# vizient



2024

**Essential Medications List** 

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Disclaimer: The Essential Medications List of drugs is not static and has the potential to change as new products enter the market and as clinical recommendations are revised. This document is not intended to replace other critical drug lists, such as those related to disaster preparedness circumstances. This is intended to identify and provide context to those molecules whose absence presents the greatest ongoing threat to routine patient care requirements.

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### History of essential medications

In March 2019, Vizient conducted a drug shortage survey to understand how shortages were impacting customer providers. Included in the survey was the question, "Does your organization have a critical drug list?". By definition, a critical drug list was considered a listing of the top 10 to 20 most commonly used, life-sustaining therapies, deemed critical to patient care. In evaluation of the survey results, it was noted that only 52% of Children's Hospital Association facilities and 33% of other hospitals maintained a critical drug list.

Based on the results of the survey, the decision was made to formally evaluate and provide a list of "essential" medications. The first Vizient Essential Medications List was published in January 2020 and was inclusive of 200 essential medications. Medications identified as of greatest importance were selected by the Vizient pharmacy team from a comprehensive clinical review of products contained within the World Health Organization's (WHO) Essential Medicines list, the Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS) algorithms, and medications included in Vizient member health systems' critical drug lists. Since the initial publication, the list has been updated quarterly by Vizient subject matter experts, and now includes **326 medications or classes.** 

### **Essential medications defined**

Vizient defines an essential medication as one where, if not available, would prove the greatest threat to a hospital's ability to provide immediate and highquality patient care.

The following are Vizient definitions of designations found in the list:

- Acute lifesaving with no alternatives Medicines used in acute and critical circumstances to sustain life and for which there are no current alternatives.
- **Chronic lifesaving with no alternatives** Medicines used in chronic disease states or conditions where no alternatives are available (e.g., nutritional deficiencies).
- High impact Medicines for which alternatives are available but may be less clinically desirable and/or are more operationally difficult to use. Also reflects drugs where the absence of one medication can affect therapeutically related drugs.
- Antibiotic resistance Antimicrobials necessary to treat organisms listed in the CDC's Antibiotic Resistance Threats in the U.S., 2019 report. Members should determine which product(s) to include on formulary using discussions with local experts and antibiogram data.
- Oncology Traditional chemotherapy and targeted medication for life-saving cancer treatment and supportive care agents.
- **Pediatric impact** These medications, if supply is disrupted, would have a disproportionate effect on the pediatric population due to preferred formulation and/or concentrations and limited treatment options.
- **Pediatric only** These medications are considered essential only for pediatric populations.
- **Antidote** Medications used to counteract or neutralize the effect of another drug or poison.

### Value of the essential medications list

In Q1 2024, the American Society of Health System Pharmacists (ASHP), reported a record high of 323 active drug shortages in the US. For the most recent data available, in Q2 2024, 300 active drug shortages were reported, highlighting the continued need to address drug shortages and prioritize production of those most essential. As noted in the Homeland Security and Governmental Affairs Committee report, generic medications, particularly generic injectables are at an increased risk of drugs shortages. Vizient's Market resiliency score, available in this edition, found 37% of generic injectables have a lower resiliency score, 41% have a medium score, and only 21% have a higher resiliency score.

#### Vizient uses of essential medications

- Initiate sourcing strategies that prioritize production of these medications and failure-to-supply agreements
- Continue efforts to advocate and endorse public policies that facilitate expanded supply and increased quality of the products contained within this database
- Focus development of mitigation strategies on medications that are classified as "essential"

#### Additional inventory programs

At the time of publication, for adult essential medications that are generic injectables, 66% are available through the Novaplus Enhanced Supply (NES) and 40% available through the NES Reserve programs. For generic injectable pediatric essential medications, 91% are available through NES and 55% through the NES Reserve programs.

In total, more than 3.7 million units have been accessed through these programs.

Furthermore, with commitment to additional production based on Vizient customer provider historical purchases, these inventory programs have resulted in more than 156 million additional vials to the current inventory, driving both supplier resiliency and access to critical, life-saving drugs through the ease of the full-line wholesale channel.

#### **Available resources**

- To access the full library of Vizient mitigation strategies, view them on the Drug Shortage resources webpage.
- To tailor Vizient's Essential Medications List to your institution's data and needs, use the Essential Medications Insights Report available in Pharmacy Analytics which is accessible from the Pharmacy Portal.
- Access NES program information on the Supply Assurance webpage. Please note, the medications available via the NES program are subject to change. For more information, contact pharmacyquestions@vizientinc.com.

### Q4 2024 revamp

The Vizient Essential Medication Internal Workgroup has reformatted and reimagined the publication with a goal of revitalizing its use.

#### **Cadence of publication**

Firstly, the Essential Medication List is moving from a quarterly to annual publication, starting with the Q4 2024 iteration.

#### Reformat

Additionally, a significant **reformat** is presented in this version.

- Previously, essential medications were categorized into three lists: Everyday Essential Medications, Antidotes and Oncology. In the Q4 2024 version and future iterations, the three lists will change to Adult, Pediatrics and Antidotes. The Oncology list will be incorporated into the Adult Essential Medications list.
- The designations have been rolled up into one column for increased readability.
- The medications have been grouped into 20 therapeutic categories. Previous iterations arranged the lists alphabetically.
- Lastly, two new columns were added to this iteration, Demand planning and Market resiliency score.



#### Reimagine

To **reimagine** the Essential Medications List, two columns, Demand planning and Market resiliency score, have been added to the Adult and Pediatric Essential Medications Lists.

- **Demand planning** is included to provide insight into national utilization based on IQVIA data.
  - Low volume: less than 1 million units
  - Medium volume: 1 to 4 million units
  - High volume: greater than 4 million units
- The Market resiliency score is included for generic injectables to provide insight into the market's ability to withstand supply constraints based on 12-month historical data elements. Generic injectables historically are more likely to experience shortages during a supply constraint. Branded products and non-injectable generic formulations are not provided with a Market resiliency score and are denoted as "not reported" (NR) in the subsequent tables.

The score ranges from 1 to 5, with 1 indicating low supply resiliency and 5 indicating high supply resiliency. The score is determined based on five components of each medication or class:

- 1. Number of manufacturers
- 2. Market share of the manufacturers
- 3. Proprietary historical Vizient fill rate performance
- 4. Food and Drug Administration (FDA) shortage status
- 5. Clinical essentialness as determined by the Vizient Essential Medication Internal Workgroup

#### Revitalize

For the upcoming 2025 publication, the Vizient Essential Medication Internal Workgroup will **revitalize** the list and review the current essential medications to identify any that may need to be removed or re-designated and continue to evaluate medications that may need to be added.

