

Quarter 3 2022

## Essential medications for high-quality patient care



## Essential Medications – Q3 2022

### New: addition of 18 Oncology drugs

As part of the mission to end drug shortages, Vizient pharmacy experts continue to identify essential medications where, if not available, would prove the greatest threat to a hospital's ability to provide immediate and high-quality patient care. Updates this quarter include the addition of an oncology-focused list, which include 51 unique drugs, half of which are categorized as life-saving with no alternative, as well as the addition of iodinated contrast media agents to our everyday essential medications list.

- **Everyday Essential Medications**

As of this edition, there are a 215-line items, representing 202 unique drugs and six categories. Essential medications include:

- **Acute treatment drugs with no alternatives (62 drugs)** – Medicines used in acute and critical circumstances to sustain life and for which there are no current alternatives
- **Chronic treatment drugs with no alternatives (12 drugs)** – Products used in chronic disease states or conditions where no alternatives are available (e.g., chemotherapy medications)
- **High impact drugs (141 drugs)** – 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
- **Pediatric impact (59 drugs)** – 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
- **Antibiotic resistance (28 drugs)** – Includes identification of antimicrobials necessary to treat organisms listed in the CDC's Antibiotic Resistance Threats in the U.S
- **Antidotes (67 drugs)** – Medications used to counteract or neutralize the effect of another drug or poison.
- **Oncology (51 drugs)** – Traditional chemotherapy and targeted medication for life saving cancer treatment and supportive care agents.

### General comments

Updated quarterly, Vizient uses the identification of these essential medications to:

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

At time of publication, more than 55% of the essential medications are available through Novaplus, our market-leading, private label program that includes a consistent supply of competitively priced medications for both inpatient and outpatient facilities. Novaplus is also a critical strategy in protecting health systems and hospitals from drug shortages and the impact on resources and delivery of patient care.

The identification and recognition of these essential medications by our hospital members and clinical experts is another key action step we take to improve the resilience of supply. We remain committed to working with our members and other stakeholders to bring a permanent end to drug shortages. In fact, Vizient is a member of the End Drug Shortages Alliance, which includes health system, supply chain, industry and other stakeholders dedicated to solving pharmaceutical supply challenges by collaborating to increase visibility, access and advocacy. Learn more at [enddrugshortages.com](https://enddrugshortages.com).

Dan Kistner, Pharm.D  
Group Senior Vice President  
Vizient Pharmacy Solutions

## Essential Medications<sup>a</sup>

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. New medications are bolded throughout the chart.

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.

Everyday Essential Medications	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance <sup>b</sup>
3-Factor Prothrombin Complex Concentrate (Human) Inj (PCC) Inj			●		
4-Factor Prothrombin Complex Concentrate (Human) Inj (PCC) Inj			●		
Acetaminophen inj	●				
Acetaminophen Oral	●			●	
Acetaminophen Rectal	●			●	
Acetylcysteine Inj	●				
Acyclovir Sodium Inj			●	●	
Adenosine Inj	●				
Albumin Human Inj			●		
Albuterol Sulfate Inhalation			●	●	
Allopurinol Inj			●		
Alprostadil Inj	●			●	
Alteplase Recombinant Inj	●			●	
Amino Acid Inj		●			
Aminocaproic Acid Inj			●	●	
Aminophylline Inj	●			●	
Amiodarone HCl Inj	●			●	
Amoxicillin Oral			●	●	
Amoxicillin/Clavulanate Potassium Oral			●	●	
Amphotericin B Deoxycholate Inj			●		
Amphotericin B Lipid Complex Intravenous			●		●
Ampicillin Inj			●	●	
Ampicillin Sodium /Sulbactam Sodium Inj			●	●	●
Argatroban Inj			●		
Ascorbic Acid Inj	●				
Aspirin Oral	●				
Atropine Sulfate Inj	●			●	
Atropine Sulfate Ophthalmic			●		

