

A healthcare worker, likely a nurse, is shown in profile, looking upwards and to the right. She is wearing a light blue short-sleeved uniform shirt and a clear blue plastic protective gown. Her hair is pulled back. She is wearing blue nitrile gloves and is adjusting a clear plastic IV drip chamber on a metal stand. The background is a bright, out-of-focus hospital room with large windows.

vizient®

Quarter 2 2022

**Essential medications for
high-quality patient care**

Essential Medications – Q2 2022

New: addition of 60 antidotes

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. **This also includes the addition of an antidotes list which includes 67-line items representing 60 unique drugs and two categories that distinguish medications used in everyday care as compared to those required to neutralize the effect of another drug or poison.**

As of this edition, there are a 246-line items, representing 234 unique drugs and five categories. Essential medications include:

- **Acute treatment drugs with no alternatives (66 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 (36 drugs)** – Products used in chronic disease states or conditions where no alternatives are available (e.g., chemotherapy medications)
- **High impact drugs (144 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 (64 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

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.

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

Essential Medications^a

Essential Medication	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance ^b
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 lipid complex inj			●		
Amphotericin B deoxycholate inj			●		●
Ampicillin inj			●	●	
Ampicillin sodium/sulbactam sodium inj			●	●	●
Argatroban inj			●		
Ascorbic acid inj	●				
Asparaginase (<i>Erwinia</i>) inj			●		
Aspirin oral	●				
Atropine inj	●			●	
Atropine sulfate ophthalmic			●		
Azathioprine sodium inj			●		
Azithromycin inj			●	●	●

Essential Medication	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance ^b
Aztreonam inj			●		●
BCG vaccine inj		●			
Benznidazole oral			●		
Betamethasone inj			●	●	
Bleomycin sulfate inj		●			
Bumetanide inj			●	●	
Bupivacaine HCl inj			●		
Bupivacaine with Epi inj			●		
Busulfan inj		●			
Caffeine citrate inj			●	●	
Calcitonin-salmon inj	●				
Calcium chloride inj			●	●	
Calcium gluconate inj			●	●	
Carboplatin inj		●			
Caspofungin acetate inj			●		●
Cefazolin sodium inj			●	●	
Cefepime HCl inj			●		
Cefidericol 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 ^a			●		
Cisplatin inj		●			
Clindamycin phosphate inj	●				
Clobazam oral	●			●	
Colistimethate sodium inj	●				●

Essential Medication	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance ^b
Continuous Renal Replacement Therapy Solutions inj	●				
Copper inj		●			
Cyclophosphamide inj		●			
Cyclosporine inj			●		
Cyclosporine oral		●			
Cysteine HCl inj		●		●	
Cytarabine conventional inj		●			
Dacarbazine inj		●			
Dactinomycin inj		●			
Daptomycin inj			●		●
Darbepoetin alfa inj			●		
Daunorubicin HCl 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			●	●	
Doxorubicin HCl conventional inj		●			
Doxycycline hyclate inj	●				
Enoxaparin sodium inj			●		
Epinephrine inhalation (Racepinephrine)			●	●	
Epinephrine inj	●			●	
Epoetin alfa recombinant inj			●		
Eptifibatide inj			●		
Ertapenem inj			●		●
Erythromycin ophthalmic			●	●	

Essential Medication	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance ^b
Ethambutol HCl oral			●		
Etomidate inj			●		
Etoposide inj			●		
Famotidine inj			●		
Fat emulsion inj	●			●	
Fentanyl citrate inj			●		
Ferric carboxymaltose inj			●		
Ferric gluconate complex inj			●		
Ferumoxytol inj			●		
Fidaxomicin oral			●		●
Filgrastim inj			●		
Fluconazole inj			●		
Fludarabine inj		●			
Fludrocortisone acetate oral		●			
Flumazenil Inj ^a	●				
Fluorescein sodium ophthalmic strips			●		
Folic acid inj		●			
Fosphenytoin Sodium inj			●	●	
Furosemide inj			●		
Gentamicin sulfate inj			●	●	●
Glucagon inj	●				
Glycopyrrolate inj			●	●	
Haloperidol inj			●		
Heparin Sodium inj			●		
Hydrocortisone sodium succinate inj			●		
Hydromorphone HCl inj			●		
Hydroxyurea oral	●				
Ibuprofen inj	●			●	
Ibuprofen oral	●				
Ifosfamide inj		●			
Imipenem/ cilastatin/ relebactam inj			●		●
Immune globulin (IVIG) inj	●				
Indomethacin inj	●			●	
Insulin regular (human) inj	●				