### **Adult Essential Medications List**

Click on orange text to access applicable mitigation strategy

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Analgesic, Anti-inflammatory or Anti	pyretic			
Acetaminophen Injection			High volume	4
Acetaminophen Oral	Analgesic or antipyretic,	Acute Lifesaving - No	High volume	NR
Acetaminophen Rectal	Non-opioid	Alternatives	Low volume	NR
Ibuprofen Oral			High volume	NR
Fentanyl Citrate Injection		High Impact	High volume	2
Hydromorphone HCl Injection		High Impact	High volume	2
Methadone HCI Oral	Analgesic, Opioid	High Impact	Medium volume	NR
Morphine Sulfate Injection		High Impact	High volume	2
Anesthetics				
Etomidate Injection		High Impact	Medium volume	3
Ketamine HCI Injection	General anesthetic	Acute Lifesaving - No Alternatives	Medium volume	2
Propofol Injection		High Impact	High volume	3
Remifentanil HCI Injection		High Impact	Medium volume	1
Desflurane Inhalation		High Impact	Low volume	NR
Isoflurane Inhalation	General anesthetic, Inhalant volatileª	High Impact	Low volume	NR
Sevoflurane Inhalation		High Impact	Medium volume	NR
Bupivacaine HCI Injection		High Impact	High volume	2
Bupivacaine HCl / Epinephrine Injection		High Impact	High volume	1
Lidocaine HCI Injection	Local anesthetic	High Impact	High volume	2
Lidocaine HCI / Epinephrine Injection		High Impact	High volume	1
Ropivacaine HCI Injection		High Impact	High volume	2
Dexmedetomidine HCI Injection	Sedative / Hypnotic	High Impact	High volume	3
Antidotes and other Reversal Agents				
Acetylcysteine Injection	Antidote, Acetaminophen poisoning	Acute Lifesaving - No Alternatives, Antidote	Low volume	3
Hydroxocobalamin (Cyanokit) Injection	Antidote, Cyanide poisoning	High Impact; Lifesaving, Antidote	Low volume	3
Methylene Blue Injection	Antidote, Methemoglobinemia	Acute Lifesaving - No Alternatives, Antidote	Low volume	3
Sodium Thiosulfate (not Pedmark) Injection	Reducing agent	Acute Lifesaving - No Alternatives, Antidote	Low volume	NR
Flumazenil Injection	Reversal agent, Benzodiazepine antagonist	Acute Lifesaving - No Alternatives, Antidote	Low volume	1
Naloxone HCI Injection	Reversal agent, Opioid antagonist	Acute Lifesaving - No Alternatives, Antidote	Medium volume	4
Neostigmine Methylsulfate Injection	Reversal agent, Reversible cholinesterase inhibitor	High Impact; Lifesaving, Antidote	Medium volume	4

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Anti-Infective Agents				
Gentamicin Sulfate Injection	Antibiotic, Aminoglycoside	High Impact; Antibiotic Resistance	High volume	2
Amoxicillin Oral		High Impact	High volume	NR
Amoxicillin / Clavulanate Potassium Oral	Antibiotic, Aminopenicillin	High Impact	High volume	NR
Ampicillin Injection		High Impact	High volume	3
Ampicillin Sodium /Sulbactam Sodium Injection	Antibiotic, Aminopenicillin and beta-lactamase inhibitor combination	High Impact	High volume	3
Metronidazole Injection	Antibiotic, Antiprotozoal	High Impact	High volume	2
Durlobactam Sodium / Sulbactam Sodium Injection	Antibiotic, Beta-lactam and beta-lactamase inhibitor	High Impact; Antibiotic Resistance	Low volume	NR
Ertapenem Sodium Injection	Antibiotic Corbonom	High Impact; Antibiotic Resistance	High volume	4
Meropenem Injection	Antibiotic, Carbapenem	High Impact; Antibiotic Resistance	High volume	4
lmipenem / Cilastatin Sodium / Relebactam Injection	Antibiotic, Carbapenem	High Impact; Antibiotic Resistance	Low volume	NR
Meropenem / Vaborbactam Injection	combination	High Impact; Antibiotic Resistance	Low volume	NR
Cefazolin Sodium Injection	Antibiotic, Cephalosporin 1st generation	High Impact	High volume	3
Cefotaxime Sodium Injection		High Impact	Low volume	NR
Ceftazidime Injection		High Impact	Medium volume	3
Ceftazidime / Avibactam Injection	Antibiotic, Cephalosporin 3rd generation	High Impact; Antibiotic Resistance	Low volume	NR
Ceftriaxone Sodium Injection		High Impact; Antibiotic Resistance	High volume	3
Cefepime HCI Injection	Antibiotic, Cephalosporin 4th generation	High Impact	High volume	3
Ceftaroline Fosamil Monoacetate Injection	Antibiotic, Cephalosporin 5th generation	High Impact; Antibiotic Resistance	Low volume	NR
Ceftolozane Sulfate / Tazobactam Sodium Injection	Antibiotic, Cephalosporin 5th generation and beta- lactamase inhibitor	High Impact; Antibiotic Resistance	Low volume	NR
Cefiderocol Sulfate Injection	Antibiotic, Cephalosporin siderophore	High Impact; Antibiotic Resistance	Low volume	NR
Daptomycin Injection	Antibiotic, Cyclic lipopeptide	High Impact; Antibiotic Resistance	High volume	4
Ciprofloxacin Injection		High Impact	Medium volume	2
_evofloxacin Injection	Antibiotic, Fluoroquinolone	High Impact	Medium volume	4
Moxifloxacin Injection		High Impact; Antibiotic Resistance	Low volume	3
Sulfamethoxazole / Trimethoprim Oral	Antibiotic, Folate antagonist	Acute Lifesaving - No Alternatives; Antibiotic Resistance	Medium volume	NR
Vancomycin HCI Injection	Antibiotic, Glycopeptide	High Impact; Antibiotic Resistance	High volume	3