Everyday Essential Medications	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance <sup>b</sup>
Azathioprine Sodium Inj			●		
Azithromycin Inj			●	●	●
Aztreonam Inj			●		●
Benznidazole Oral			●		
Betamethasone Inj			●	●	
Bumetanide Inj			●	●	
Bupivacaine HCl Inj			●		
Bupivacaine with Epi Inj			●		
Caffeine Citrate Inj			●	●	
Calcium Chloride Inj			●	●	
Calcium Gluconate Inj			●	●	
Caspofungin Acetate Inj			●		●
Cefazolin Sodium Inj			●	●	
Cefepime HCl Inj			●		
Cefiderocol inj			●		●
Cefotaxime Sodium Inj			●	●	
Ceftaroline Fosamil Monoacetate Inj			●		●
Ceftazidime Inj			●	●	
Ceftazidime/ avibactam inj			●		●
Ceftolozane/ tazobactam inj			●		●
Ceftriaxone Sodium Inj			●		●
Chlorothiazide Sodium Inj			●	●	
Chromic Chloride Inj		●			
Ciprofloxacin HCl Ophthalmic			●		
Ciprofloxacin Inj			●		
Cisatracurium Besylate Inj			●		
Clindamycin Phosphate Inj	●				
Clobazam Oral	●			●	
Colistimethate Sodium Inj	●				●
Continuous Renal Replacement Therapy (CRRT)	●				
Copper Inj		●			
Cyclosporine Inj			●		
Cyclosporine Oral		●			
Cysteine HCl Inj		●		●	
Daptomycin Inj			●		●

Everyday Essential Medications	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance <sup>b</sup>
Darbepoetin Alfa Inj			●		
Desflurane Inhalation			●		
Desmopressin Acetate Inj	●				
Dexamethasone Sodium Phosphate Inj			●		
Dexmedetomidine HCl Inj			●		
Dextrose 50% in Water Inj	●			●	
Diazepam Inj			●	●	
Digestive Enzymes Oral		●		●	
Diltiazem HCl Inj			●		
Diphenhydramine HCl Inj	●				
Dobutamine HCl Inj			●	●	
Dopamine HCl Inj			●	●	
Doxycycline Hyclate Inj	●				
Enoxaparin Sodium Inj			●		
Epinephrine (Racepinephrine) Inhalation			●	●	
Epinephrine Inj	●			●	
Epoetin Alfa Recombinant Inj			●		
Eptifibatide Inj			●		
Ertapenem inj			●		●
Erythromycin Ophthalmic			●	●	
Ethambutol HCl Oral			●		
Etomidate Inj			●		
Famotidine Inj			●		
Fat Emulsion Intravenous	●			●	
Fentanyl Citrate Inj			●		
Ferric Carboxymaltose Inj			●		
Ferric Gluconate Complex Inj			●		
Ferumoxytol Inj			●		
Fidaxomicin Oral			●		●
Fluconazole Inj			●		
Fludrocortisone Acetate Oral		●			
Flumazenil Inj	●				
Fluorescein Sodium Strips Ophthalmic			●		
Folic Acid Inj		●			
Fosphenytoin Sodium Inj			●	●	

Everyday Essential Medications	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance <sup>b</sup>
Furosemide Inj			●		
Gentamicin Sulfate Inj			●	●	●
Glucagon Inj	●				
Glycopyrrolate Inj			●	●	
Haloperidol Lactate Inj			●		
Heparin Sodium Inj			●		
Hydrocortisone Sodium Succinate Inj			●		
Hydromorphone HCl Inj			●		
Ibuprofen Inj	●			●	
Ibuprofen Oral	●				
Imipenem/ Cilastatin/Relebactam Inj			●		●
Immune Globulin (IVIG) Inj	●				
Indomethacin Inj	●			●	
Insulin Regular (Human) Inj	●				
<b>Iodinated Contrast Media</b>	●				
Ipratropium Bromide Inhalation	●			●	
Iron dextran Inj			●		
Iron sucrose Inj			●		
Isoflurane Inhalation			●		
Isoproterenol HCl Inj			●		
Ketamine HCl Inj	●				
Labetalol HCl Inj			●		
Lacosamide Inj			●		
Lactulose Oral			●	●	
Lefamulin Inj			●		●
Levetiracetam Inj	●			●	
Levofloxacin Inj			●		
Levothyroxine Sodium (T4) Inj	●				
Lidocaine Hydrochloride Inj			●		
Lidocaine Hydrochloride/ Epinephine Bitartrate Inj			●		
Linezolid Inj			●		●
Liothyronine Sodium (T3) Inj	●				
Lorazepam Inj			●		
Magnesium Sulfate Inj	●				
Manganese Inj		●			

