



November 2017
Drug Information Update

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NEWLY AVAILABLE GENERICS

GENERIC DRUG NAME	STRENGTH & DOSAGE FORM	GENERIC MANUFACTURER	BRAND NAME
LIDOCAINE HCL	3.88% CREAM	PURETEK CORPORA	LIDOTRAL
MAFENIDE ACETATE	50 gram CREAM	MYLAN	SULFAMYLON
OSELTAMIVIR PHOSPHATE	6 mg/mL suspension	ZYDUS PHARMACETICALS	TAMIFLU
RIBAVIRIN	600 mg (28)-400 mg (28) TB DS PK	ABBVIE US LLC	RIBAVIRIN
RIBAVIRIN	400 mg (28)-400 mg (28) TB DS PK	ABBVIE US LLC	RIBAVIRIN
RIBAVIRIN	600 mg (28)-600 mg (28) TB DS PK	ABBVIE US LLC	RIBAVIRIN
RIBAVIRIN	200 mg (28)-400 mg (28) TB DS PK	ABBVIE US LLC	RIBAVIRIN
CARVEDILOL ER	10 mg TABLET	APOTEX CORP	COREG CR
CARVEDILOL ER	20 mg TABLET	APOTEX CORP	COREG CR
CARVEDILOL ER	40 mg TABLET	APOTEX CORP	COREG CR
CARVEDILOL ER	80 mg TABLET	APOTEX CORP	COREG CR
DICLOFEN SODIUM/KINESIOLOGY TAPE	1.5% KIT	PURETEK CORPORA	XRYLIX

NEW DRUG ENTITIES/COMBINATIONS/STRENGTHS

DESCRIPTION	BRAND NAME	GENERIC NAME	STRENGTH	NOTES
ANTI-INFLAMMATORY TUMOR NECROSIS FACTOR INHIBITOR	ENBREL	ETANERCEPT	50 mg/mL	New Dosage form
ANTINEOPLASTIC SYSTEMIC ENZYME INHIBITORS	ALIQOPA	COPANLISIB DIHCL	60 mg	New Entity
CALCIMIMETIC, PARATHYROID CALCIUM ENHANCER	PARSABIV	ETELCALCETIDE HYDROCHLORIDE	5 mg/mL	New Entity
PULMONARY ANTI-HTN, ENDOTHELIN RECEPTOR ANTAGONIST	TRACLEER	BOSENTAN	32 mg	New Strength and Dosage Form
INTERLEUKIN-5(IL-5) RECEPTOR ALPHA ANTAGONIST, MAB	FASENRA	BENRALIZUMAB	30 mg/mL	New Entity
VITAMIN A DERIVATIVES	RETIN-A MICRO PUMP	TRETINOIN	0.06 % topical gel	New Strength
ANTIHYPERGLY, INCRETIN MIMETIC(GLP-1 RECEPTOR AGONIST)	BYDUREON BCISE	EXENATIDE MICROSPHERES	2 mg/ 0.85 mL	New Formulation
ANTIHYPERGLYCEMIC, SGLT-2 AND DPP-4 INHIBITOR COMB	QTERN	DAPAGLIFLOZIN/ SAXAGLIPTIN HCL	10 mg-5 mg	New Combination
ANTI-INFLAMMATORY/ ANTIARTHRITIS AGENTS, MISC	DUROLANE	HYALURONATE SODIUM, STABILIZED	60 mg/3 mL	New Strength
ANTIEMETIC/ ANTIVERTIGO AGENTS	VARUBI	ROLAPITANT HCL	166.5 mg/92.5 mL	New Strength, Route and Dosage Form
TETRACYCLINES	XIMINO	MINOCYCLINE HCL	45 mg	New Dosage Form
TETRACYCLINES	XIMINO	MINOCYCLINE HCL	90 mg	New Dosage Form
TETRACYCLINES	XIMINO	MINOCYCLINE HCL	145 mg	New Dosage Form
ANTINEOPLASTIC SYSTEMIC ENZYME	CALQUENCE	ACALABRUTINIB	100 mg	New Entity