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Clindamycin Phosphate Injection	Antibiotic, Lincosamide	Acute Lifesaving - No Alternatives	High volume	1
Azithromycin Injection		High Impact; Antibiotic Resistance	High volume	3
Fidaxomicin Oral	Antibiotic, Macrolide	High Impact; Antibiotic Resistance	Low volume	NR
Aztreonam Injection	Antibiotic, Monobactam	High Impact; Antibiotic Resistance	Medium volume	3
Linezolid Injection		High Impact; Antibiotic Resistance	Medium volume	5
Tedizolid Injection	Antibiotic, Oxazolidinone	High Impact; Antibiotic Resistance	Low volume	NR
Penicillin G Injection	Antibiotic, Penicillin extended release <sup>a</sup>	High Impact	Medium volume	NR
Piperacillin Sodium / Tazobactam Sodium Injection	Antibiotic, Penicillin extended-spectrum and beta-lactamase inhibitor	High Impact	High volume	3
Lefamulin Injection	Antibiotic, Pleuromutilin	High Impact; Antibiotic Resistance	Low volume	NR
Colistimethate Sodium Injection	Antibiotic, Polymyxin	Acute Lifesaving - No Alternatives; Antibiotic Resistance	Low volume	3
Polymyxin B Injection		High Impact; Antibiotic Resistance	Low volume	4
Doxycycline Hyclate Injection		Acute Lifesaving - No Alternatives	Medium volume	3
Tigecycline Injection	Antibiotic, Tetracycline	High Impact; Antibiotic Resistance	Low volume	4
Fluconazole Injection		High Impact	Medium volume	3
Voriconazole Injection	Antifungal, Azole	High Impact; Antibiotic Resistance	Low volume	4
Caspofungin Acetate Injection		High Impact; Antibiotic Resistance	Low volume	5
Micafungin Sodium Injection	Antifungal, Echinocandin <sup>a</sup>	High Impact; Antibiotic Resistance	Medium volume	4
Amphotericin B Deoxycholate Injection		High Impact	Low volume	2
Amphotericin B Lipid Complex Injection	Antifungal, Polyene macrolide	High Impact; Antibiotic Resistance	Low volume	NR
Amphotericin B Liposome Injection		High Impact; Antibiotic Resistance	Medium volume	NR
Benznidazole Oral	Antiparasitic, Nitroimidazole derivative	High Impact	Low volume	NR
Ethambutol HCI Oral		High Impact	Low volume	NR
Rifampin Oral	Antitubercular	High Impact; Antibiotic Resistance	Low volume	NR
Valganciclovir HCl Oral	Antiviral, Nucleoside analog	High Impact	Low volume	NR
Cidofovir Injection	Antiviral, Nucleotide analog	High Impact	Low volume	3
Acyclovir Sodium Injection	Antiviral, Purine analog	High Impact	Medium volume	2
Ribavirin Inhalation	Antiviral, Respiratory syncytial virus	Acute Lifesaving - No Alternatives	Low volume	NR

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Biologicals				
Immune Globulin (IVIG) Injection	lmmune globulin, Gamma globulinª	Acute Lifesaving - No Alternatives	High volume	NR
Rho (D) Immune Globulin Injection	Immune globulin, Rho(D)ª	Acute Lifesaving - No Alternatives	Low volume	NR
Cardiovascular Therapy Agents				
Phentolamine Mesylate Injection	Alpha-1 receptor blocker	Acute Lifesaving - No Alternatives, Antidote	Low volume	2
Amiodarone HCI Injection	Antiarrhythmic, Class III	Acute Lifesaving - No Alternatives	High volume	3
Ibutilide Injection		High Impact	Low volume	2
Adenosine Injection	Antiarrhythmic, Class IV	Acute Lifesaving - No Alternatives	Medium volume	3
Atropine Injection	Anticholinergic	Acute Lifesaving - No Alternatives, Antidote	Medium volume	2
Vasopressin Injection	Antidiuretic hormone	Acute Lifesaving - No Alternatives	Medium volume	3
Labetalol HCI Injection		High Impact	High volume	3
Metoprolol Tartrate Injection	Antihypertensive, Beta blocker	High Impact	High volume	3
Propranolol HCI Injection	beta bioekei	High Impact	Low volume	1
Diltiazem HCI Injection	Antihypertensive, Calcium-	High Impact	Medium volume	3
Nicardipine HCI Injection	channel blocker	High Impact	Medium volume	4
Bumetanide Injection	Diuratic Loop	High Impact	High volume	2
Furosemide Injection	Diuretic, Loop	High Impact	High volume	2
Chlorothiazide Sodium Injection	Diuretic, Thiazide	High Impact	Low volume	4
Milrinone Lactate Injection	Inotrope	High Impact	Medium volume	4
Epoprostenol Injection	Pulmonary	High Impact	Low volume	3
Treprostinil Injection	antihypertensive, Prostacyclin	High Impact	Low volume	4
Dehydrated Alcohol Injection	Sclerosing agent	High Impact	Low volume	NR
Dobutamine HCI Injection		High Impact	Low volume	2
Dopamine HCI Injection		High Impact	Low volume	1
Ephedrine Injection		High Impact	High volume	4
Epinephrine Injection	Sympathomimetic	Acute Lifesaving - No Alternatives	High volume	2
Isoproterenol HCI Injection		High Impact	Low volume	4
Norepinephrine Bitartrate Injection		High Impact	High volume	4
Phenylephrine HCI Injection		Acute Lifesaving - No Alternatives	High volume	4
Nitroglycerin Injection		High Impact	Medium volume	1
Nitroprusside Sodium Injection	Vasodilator	High Impact	Low volume	5

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Central Nervous System Agents				
Clobazam Oral		Acute Lifesaving - No Alternatives	Medium volume	NR
Diazepam Injection		High Impact	Medium volume	3
Fosphenytoin Sodium		High Impact	Low volume	3
Lacosamide Injection	Anticonvulsant	High Impact	Medium volume	4
Levetiracetam Injection		Acute Lifesaving - No Alternatives	High volume	3
Phenobarbital Sodium Injection		High Impact	Medium volume	NR
Valproic Acid Injection		High Impact	Medium volume	2
Haloperidol Injection	Antipsychotic, 1st generation	High Impact	High volume	3
Lorazepam Injection	Anxiolytic / Sedative / Hypnotic	High Impact	High volume	1
Midazolam HCI Injection	Sedative / Hypnotic	High Impact	High volume	2
Diagnostic Agents				
Iodinated Contrast Media <sup>a</sup>	Diagnostic agent	Acute Lifesaving - No Alternatives	High volume	NR
Electrolyte Balance-Nutritional Proc	lucts			
Potassium lodide Oral	Antithyroid agent	High Impact; Lifesaving, Antidote	Low volume	NR
Dextrose 50% in Water Injection	Dextrose solution	Acute Lifesaving - No Alternatives, Antidote	Medium volume	1
Sterile Water for Injection (SWFI) Injection	Diluent	High Impact	High volume	2
Sodium Polystyrene Sulfonate Oral	Electrolyte depleter, Potassium binder	High Impact	Medium volume	NR
Sodium Acetate Injection	Electrolyte, Bicarbonate	High Impact	Medium volume	2
Sodium Bicarbonate Injection	Electrolyte, Bicarbonate agent	Acute Lifesaving - No Alternatives, Antidote	High volume	1
Calcium Chloride Injection		High Impact; Lifesaving, Antidote	Medium volume	4
Calcium Gluconate Injection	Electrolyte, Calcium	High Impact; Lifesaving, Antidote	High volume	3
Magnesium Sulfate Injection	Electrolyte, Magnesium	Acute Lifesaving - No Alternatives	High volume	3
Potassium Phosphate Injection		High Impact	Medium volume	3
Sodium Phosphate Injection	Electrolyte, Phosphate	High Impact	Medium volume	1
Potassium Acetate Injection	Electrolyte Determine	High Impact	Medium volume	1
Potassium Chloride Injection	Electrolyte, Potassium	High Impact	High volume	2
Sodium Chloride 3% Injection	Electrolyte, Sodium chloride	Acute Lifesaving - No Alternatives	Low volume	3
Sodium Chloride 23.4% Injection	Electrolyte, Sodium chloride concentrated	Acute Lifesaving - No Alternatives	Medium volume	1
Sodium Chloride Bacteriostatic 0.9% Injection	Intravenous fluid	Acute Lifesaving - No Alternatives	Medium volume	1
Lactated Ringers Injection	Lactated Ringer's solution	Acute Lifesaving - No Alternatives	High volume	3