Everyday Essential Medications	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance <sup>b</sup>
Meropenem Inj			●	●	●
Meropenem/Vaborbactam Inj			●		●
Methadone HCl Oral			●		
Methylene Blue Inj	●				
Methylergonovine Maleate Inj			●		
Methylprednisolone Sodium Succinate Inj			●		
Metoprolol Tartrate Inj			●		
Metronidazole Inj			●		
Micafungin Sodium Inj			●		●
Midazolam HCl Inj			●	●	
Milrinone Lactate Inj			●	●	
Morphine Sulfate Inj			●		
Moxifloxacin Inj			●		●
Mycophenolate Mofetil HCl inj			●		
Naloxone HCl Inj	●				
Neostigmine Methylsulfate Inj			●		
Nicardipine HCl Inj			●		
Nitroglycerin Inj			●		
Nitroprusside Sodium Inj			●		
Norepinephrine Bitartrate Inj			●		
Octreotide Acetate Inj	●				
Ofloxacin Ophthalmic			●		
Ondansetron HCl Inj			●	●	
Oxytocin Inj	●				
Pantoprazole Sodium Inj			●		
Phenobarbital Sodium Inj			●	●	
Phentolamine Mesylate Inj	●				
Phenylephrine HCl Inj	●				
Phytonadione (Vit K) Inj	●			●	
Piperacillin Sodium/Tazobactam Sodium Inj			●		
Polymyxin B Inj			●		●
Potassium Acetate Inj			●		
Potassium Chloride Inj			●		
Potassium Iodide Oral			●		

Everyday Essential Medications	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance <sup>b</sup>
Potassium Phosphate Inj			●		
Prednisolone Oral			●	●	
Propofol Inj			●		
Propranolol HCl Inj			●		
Propylthiouracil (PTU) Oral	●				
Pyridoxine HCl (Vit B6) Inj	●				
Remifentanyl HCl Inj			●		
Reteplase Recombinant Inj			●		
Rho(D) Immune Globulin Inj	●				
Ribavirin Inhalation	●				
Rocuronium Bromide Inj			●		
Ropivacaine HCl Inj			●		
Selenium Inj		●		●	
Sevoflurane Inhalation			●		
Sildenafil Inj	●			●	
Sirolimus Oral			●		
Sodium Acetate Inj			●		
Sodium Benzoate/ Sodium Phenylacetate Inj	●			●	
Sodium Bicarbonate Inj	●				
Sodium Chloride 0.9% Intravenous	●				
Sodium Chloride 23.4% Intravenous	●				
Sodium Chloride 3% Intravenous	●				
Sodium Chloride Bacertistatic 0.9%			●		
Sodium Phosphate Inj			●	●	
Sodium Polystyrene Sulfonate Oral			●		
Sodium Thiosulfate Inj	●				
Sterile Water for Inj (SWFI) Inj			●		
Succinylcholine Chloride Inj			●		
Sulfamethoxazole/Trimethoprim Oral	●				●
Surfactant, Lung Intratracheal	●			●	
Tacrolimus Inj			●		
Tacrolimus Oral			●		
Tedizolid Inj			●		●
Thiamine (Vit B1) Inj	●				
Thrombin Topical	●				



Everyday Essential Medications	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance <sup>b</sup>
Tigecycline Inj			●		●
Tirofiban HCl Inj			●		
Tobramycin Inhalation	●			●	
Tocilizumab Inj	●				
Tranexamic Acid Inj	●				
Valganciclovir HCl Oral			●		
Vancomycin HCl Inj			●	●	●
Vasopressin Inj	●				
Vecuronium Bromide Inj			●	●	
Vitamin D Analogs Inj		●			
Voriconazole Inj			●		●
Warfarin Sodium Oral			●		
Zinc Chloride Inj		●		●	

Abbreviations: BCG = Bacillus Calmette–Guérin; DMSO = dimethyl sulfoxide; HCl = hydrochloride; inj=inj; IV = intravenous; IVIG = intravenous immunoglobulin; NS = normal saline

<sup>a</sup>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.

<sup>b</sup>This column contains 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.