DESCRIPTION	BRAND NAME	GENERIC NAME	STRENGTH	NOTES
INHIBITORS				
ANTIPROTOZOAL DRUGS, MISCELLANEOUS	BENZNIDAZOLE	BENZNIDAZOLE	12.5 mg	New Entity
ANTIPROTOZOAL DRUGS, MISCELLANEOUS	BENZNIDAZOLE	BENZNIDAZOLE	100 mg	New Entity

NEW INDICATIONS (EXISTING DRUGS)

SIMPONI ARIA®

October 20, 2017

Horsham, Pa., October 20, 2017 — Janssen Biotech, Inc., announced today that the U.S. Food and Drug Administration (FDA) has approved SIMPONI ARIA® (golimumab), the only fully-human anti-tumor necrosis factor (TNF)-alpha therapy administered via a 30-minute infusion, for the treatment of adults with active psoriatic arthritis (PsA) or active ankylosing spondylitis (AS).

Today's approvals follow the first FDA approval of SIMPONI ARIA® in 2013 for the treatment of moderately to severely active rheumatoid arthritis (RA). The PsA and AS approvals are supported by comprehensive clinical development programs that demonstrated the significant efficacy of SIMPONI ARIA® over placebo, while offering a consistent safety profile across all indications. In the study for the treatment of active PsA, patients experienced improvement in joint symptoms and inhibition of structural damage. In the study for treatment of active AS, results showed improvement in measures of disease activity.

Source: Janssen Biotech, Inc.

BYDUREON® BCise™

October 23, 2017

AstraZeneca today announced that the US Food and Drug Administration (FDA) has approved Bydureon BCise (exenatide extended-release) injectable suspension, a new formulation of Bydureon in an improved once-weekly, single-dose auto injector device for adults with type-2 diabetes whose blood sugar remains uncontrolled on one or more oral medicines in addition to diet and exercise, to improve glycemic control.

Source: AstraZeneca

SOLIRIS®

October 23, 2017

NEW HAVEN, Conn.--(BUSINESS WIRE)--Alexion Pharmaceuticals, Inc. (NASDAQ:ALXN) announced today that the U.S. Food and Drug Administration (FDA) has approved Soliris® (eculizumab) as a treatment for adult patients with generalized myasthenia gravis (gMG) who are anti-acetylcholine receptor (AChR) antibody-positive. In the Phase 3 REGAIN study and its ongoing open-label extension study, Soliris demonstrated treatment benefits for patients with anti-AChR antibody-positive gMG who had previously failed immunosuppressive treatment and continued to suffer from significant unresolved disease symptoms, which can include difficulties seeing, walking, talking, swallowing and breathing. These patients are at an increased risk of disease exacerbations and crises that may require hospitalization and intensive care and may be life-threatening. These patients represent approximately 5-10% of all patients with MG.

Source: Alexion Pharmaceuticals, Inc.

VARUBI®

October 25, 2017

WALTHAM, Mass., Oct. 25, 2017 (GLOBE NEWSWIRE) -- TESARO, Inc. (NASDAQ:TSRO), an oncology-focused biopharmaceutical company, today announced that the U.S. Food and Drug

Administration (FDA) has approved VARUBI® (rolapitant) IV in combination with other antiemetic agents in adults for the prevention of delayed nausea and vomiting associated with initial and repeat courses of emetogenic cancer chemotherapy, including, but not limited to, highly emetogenic chemotherapy. Delayed nausea and vomiting can occur anytime between 25 and 120 hours following chemotherapy, and is often extremely debilitating.

Source: TESARO, Inc.

ZELBORAF®

November 6, 2017

South San Francisco, CA -- November 6, 2017 -Genentech, a member of the Roche Group (SIX: RO, ROG; OTCQX: RHHBY), today announced that the U.S. Food and Drug Administration (FDA) has approved Zelboraf® (vemurafenib) for Erdheim-Chester disease (ECD) with BRAF V600 mutation. ECD is a rare, serious blood disease characterized by the abnormal multiplication of certain white blood cells called histiocytes, which can invade normal tissues and organs in the body.