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Amino Acid Injection	M	Chronic Lifesaving - No Alternatives	Medium volume	NR
Cysteine HCI Injection	– Macronutrient, Amino acid	Chronic Lifesaving - No Alternatives	Low volume	NR
Fat Emulsion Injection	Macronutrient, Fat <sup>a</sup>	Acute Lifesaving - No Alternatives, Antidote	Low volume	NR
Ferric Carboxymaltose Injection		High Impact	Low volume	NR
Ferric Gluconate Complex Injection		High Impact	High volume	2
Ferumoxytol	Mineral, Iron <sup>a</sup>	High Impact	Low volume	3
Iron Dextran Injection		High Impact	Medium volume	NR
Iron Sucrose injection		High Impact	High volume	NR
Manganese Injection	Mineral, Manganese	Chronic Lifesaving - No Alternatives	Low volume	2
Chromium Injection		Chronic Lifesaving - No Alternatives	Low volume	NR
Copper Injection	Mineral, Trace	Chronic Lifesaving - No Alternatives	Low volume	1
Selenium Injection		Chronic Lifesaving - No Alternatives	Low volume	NR
Zinc Chloride Injection	Mineral, Zinc	Chronic Lifesaving - No Alternatives	Low volume	2
Sodium Chloride 0.9% Injection	Sodium chloride, Parenteral	Acute Lifesaving - No Alternatives	High volume	2
Thiamine (Vit B1) Injection	Vitamin B1	Acute Lifesaving - No Alternatives, Antidote	High volume	3
Pyridoxine HCI (Vit B6) Injection	Vitamin B6	Acute Lifesaving - No Alternatives, Antidote	Low volume	2
Ascorbic Acid Injection	Vitamin C	Acute Lifesaving - No Alternatives	Low volume	NR
Vitamin D Derivatives Injection	Vitamin Da	Chronic Lifesaving - No Alternatives	High volume	2
Phytonadione (Vit K) Injection	Vitamin K	Acute Lifesaving - No Alternatives, Antidote	High volume	3
Folic Acid Injection	Vitamin, Folic acid	Chronic Lifesaving - No Alternatives, Antidote	Low volume	2
Endocrine				
Methimazole Oral	Antithyroid agent, Imidazole derivative	High Impact	Medium volume	NR
Propylthiouracil (PTU) Oral	Antithyroid agent, Thiouracil derivative	Acute Lifesaving - No Alternatives	Low volume	NR
Conjugated Estrogens Injection	Estrogen derivative	High Impact	Low volume	NR
Methylprednisolone Sodium Succinate Injection	Glucocorticoid,	High Impact	High volume	3
Prednisolone Oral	Intermediate acting	High Impact	Medium volume	NR
Betamethasone Injection		High Impact	Medium volume	3
Dexamethasone Sodium Phosphate Injection	Glucocorticoid, Long acting	High Impact	High volume	2
Hydrocortisone Sodium Succinate Injection	Glucocorticoid, Short acting	High Impact	High volume	1

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Glucagon Injection	Hyperglycemic, Hypoglycemia treatment agent	Acute Lifesaving - No Alternatives, Antidote	Medium volume	3
Insulin Regular (Human) Injection	Insulin, Short acting	Acute Lifesaving - No Alternatives, Antidote	High volume	NR
Fludrocortisone Acetate Oral	Mineralcorticoid	Chronic Lifesaving - No Alternatives	Low volume	NR
Methylergonovine Maleate Injection	Oxytocic, Ergot alkaloid	High Impact	Low volume	3
Oxytocin Injection	Oxytocic, Oxytocin and analogs	Acute Lifesaving - No Alternatives	Medium volume	3
Octreotide Acetate Injection	Somastatin analog	Acute Lifesaving - No Alternatives, Antidote	Medium volume	3
Liothyronine Sodium (T3) Injection	Thyroid product, Synthetic T3	Acute Lifesaving - No Alternatives	Low volume	1
Levothyroxine Sodium (T4) Injection	Thyroid product, Synthetic T4	Acute Lifesaving - No Alternatives	Low volume	3
Desmopressin Acetate Injection	Vasopressin analog	Acute Lifesaving - No Alternatives	Low volume	3
Gastrointestinal Therapy Agents				
Glycopyrrolate Injection	Anticholinergic	High Impact; Lifesaving, Antidote	High volume	4
Aprepitant Injection	Antiemetic, Neurokinin 1 receptor antagonist	High Impact	Low volume	3
Ondansetron HCI Injection	Antiemetic, Selective 5-HT3 antagonist	High Impact	High volume	3
Digestive Enzymes Oral	Digestive aid, Enzyme <sup>a</sup>	Chronic Lifesaving - No Alternatives	Medium volume	NR
Famotidine Injection	Gastric acid secretion reducer, Histamine H2 antagonist	High Impact	High volume	3
Lactulose Oral	Laxative, Osmotic	High Impact	High volume	NR
Pantoprazole Sodium Injection	Proton pump inhibitor	High Impact	High volume	3
Gout and Hyperuricemia Therapy				
Allopurinol Injection	Hyperuricemia therapy, Xanthine oxidase inhibitor	High Impact	Low volume	2
Hematological Agents				
Argatroban Injection		High Impact	Low volume	4
Enoxaparin Sodium Injection	Anticoagulant	High Impact	High volume	4
Heparin Sodium Injection	Anticoayuidilt	High Impact	High volume	2
Warfarin Sodium Oral		High Impact	High volume	NR
Aminocaproic Acid Injection	Antifibrinolytic	High Impact; Lifesaving, Antidote	Low volume	3
Tranexamic Acid Injection	Antihormolytic	Acute Lifesaving - No Alternatives, Antidote	High volume	3
Aspirin Oral		Acute Lifesaving - No Alternatives	High volume	NR
Eptifibatide Injection	Antiplatelet	High Impact	Low volume	4
Tirofiban HCI Injection		High Impact	Low volume	3