Items in bold are new

## Antidotes

Antidote	Primary indication in toxicology <sup>a</sup>
3-factor prothrombin complex concentrate (PCC) Inj	Reversal of anticoagulants (e.g., warfarin)
4-factor prothrombin complex concentrate (PCC) Inj	Reversal of anticoagulants (e.g., warfarin, factor Xa inhibitors)
Acetylcysteine Inj	Acetaminophen toxicity
Activated charcoal Oral	Gastrointestinal decontamination
Activated prothrombin complex concentrate (aPCC; FEIBA) Inj	Reversal of anticoagulants (e.g., DOACs)
Aminocaproic acid Inj	Life-threatening bleed in patient on thrombolytic or anticoagulation (e.g., DOACs)
Andexanet alfa (andexanet) Inj	Reversal of factor Xa inhibitors
Antivenin (Latrodectus mactans) Inj	Envenomation due to Latrodectans mactans (black widow spider)
Atropine Inj	Cholinergic toxicity (e.g., organophosphate poisoning)

Antidote	Primary indication in toxicology <sup>a</sup>
Botulinum antitoxin Inj	Botulism (Clostridium botulinum)
Calcium chloride Inj	Beta-blocker, calcium channel blocker toxicity
Calcium gluconate Inj	Beta-blocker, calcium channel blocker toxicity
Calcium gluconate Topical	Hydrofluoric acid
Centruroides Immune F(ab') <sub>2</sub> (equine) Inj	Scorpion envenomation
Crotalidae Immune F(ab') <sub>2</sub> (equine) Inj	Crotalinae envenomation
Crotalidae Polyvalent-immune Fab (ovine) Inj	Crotalinae envenomation
Cyproheptadine Oral	Serotonin syndrome
Dantrolene Inj	Malignant hyperthermia
Deferoxamine Inj	Acute iron toxicity
Dexrazoxane Inj	Extravasation of anthracyclines
Dextrose Inj	Hypoglycemia (antidiabetic agents)
Digoxin Immune Fab Inj	Digoxin toxicity
Dimercaprol Inj	Heavy metal (e.g., arsenic, lead, mercury) poisoning
Dimethyl sulfoxide (DMSO) Inj	Extravasation
Edetate calcium disodium Inj	Lead poisoning
Flumazenil Inj	Reversal of benzodiazepines
Folic acid Inj	Methanol toxicity, reduce toxicity associated with antifolate chemotherapy
Folic acid Oral	Methanol toxicity, reduce toxicity associated with antifolate chemotherapy
Fomepizole Inj	Methanol, ethylene glycol toxicity
Glucagon Inj	Beta-blocker, calcium channel blocker toxicity
Glucarpidase Inj	Methotrexate toxicity
Glycopyrrolate Inj	Adjunct in NMB reversal (offset cholinergic effects associated w/ neostigmine, pyridostigmine)
Hyaluronidase Inj	Extravasation, misc.
Hydroxocobalmin (Cyanokit) Inj	Cyanide poisoning
Idarucizumab (Praxbind) Inj	Reversal of dabigatran
Insulin regular Inj	Beta-blocker, calcium channel blocker toxicity
Leucovorin Inj	Methotrexate toxicity
Leucovorin Oral	Methotrexate toxicity
Levocarnitine (L-carnitine) Inj	Valproic acid toxicity
Levocarnitine (L-carnitine) Oral	Valproic acid toxicity