Source: Genentech

AURYXIA®

November 7, 2017

BOSTON, Nov. 07, 2017 (GLOBE NEWSWIRE) -- Keryx Biopharmaceuticals, Inc. (Nasdaq: KERX), a company focused on bringing innovative medicines to people with kidney disease, today announced that the U.S. Food and Drug Administration (FDA) has approved Auryxia for an additional indication. The approval is for the treatment of iron deficiency anemia in adults with chronic kidney disease (CKD), not on dialysis. Auryxia was originally approved in September 2014 for the control of serum phosphorus levels in people with chronic kidney disease who require dialysis.

Source: Keryx Biopharmaceuticals, Inc.

SPRYCEL®

November 10, 2017

PRINCETON, N.J.--(BUSINESS WIRE)--Bristol-Myers Squibb Company (NYSE:BMY) today announced the U.S. Food and Drug Administration (FDA) has expanded the indication for Sprycel® (dasatinib) tablets to include the treatment of children with Philadelphia chromosome-positive (Ph+) chronic myeloid leukemia (CML) in chronic phase (CP).¹ This approval for Sprycel in pediatric patients with Ph+ CML in chronic phase was granted under priority review, and the indication received orphan drug designation from the FDA. The safety and efficacy of Sprycel in pediatric patients was evaluated in two pediatric studies of 97 patients with CP-CML: an open-label, non-randomized, dose-ranging trial (NCT00306202) and an open-label, non-randomized, single-arm trial (NCT00777036). Among the 97 patients in the two studies, 51 patients (exclusively from the single-arm trial) had newly diagnosed CP-CML, and 46 patients (17 from the dose-ranging trial and 29 from the single-arm trial) were resistant or intolerant to previous treatment with imatinib.

Source: Bristol-Myers Squibb Company

VRAYLAR™

November 13, 2017

DUBLIN, Nov. 13, 2017 /PRNewswire/ -- Allergan plc (NYSE: AGN) today announced that the U.S.

Food and Drug Administration (FDA) has approved the supplemental New Drug Application (sNDA) for VRAYLAR™ (cariprazine) for the maintenance treatment of adults with schizophrenia. VRAYLAR is also approved in the U.S. in adults for the acute treatment of schizophrenia and acute treatment of manic or mixed episodes of bipolar I disorder.

Source: Allergan plc

FDA NEWS/BULLETINS/ADVISORIES/SAFETY ALERTS

Octagam [Immune Globulin Intravenous (human)] 10 Percent Liquid Preparation]: Voluntary Market Withdrawal

[Posted 10/23/2017]

ISSUE: Octapharma USA Inc. is initiating a voluntary market withdrawal of octagam 10% [Immune Globulin Intravenous (human)] 10% Liquid Preparation] that is labeled with lot numbers K724B8541 & K725A8541. Although there have been no reports of serious injury at this time, Octapharma has determined, through consultation with the public health authorities at FDA, the most prudent course of action is to suspend further administration of octagam 10% from these particular production lots.

BACKGROUND: Lot numbers K724B8541 & K725A8541 are affected by this recall.

RECOMMENDATION: Distributors that received these lots of octagam 10% from Octapharma are asked to immediately quarantine these lots and contact Octapharma for return instructions.

Healthcare professionals and patients are encouraged to report adverse events or side effects related to the use of these products to the FDA's MedWatch Safety Information and Adverse Event Reporting Program:

- Complete and submit the report Online: www.fda.gov/MedWatch/report
- Download form or call 1-800-332-1088 to request a reporting form, then complete and return to the address on the pre-addressed form, or submit by fax to 1-800-FDA-0178

Source: U.S. Food and Drug Administration (FDA)

MedWatch - The FDA Safety Information and Adverse Event Reporting Program

[Posted 11/03/2017]

ISSUE: Fresenius Kabi USA is voluntarily recalling Lot of Midazolam Injection, USP, 2 mg/2 mL packaged in a 2 mL prefilled single-use glass syringe to the hospital/user level. The product mislabeled as Midazolam Injection, USP, 2 mg/2 mL contains syringes containing and labeled as Ondansetron Injection, USP, 4 mg/2 mL.