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Darbepoetin Alfa Injection	Hematopoietic	High Impact	Medium volume	NR
Epoetin Alfa Recombinant Injection	growth factor	High Impact	High volume	NR
4-factor prothrombin complex concentrate (PCC) Injection	Hemostatic agent, Factor IX complex	High Impact; Lifesaving, Antidote	Medium volume	NR
3-factor prothrombin complex concentrate (PCC) Injection	Hemostatic agent, Factor IX preparation	High Impact; Lifesaving, Antidote	Medium volume	NR
Thrombin Topical	Hemostatic agent, Topical	Acute Lifesaving - No Alternatives	Medium volume	NR
Albumin Human Injection	Plasma expander	High Impact	High volume	NR
Alteplase Recombinant Injection		Acute Lifesaving - No Alternatives	Low volume	NR
Reteplase Recombinant Injection	Thrombolytic, Tissue plasminogen activator	High Impact	Low volume	NR
Tenecteplase Injection	plastiniogen activator	Acute Lifesaving - No Alternatives	Low volume	NR
Immunosuppressive Agents				
Cyclosporine Injection		High Impact	Low volume	2
Cyclosporine Oral	Immunosuppressant, Calcineurin inhibitor	Chronic Lifesaving - No Alternatives	Medium volume	NR
Tacrolimus Injection	Calcineurin Innibitor	High Impact	Low volume	NR
Tacrolimus Oral		High Impact	High volume	NR
Mycophenolate Mofetil HCl Injection	Immunosuppressant, Inosine monophosphate dehydrogenase inhibitor	High Impact	Low volume	4
Sirolimus Oral	Immunosuppressant, Mammalian target of rapamycin (mTOR) inhibitor	High Impact	Low volume	NR
Azathioprine Sodium Injection	Immunosuppressant, Purine analog	High Impact	Low volume	2
Metabolic Modifiers				
Sodium Benzoate/ Sodium Phenylacetate Injection	Urea cycle disorder agent, Conjugating agent	Acute Lifesaving - No Alternatives	Low volume	2
Oncology				
Thalidomide Oral	Anti-infective agent, Immunomodulator	High Impact	Low volume	NR
Bendamustine Injection		Lifesaving - No Alternatives	Low volume	3
Cyclophosphamide Injection		High Impact	Low volume	4
Dacarbazine Injection		Lifesaving - No Alternatives	Low volume	1
fosfamide Injection	Antineoplastic agent,	Lifesaving - No Alternatives	Low volume	2
omustine Oral	Alkylating agent	High Impact	Low volume	NR
Melphalan Injection		Lifesaving - No Alternatives	Low volume	4
Procarbazine Oral		Lifesaving - No Alternatives	Low volume	NR
Thiotepa Injection		Lifesaving - No Alternatives	Low volume	3
Busulfan Injection	Antineoplastic agent, Alkylating agent, Alkyl sulfonate	Lifesaving - No Alternatives	Low volume	3

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Bleomycin Sulfate Injection		High Impact	Low volume	3
Dactinomycin Injection	Antineoplastic agent, Antibiotic	Lifesaving - No Alternatives	Low volume	3
Mitomycin Injection		High Impact	Low volume	3
Methotrexate Injection	Antineoplastic agent, Antimetabolite, Folic acid analog	Acute Lifesaving - No Alternatives	Medium volume	1
Fludarabine Injection		Lifesaving - No Alternatives	Low volume	2
Mercaptopurine Oral	Antineoplastic agent, Antimetabolite, Purine analog	Lifesaving - No Alternatives	Low volume	NR
Nelarabine Injection		Lifesaving - No Alternatives	Low volume	3
Capecitabine Oral		High Impact	Low volume	NR
Cytarabine (Conventional) Injection	Antineoplastic agent, Antimetabolite, Pyrimidine analog	Lifesaving - No Alternatives	Low volume	2
Fluorouracil Injection	r yrinnanc analog	High Impact	Medium volume	2
Hydroxyurea Oral	Antineoplastic agent, Antimetabolite, Urea derivative	Lifesaving - No Alternatives	Low volume	NR
Pegaspargase Injection	Antineoplastic agent, Asparaginase enzyme therapy agent	High Impact	Low volume	NR
Asparaginase (Erwinia) [recombinant] Injection	Antineoplastic	High Impact	Low volume	NR
Asparaginase (Erwinia) Injection	agent, Enzyme	High Impact	Low volume	NR
Leuprolide Injection	Antineoplastic agent, GnRH agonist analog	High Impact	Medium volume	3
Bacillus Calmette–Guérin (BCG) Vaccine Injection	Antineoplastic agent, Immunomodulator	Lifesaving - No Alternatives	Low volume	NR
Lenalidomide Oral	Initiationodulator	High Impact	Low volume	NR
Arsenic Trioxide Injection	Antineoplastic agent, Metal complex	Lifesaving - No Alternatives	Low volume	3
Rituximab Injection <sup>b</sup>	Antineoplastic agent,	Lifesaving - No Alternatives	Medium volume	NR
Trastuzumab Injection <sup>b</sup>	Monoclonal antibody	Lifesaving - No Alternatives	Medium volume	NR
Carboplatin Injection		High Impact	Low volume	1
Cisplatin Injection	Antineoplastic agent, Platinum complex	High Impact	Low volume	1
Oxaliplatin Injection	1	High Impact	Medium volume	4
Bortezomib Injection	Antineoplastic agent, Proteasome enzyme inhibitor	High Impact	Low volume	4
Tretinoin Oral	Antineoplastic agent, Retinoid	Lifesaving - No Alternatives	Low volume	NR
Paclitaxel (Conventional) Injection	Antineoplastic agent, Taxane	High Impact	Low volume	4
Irinotecan Injection	Antineoplastic agent, Topoisomerase I inhibitor	High Impact	Medium volume	3