Essential Medication	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance ^b
Ipratropium bromide inhalation	●			●	
Iron dextran inj			●		
Iron sucrose inj			●		
Isoflurane inhalation			●		
Isoproterenol HCl inj			●		
Isotretinoin oral		●		●	
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/ epinephrine bitartrate inj			●		
Linezolid inj			●		●
Liothyronine sodium (T3) inj	●				
Lomustine oral		●		●	
Lorazepam inj			●		
Magnesium sulfate inj	●				
Manganese inj		●			
Mercaptopurine oral		●			
Meropenem inj			●	●	●
Meropenem/ vaborbactam inj			●		●
Mesna inj	●			●	
Methadone HCl oral			●		
Methotrexate inj	●				
Methylene blue inj	●				
Methylergonovine maleate injection			●		
Methylprednisolone sodium succinate inj			●		
Metoprolol tartrate inj			●		

Essential Medication	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance ^b
Metronidazole inj			●		
Micafungin Sodium inj			●		●
Midazolam HCl inj			●	●	
Milrinone lactate inj			●	●	
Mitomycin inj		●			
Morphine sulfate inj			●		
Moxifloxacin inj			●		●
Mycophenolate Mofetil HCl inj			●		
Naloxone HCl inj	●				
Nelarabine 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	●				
Paclitaxel conventional inj		●			
Pantoprazole sodium inj			●		
Pegaspargase inj		●			
Phenobarbital sodium inj			●	●	
Phentolamine meyslate inj	●				
Phenylephrine HCl inj	●				
Phytonadione (vitamin K) inj	●			●	
Piperacillin sodium / tazobactam sodium inj			●		
Polymyxin B inj			●		●
Potassium acetate inj			●		
Potassium chloride inj			●		
Potassium iodide oral			●		
Potassium phosphate inj			●		
Prednisolone oral			●	●	

Essential Medication	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance ^b
Propofol inj			●		
Propranolol HCl inj			●		
Propylthiouracil (PTU) oral	●				
Prothrombin complex concentrate (human) inj			●		
Pyridoxine HCl (vitamin B6) inj	●				
Rasburicase inj	●			●	
Remifentanyl HCl inj			●		
Retepase recombinant inj			●		
Rho(D) immune globulin (RhoGam) 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% IV	●				
Sodium chloride 23.4% IV	●				
Sodium chloride 3% IV ^a	●				
Sodium chloride bacteriostatic 0.9% inj			●		
Sodium phosphate inj			●	●	
Sodium polystyrene sulfonate oral			●		
Sodium thiosulfate inj	●				
Sterile water for injection (SWFI)			●		
Succinylcholine chloride inj			●		
Sulfamethoxazole/trimethoprim oral	●				●
Surfactant, lung intratracheal	●			●	
Tacrolimus inj			●		
Tacrolimus oral			●		

Essential Medication	Acute treatment drugs / no alternative	Chronic treatment drugs/ no alternative	High impact	Pediatric impact	Antibiotic resistance ^b
Tedizolid inj			●		●
Thiamine (vitamin B1) inj	●				
Thiotepa inj		●			
Thrombin topical	●				
Tigecycline inj			●		●
Tirofiban HCl inj			●		
Tobramycin inhalation	●			●	
Tocilizumab inj	●				
Tranexamic acid inj	●				
Tretinoin oral		●			
Valganciclovir HCl oral			●		
Vancomycin HCl in			●	●	●
Vasopressin inj	●				
Vecuronium bromide inj			●	●	
Vinblastine sulfate inj		●			
Vincristine sulfate inj		●		●	
Vitamin D analogs inj		●			
Voriconazole inj			●		●
Warfarin sodium oral			●		
Zinc chloride inj		●		●	
Zoledronic acid inj			●		

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

^aMedications 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.

^bThis 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.

Antidotes

Antidote	Primary indication in toxicology ^a
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)

Antidote	Primary indication in toxicology ^a
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 <i>Latrodectus mactans</i> (black widow spider)
Atropine inj	Cholinergic toxicity (e.g., organophosphate poisoning)
Botulinum antitoxin inj	Botulism (<i>Clostridium botulinum</i>)
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') ₂ (equine) inj	Scorpion envenomation
Crotalidae Immune F(ab') ₂ (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

Antidote	Primary indication in toxicology ^a
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
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

Antidote	Primary indication in toxicology ^a
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 ^b	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 = injection; LMWH=low molecular weight heparin; NMB=neuromuscular blocker; UFH=unfractionated heparin

^a These medications may have additional indications


^b Refers to a tetanus toxoid-containing vaccine; see guidelines for preferred presentation based on age and current vaccine status

Any listing of drugs is not static and has the potential to change as new products enter the market and as clinical recommendations are revised. Patient populations also vary, so the specific therapies of greatest importance are based on provider need. Finally, 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.

To learn more details about Vizient Pharmacy Solutions and the [Novaplus Enhanced Supply program](#), go to www.vizientinc.com or email pharmacyquestions@vizientinc.com.

Do you know your organization's utilization of essential medications?

View your spend on items matched to Vizient's list of essential medications through the **Vizient Savings Actualyzer for Pharmacy** platform. Our user-friendly interface provides real-time purchasing oversight and visibility across all spend types (WAC, GPO and 340B). [Learn more →](#)

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