Antidote	Primary indication in toxicology <sup>a</sup>
Levoleucovorin Inj	Methotrexate toxicity
Lipid emulsion, 20% Inj	Systemic toxicity from local anesthetics; lipid soluble cardiotoxics (e.g., beta-blockers, CCBs)
Methylene blue Inj	Methemoglobinemia
Naloxone Inj	Reversal of opioids
Neostigmine Inj	Reversal of non-depolarizing NMB
Octreotide Inj	Hypoglycemia induced by insulin-secretagogues (e.g., sulfonylureas)
Phentolamine Inj	Extravasation of vasopressors (e.g., norepinephrine)
Physostigmine Inj	Anticholinergic toxicity
Phytonadione Inj	Reversal vitamin K antagonist (e.g., warfarin)
Phytonadione Oral	Reversal vitamin K antagonist (e.g., warfarin)
Potassium iodide Oral	Radioactive iodine exposure
Pralidoxime Inj	Cholinergic toxicity (e.g., organophosphate poisoning)
Protamine Inj	Heparin (UFH, LMWH) reversal
Pyridostigmine Inj	Reversal of non-depolarizing NMB
Pyridoxine Inj	Isoniazid toxicity
Rabies immune globulin (human) Inj	Rabies, postexposure prophylaxis
Rabies vaccine Inj	Rabies, pre- and postexposure prophylaxis
Sodium bicarbonate Inj	Various toxicities (e.g., cyclic antidepressants, salicylates)
Sodium nitrite Inj	Cyanide poisoning
Sodium thiosulfate Inj	Cyanide poisoning
Succimer Oral	Arsenic, mercury, and lead poisoning
Sugammadex Inj	Reversal of NMB (rocuronium or vecuronium)
Tetanus immune globulin (human) Inj	Tetanus, prophylaxis and treatment
Tetanus toxoid* Inj	Tetanus, prophylaxis
Thiamine Inj	Ethanol (prevention/treatment of Wernicke encephalopathy), ethylene glycol toxicity
Tranexamic acid Inj	Life-threatening bleed in patient on thrombolytic or anticoagulation (e.g., DOACs)
Uridine triacetate Oral	Fluorouracil or capecitabine toxicity

Abbreviations: DOAC=direct-acting oral anticoagulant; inj = inj; LMWH=low molecular weight heparin; NMB=neuromuscular blocker; UFH=unfractionated heparin

\*refers to a tetanus toxoid-containing vaccine; see guidelines for preferred presentation based on age and current vaccine status

## Oncology

Drug name	Life-saving drugs with no alternative	High Impact
<b>Arsenic trioxide Inj</b>	●	
Asparaginase (Erwinia) Inj		●
<b>Asparaginase (Erwinia) [recombinant] Inj</b>		●
BCG Vaccine Inj	●	
<b>Bendamustine Inj</b>	●	
Bleomycin Sulfate Inj		●
<b>Bortezomib Inj</b>		●
Busulfan Inj	●	
Calcitonin-Salmon Inj	●	
Carboplatin Inj		●
<b>Capecitabine Oral</b>		●
Cisplatin Inj		●
Cyclophosphamide Inj		●
Cytarabine (Conventional) Inj	●	
Dacarbazine Inj	●	
Dactinomycin Inj	●	
Daunorubicin HCl Inj		●
Doxorubicin HCl (Conventional) Inj		●
Etoposide Inj	●	
Filgrastim Inj*		●
<b>Flourouracil Inj</b>		●
Fludarabine Inj	●	
<b>Ibrutinib Oral</b>		●
Ifosfamide Inj	●	
<b>Imatinib Oral</b>		●
<b>Irinotecan Inj</b>		●
Isotretinoin Oral	●	
Hydroxyurea Oral	●	
<b>Lenalidomide Oral</b>		●
<b>Leuprolide Inj</b>		●
Lomustine Oral		●

Drug name	Life-saving drugs with no alternative	High Impact
<b>Melphalan Inj</b>	●	
Mercaptopurine Oral	●	
Mesna Inj		●
Methotrexate Inj	●	
Mitomycin Inj		●
Nelarabine Inj	●	
<b>Oxaliplatin Inj</b>		●
Paclitaxel (Conventional) Inj		●
Pegaspargase Inj		●
<b>Procarbazine Oral</b>	●	
Rasburicase Inj	●	
<b>Rituximab Inj*</b>	●	
<b>Tamoxifen Oral</b>		●
<b>Thalidomide Oral</b>		●
Thiotepa Inj	●	
<b>Trastuzumab Inj*</b>	●	
Tretinoin Oral	●	
Vinblastine Sulfate Inj	●	
Vincristine Sulfate Inj	●	
Zoledronic Acid Inj		●

<sup>a</sup> These medications may have additional indications

<sup>b</sup> Refers to a tetanus toxoid-containing vaccine; see guidelines for preferred presentation based on age and current vaccine status  
Items in bold are new

To learn more details about Vizient Pharmacy Solutions and the **Novaplan Enhanced Supply program**, go to [www.vizientinc.com](http://www.vizientinc.com) or email [pharmacyquestions@vizientinc.com](mailto:pharmacyquestions@vizientinc.com).



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