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Daunorubicin HCI Injection		High Impact	Low volume	2
Doxorubicin HCl (Conventional) Injection	Antineoplastic agent, Topoisomerase II inhibitor	High Impact	Low volume	3
Etoposide Injection		Lifesaving - No Alternatives	Low volume	2
Ibrutinib Oral	Antineoplastic agent,	High Impact	Low volume	NR
Imatinib Oral	Tyrosine kinase inhibitor	High Impact	Low volume	NR
Vinblastine Sulfate Injection	Antineoplastic agent,	Lifesaving - No Alternatives	Low volume	1
Vincristine Sulfate Injection	Vinca alkaloid	Lifesaving - No Alternatives	Low volume	2
Isotretinoin Oral	Antineoplastic, Retinoid	Lifesaving - No Alternatives	High volume	NR
Tamoxifen Oral	Antineoplastic, Selective estrogen receptor modulator	High Impact	Medium volume	NR
Mesna Injection	Chemotherapy rescue agent, Urinary tract protective agent	High Impact	Low volume	3
Zoledronic Acid Injection	Endocrine, Bone resorption inhibitor	High Impact	Low volume	3
Calcitonin - Salmon Injection	Endocrine, Calcium and bone metabolism regulators	Lifesaving - No Alternatives	Low volume	3
Filgrastim Injection <sup>b</sup>	Hematological agent, Granulocyte colony- stimulating factor (G-CSF)	High Impact	Medium volume	NR
Rasburicase Injection	Hyperuricemia therapy, Urate-oxidase enzyme	Acute Lifesaving - No Alternatives	Low volume	NR
Tocilizumab Injection	Monoclonal antibody, Interleukin-6 (IL-6) receptor inhibitor	Acute Lifesaving - No Alternatives	Low volume	NR
Ophthalmic Agents				
Ciprofloxacin HCl Opthalmic	Antibiotic Elucatoria la se	High Impact	Medium volume	NR
Ofloxacin Opthalmic	Antibiotic, Fluoroquinolone	High Impact	High volume	NR
Erythromycin Opthalmic	Antibiotic, Macrolide	High Impact	High volume	NR
Fluorescein Sodium Strips Opthalmic	Diagnostic agent	High Impact	Low volume	NR
Atropine Sulfate Opthalmic	Mydriatic, anticholinergic	High Impact	Low volume	NR
Paralytic				
Succinylcholine Chloride Injection	Neuromuscular blocker, depolarizing	High Impact	High volume	4
Cisatracurium Besylate Injection		High Impact	Low volume	5
Rocuronium Bromide Injection	Neuromuscular blocker, nondepolarizing	High Impact	High volume	3
Vecuronium Bromide Injection	nondepolarizing	High Impact	Low volume	2
Renal Replacement Therapy				
Dialysate solutions for Continuous Renal Replacement Therapy (CRRT)	Dialysate, Hemodialysis and hemofiltrate solution <sup>a</sup>	Acute Lifesaving - No Alternatives	High volume	NR

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Respiratory Therapy Agents				
Tobramycin Inhalation	Antibiotic, Cystic fibrosis	Acute Lifesaving - No Alternatives	Medium volume	NR
Diphenhydramine HCI Injection	Antihistamine, 1st generation	Acute Lifesaving - No Alternatives	High volume	3
Ipratropium Bromide Inhalation	Asthma / COPD, Anticholinergic, short acting	Acute Lifesaving - No Alternatives	High volume	NR
Albuterol Sulfate Inhalation	Asthma / COPD, Beta 2-adrenergic, short acting High Impact High volume		High volume	NR
Epinephrine (Racepinephrine) Inhalation	Asthma, Alpha- ,beta-adrenergic	High Impact	Low volume	NR

<sup>a</sup>Inclusion of an agent from this therapeutic class is essential. Selection of which agent is at the discretion of each institution <sup>b</sup>Includes originator and biosimilar products Abbreviations: NR = Not reported

### Pediatric Essential Medications List

#### Click on orange text to access applicable mitigation strategy.

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Analgesic, Anti-inflammatory or Ant	ipyretic			
Acetaminophen Oral	Analgesic or antipyretic, Non-opioid	Acute Lifesaving - No Alternatives; Pediatric Impact	High volume	NR
Acetaminophen Rectal	Analgesic or antipyretic, Non-opioid	Acute Lifesaving - No Alternatives; Pediatric Impact	Low volume	NR
Antidotes and other Reversal Agents	5			
Acetylcysteine Injection	Antidote, Acetaminophen poisoning	Acute Lifesaving - No Alternatives, Antidote; Pediatric Impact	Low volume	3
Anti-Infective Agents				
Gentamicin Sulfate Injection	Antibiotic, Aminoglycoside	High Impact; Antibiotic Resistance; Pediatric Impact	High volume	2
Amoxicillin Oral		High Impact; Pediatric Impact	High volume	NR
Amoxicillin / Clavulanate Potassium Oral	Antibiotic, Aminopenicillin	High Impact; Pediatric Impact	High volume	NR
Ampicillin Injection		High Impact; Pediatric Impact	High volume	3
Ampicillin Sodium /Sulbactam Sodium Injection	Antibiotic, Aminopenicillin and beta-lactamase inhibitor combination	High Impact; Pediatric Impact	High volume	3
Meropenem Injection	Antibiotic, Carbapenem combination	High Impact; Antibiotic Resistance; Pediatric Impact	High volume	4
Cefazolin Sodium Injection	Antibiotic, Cephalosporin 1st generation	High Impact; Pediatric Impact	High volume	3

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Cefotaxime Sodium Injection	Antibiotic, Cephalosporin	High Impact; Pediatric Impact	Low volume	NR
Ceftazidime Injection	3rd generation	High Impact; Pediatric Impact	Medium volume	3
Vancomycin HCI Injection	Antibiotic, Glycopeptide	High Impact; Antibiotic Resistance; Pediatric Impact	High volume	3
Azithromycin Injection	Antibiotic, Macrolide	High Impact; Antibiotic Resistance; Pediatric Impact	High volume	3
Penicillin G Injection	Antibiotic, Penicillin extended release <sup>a</sup>	High Impact; Pediatric Impact	Medium volume	NR
Acyclovir Sodium Injection	Antiviral, Purine analog	High Impact; Pediatric Impact	Medium volume	2
Cardiovascular Therapy Agents				
Amiodarone HCI Injection	Antiarrhythmic, Class III	Acute Lifesaving - No Alternatives; Pediatric Impact	High volume	3
Atropine Injection	Anticholinergic	Acute Lifesaving - No Alternatives, Antidote; Pediatric Impact	Medium volume	2
Bumetanide Injection	Diuretic, Loop	High Impact; Pediatric Impact	High volume	2
Chlorothiazide Sodium Injection	Diuretic, Thiazide	High Impact; Pediatric Impact	Low volume	4
Milrinone Lactate Injection	Inotrope	High Impact; Pediatric Impact	Medium volume	4
Alprostadil Injection	Patency ductus arteriosus treatment agent, prostaglandin	Acute Lifesaving - No Alternatives; Pediatric Only	Low volume	NR
Ibuprofen Injection	Patency ductus arteriosus	Acute Lifesaving - No Alternatives; Pediatric Only	Low volume	NR
Indomethacin Injection	treatment agent, non- steroidal antiinflammatory	Acute Lifesaving - No Alternatives; Pediatric Only	Low volume	NR
Sildenafil Injection	Pulmonary antihypertensive, PDE5 inhibitor	Acute Lifesaving - No Alternatives; Pediatric Only	Low volume	NR
Dobutamine HCI Injection		High Impact; Pediatric Impact	Low volume	2
Dopamine HCI Injection	Sympathomimetic	High Impact; Pediatric Impact	Low volume	1
Epinephrine Injection		Acute Lifesaving - No Alternatives; Pediatric Impact	High volume	2

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Central Nervous System Agents				
Clobazam Oral		Acute Lifesaving - No Alternatives; Pediatric Impact	Medium volume	NR
Diazepam Injection		High Impact; Pediatric Impact	Medium volume	3
Fosphenytoin Sodium	Anticonvulsant	High Impact; Pediatric Impact	Low volume	3
Levetiracetam Injection		Acute Lifesaving - No Alternatives; Pediatric Impact	High volume	3
Phenobarbital Sodium Injection		High Impact; Pediatric Impact	Medium volume	NR
Midazolam HCI Injection	Sedative / Hypnotic	High Impact; Pediatric Impact	High volume	2
Caffeine Citrate Injection	Stimulant	High Impact; Pediatric Only	Low volume	NR
Electrolyte Balance-Nutritional Pro	ducts			
Dextrose 50% in Water Injection	Dextrose solution	Acute Lifesaving - No Alternatives, Antidote; Pediatric Impact	Medium volume	1
Sodium Bicarbonate Injection	Electrolyte, Bicarbonate agent	Acute Lifesaving - No Alternatives, Antidote; Pediatric Impact	High volume	1
Calcium Chloride Injection	Electrolyte, Calcium	High Impact; Lifesaving, Antidote; Pediatric Impact	Medium volume	4
Calcium Gluconate Injection	Electrolyte, Calcium	High Impact; Lifesaving, Antidote; Pediatric Impact	High volume	3
Sodium Phosphate Injection	Electrolyte, Phosphate	High Impact; Pediatric Impact	Medium volume	1
Cysteine HCI Injection	Macronutrient, Amino acid	Chronic Lifesaving - No Alternatives; Pediatric Impact	Low volume	NR
Fat Emulsion Injection	Macronutrient, Fat <sup>a</sup>	Acute Lifesaving - No Alternatives, Antidote; Pediatric Impact	Low volume	NR
Selenium Injection	Mineral, Trace	Chronic Lifesaving - No Alternatives; Pediatric Impact	Low volume	NR
Zinc Chloride Injection	Mineral, Zinc	Chronic Lifesaving - No Alternatives; Pediatric Impact	Low volume	2
Phytonadione (Vit K) Injection	Vitamin K	Acute Lifesaving - No Alternatives, Antidote; Pediatric Impact	High volume	3
Endocrine				
Prednisolone Oral	Glucocorticoid, Intermediate acting	High Impact; Pediatric Impact	Medium volume	NR
Betamethasone Injection	Glucocorticoid, Long acting	High Impact; Pediatric Impact	Medium volume	3

Drug name	Therapeutic classification	Designation	Demand planning	Market resiliency score 1-5
Gastrointestinal Therapy Agents				
Glycopyrrolate Injection Anticholinergic		High Impact; Lifesaving, Antidote; Pediatric Impact	High volume	4
Promethazine Injection <sup>b</sup>	Antiemetic, Phenothiazine	High Impact; Pediatric Only	High volume	NR
Ondansetron HCI Injection	Antiemetic, Selective 5-HT3 antagonist	High Impact; Pediatric Impact	High volume	3
Digestive Enzymes Oral	Digestive aid, Enzyme <sup>a</sup>	Chronic Lifesaving - No Alternatives; Pediatric Impact	Medium volume	NR
Lactulose Oral	Laxative, Osmotic	High Impact; Pediatric Impact	High volume	NR
Hematological Agents				
Aminocaproic Acid Injection	Antifibrinolytic	High Impact; Lifesaving, Antidote; Pediatric Impact	Low volume	3
Alteplase Recombinant Injection	Thrombolytic, Tissue plasminogen activator	Acute Lifesaving - No Alternatives; Pediatric Impact	Low volume	NR
Metabolic Modifiers				
Sodium Benzoate/ SodiumUrea cycle disorder agent,Phenylacetate InjectionConjugating agent		Acute Lifesaving - No Alternatives; Pediatric Impact	Low volume	2
Ophthalmic Agents				
Erythromycin Opthalmic Antibiotic, Macrolide		High Impact; Pediatric Impact	High volume	NR
Paralytic				
Vecuronium Bromide Injection	Neuromuscular blocker, nondepolarizing	High Impact; Pediatric Impact	Low volume	2
Respiratory Therapy Agents				
Tobramycin Inhalation Antibiotic, Cystic fibrosis		Acute Lifesaving - No Alternatives; Pediatric Impact	Medium volume	NR
Ipratropium Bromide Inhalation Asthma / COPD, short acting		Acute Lifesaving - No Alternatives; Pediatric Impact	High volume	NR
Albuterol Sulfate Inhalation	Albuterol Sulfate Inhalation Asthma / COPD, Beta 2-adrenergic, short acting		High volume	NR
Epinephrine (Racepinephrine) Inhalation			Low volume	NR
Terbutaline Injection	Asthma, Beta adrenergic	High Impact; Pediatric Only	Low volume	NR
Aminophylline Injection	Asthma, Xanthine	Acute Lifesaving - No Alternatives; Pediatric Only	Low volume	NR
Surfactant, Lung Intratracheal	Lung surfactant <sup>a</sup>	Acute Lifesaving - No Alternatives; Pediatric Only	Low volume	NR

<sup>a</sup>Inclusion of an agent from this therapeutic class is essential. Selection of which agent is at the discretion of each institution <sup>b</sup>Noted as essential for pediatric oncology patients with refractory nausea and vomiting Abbreviations: NR = Not reported

### Antidotes

Click on orange text to access applicable mitigation strategy.

Drug name	Primary indication in toxicology
3-factor Prothrombin Complex Concentrate (PCC) Injection	Reversal of anticoagulants (e.g., warfarin)
4-factor Prothrombin Complex Concentrate (PCC) Injection	Reversal of anticoagulants (e.g., warfarin, factor Xa inhibitors)
Acetylcysteine Injection	Acetaminophen toxicity
Activated Charcoal Oral	Gastrointestinal decontamination
Activated Prothrombin Complex Concentrate (aPCC; FEIBA) Injection	Reversal of anticoagulants (e.g., DOACs)
Aminocaproic Acid Injection	Life-threatening bleed in patient on thrombolytic or anticoagulation (e.g., DOACs)
Andexanet Alfa (andexanet) Injection	Reversal of factor Xa inhibitors
Antivenin (Latrodectus mactans) Injection	Envenomation due to Lactrodectans mactans (black widow spider)
Atropine Injection	Cholinergic toxicity (e.g., organophosphate poisoning)
Botulinum Antitoxin Injection	Botulism (Clostridium botulinum)
Calcium Chloride Injection	Beta-blocker, calcium channel blocker toxicity
Calcium Gluconate Injection	Beta-blocker, calcium channel blocker toxicity
Calcium Gluconate Topical	Hydrofluoric acid
Centruroides Immune F(ab)2 (Equine) Injection	Scorpion envenomation
Crotalidae Immune Fab (Equine) Injection	Crotalinae envenomation
Crotalidae Polyvalent Immune FAB (Ovine) Injection	Crotalinae envenomation
Cyproheptadine Oral	Serotonin syndrome
Dantrolene Sodium Injection	Malignant hyperthermia
Deferoxamine Injection	Acute iron toxicity
Dexrazoxane HCI Injection	Extravasation of anthracyclines
Dextrose 50% in Water Injection	Hypoglycemia (antidiabetic agents)
Digoxin Immune Fab (Ovine) Injection	Digoxin toxicity
Dimethyl Sulfoxide (DMSO)	Extravasation
Edetate Calcium Disodium Injection	Lead poisoning
Fat Emulsion Injection	Systemic toxicity from local anesthetics; lipid soluble cardiotoxic agents (e.g., beta-blockers, CCBs)
Flumazenil Injection	Reversal of benzodiazepines
Folic Acid Injection	Methanol toxicity, reduce toxicity associated with antifolate chemotherapy
Folic Acid Oral	Methanol toxicity, reduce toxicity associated with antifolate chemotherapy
Fomepizole Injection	Methanol, ethylene glycol toxicity
Glucagon Injection	Beta-blocker, calcium channel blocker toxicity
Glucarpidase Injection	Methotrexate toxicity
Glycopyrrolate Injection	Adjunct in NMB reversal (offset cholinergic effects associated w/ neostigmine, pyridostigmine)
Hyaluronidase Injection	Extravasation, misc.
Hydroxocobalamin (Cyanokit) Injection	Cyanide poisoning
Idarucizumab (Praxbind) Injection	Reversal of dabigatran
Insulin Regular (Human) Injection	Beta-blocker, calcium channel blocker toxicity
Leucovorin Calcium Injection	Methotrexate toxicity

Drug name	Primary indication in toxicology
Leucovorin Calcium Oral	Methotrexate toxicity
Levocarnitine (L-carnitine) Injection	Valproic acid toxicity
Levocarnitine (L-carnitine) Oral	Valproic acid toxicity
Levoleucovorin Injection	Methotrexate toxicity
Methylene Blue Injection	Methemoglobinemia
Naloxone HCI Injection	Reversal of opioids
Neostigmine Methylsulfate Injection	Reversal of non-depolarizing NMB
Octreotide Acetate Injection	Hypoglycemia induced by insulin-secretagogues (e.g., sulfonylureas)
Phentolamine Mesylate Injection	Extravasation of vasopressors (e.g., norepinephrine)
Phytonadione (Vit K) Injection	Reversal vitamin K antagonist (e.g., warfarin)
Phytonadione (Vit K) Oral	Reversal vitamin K antagonist (e.g., warfarin)
Potassium Iodide Oral	Radioactive iodine exposure
Pralidoxime Injection	Cholinergic toxicity (e.g., organophosphate poisoning)
Protamine Sulfate Injection	Heparin (UFH, LMWH) reversal
Pyridostigmine Injection	Reversal of non-depolarizing NMB
Pyridoxine HCI (Vit B6) Injection	Isoniazid toxicity
Rabies IVIG Injection	Rabies, postexposure prophylaxis
Rabies Vaccine Injection	Rabies, pre- and postexposure prophylaxis
Rivastigmine Oral	Anticholinergic toxicity (alternative to physostigmine)
Sodium Bicarbonate Injection	Various toxicities (e.g., cyclic antidepressants, salicylates)
Sodium Nitrite Injection	Cyanide poisoning
Sodium Thiosulfate Injection	Cyanide poisoning
Sodium Thiosulfate (Pedmark) Injection	Platin ototoxicity
Succimer (DMSO) Oral	Arsenic, mercury, and lead poisoning
Sugammadex Injection	Reversal of NMB (rocuronium or vecuronium)
Tetanus Immune Globulin Human Injection	Tetanus, prophylaxis and treatment
Tetanus Toxoid Injection <sup>a</sup>	Tetanus, prophylaxis
Thiamine (Vit B1) Injection	Ethanol (prevention/treatment of Wernicke encephalopathy), ethylene glycol toxicity
Tranexamic Acid Injection	Life-threatening bleed in patient on thrombolytic or anticoagulation (e.g., DOACs)
Uridine Triacetate (Vistogard) Oral	Fluorouracil or capecitabine toxicity

Abbreviations: DOAC = Direct-acting oral anticoagulant; IVIG = intravenous immune globulin; LMWH = Low molecular weight heparin; NMB = Neuromuscular blocker; UFH = Unfractionated heparin ª Refers to a tetanus toxoid-containing vaccine; see guidelines for preferred presentation based on age and current vaccine status

### Essential medications not actively manufactured

Medication <sup>a</sup>	FDA-labeled indication / clinical utilization
Cefotaxime Injection	For the treatment of patients with serious infections caused by susceptible strains of designated microorganisms.
Dimercaprol injection	For the treatment of arsenic, gold and mercury poisoning. It is indicated in acute lead poisoning when used concomitantly with edetate calcium disodium injection.
Physostigmine salicylate injection	To reverse the effect upon the central nervous system, caused by clinical or toxic dosages of drugs capable of producing the anticholinergic syndrome.

°Not manufactured in the US at time of publication but FDA is allowing temporary importation.



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