BACKGROUND: A missed dose of midazolam may lead to ineffective sedation and/or anxiety related to patient recall of a surgical or diagnostic procedure. If a selection error occurs, a patient who may have received a pre-operative dose of ondansetron may inadvertently receive an additional dose of ondansetron. Dose-dependent serious cardiac arrhythmias may be observed with higher dosages of ondansetron in those patients with certain pre-existing cardiac conditions.

Patients may also be at risk for serotonin syndrome. Serotonin syndrome is associated with increased serotonergic activity in the central nervous system. Most reports of serotonin syndrome have been associated with concomitant use of certain drugs, some commonly used during surgery, such as fentanyl. Some of the reported cases of serotonin syndrome were fatal.

RECOMMENDATION: Fresenius Kabi is notifying its distributors and customers by letter and is arranging for return of the recalled product. If health care facilities have the affected lot, they are to immediately discontinue distributing, dispensing or using the lot and return all units to Fresenius Kabi. Distributors

are instructed to immediately notify their customers that have been shipped, or may have been shipped the product involved in this recall.

Consumers with questions regarding this recall can contact Fresenius Kabi Quality Assurance at 1-866-716-2459. Consumers should contact their physician or health care provider if they have experienced any problems that may be related to receiving this drug product.

Health care professionals are encouraged to report any adverse events to FDA's MedWatch Adverse Event Reporting Program:

- Complete and submit the report Online: www.fda.gov/MedWatch/report
- Download form or call 1-800-332-1088 to request a reporting form, then complete and return to the address on the pre-addressed form, or submit by fax to 1-800-FDA-0178.

Source: U.S. Food and Drug Administration (FDA)

Nexterone (amiodarone HCl) 150 mg/100 mL Premixed Injection: Recall - Presence Of Particulate Matter **[Posted 11/15/17]**

ISSUE: Baxter International announced it is voluntarily recalling one lot of Nexterone (amiodarone HCl) 150 mg/100 mL Premixed Injection – distributed between 8/23/2017 and 10/2/2017 in the United States to wholesalers/distributors and healthcare facilities – due to the potential presence of particulate matter. The particulate matter may have entered the solution during the manufacturing process. The recalled lot number is NC109925.

The particulate matter was identified by Baxter during a stability study, and was consistent with polyethylene, the primary constituent of the film and ports used to manufacture the bag in which Nexterone is packaged.

Intravenous administration of a solution containing sterile particulate matter may lead to adverse health consequences. The extent and severity of harm depends on the size, number and composition of the foreign material and the patient's underlying medical condition. In the absence of in-line filtration, these particles may cause local vein irritation, inflammatory reaction, aggravation of preexisting infections, allergic reactions, phlebitis, pulmonary emboli, pulmonary granulomas, immune

BACKGROUND: Nexterone is a prescription antiarrhythmic agent indicated for initiation of treatment and prophylaxis of frequently recurring ventricular fibrillation and hemodynamically unstable ventricular tachycardia in patients refractory to other therapy.

RECOMMENDATION: Anyone with an existing inventory of the recalled lot should stop use and distribution and quarantine the product immediately. Inform health care professionals in your organization of this recall. If you have further distributed the recalled product, please notify any accounts or additional locations which may have received the recalled product from you. Further, please instruct entities that may have received the recalled product from you that if they redistributed the product, they should notify their accounts, locations or facilities of the recall to the hospital/retail user level. Recalled product should be returned to Baxter for credit by contacting Baxter Healthcare Center for Service at 888-229-0001, Monday through Friday, between 7 a.m. and 6 p.m. Central Time.

Customers with questions regarding this recall can contact Baxter Corporate Product Surveillance at 800-437-5176, Monday through Friday, between 8 a.m. and 5 p.m. Central Time. Customers should contact their physician or healthcare provider if they have experienced any problems that may be related to using this product.

Healthcare professionals and patients are encouraged to report adverse events or side effects related to the use of these products to the FDA's MedWatch Safety Information and Adverse Event Reporting Program:

- Complete and submit the report Online: www.fda.gov/MedWatch/report
- Download form or call 1-800-332-1088 to request a reporting form, then complete and return to the address on the pre-addressed form, or submit by fax to 1-800-FDA-0178

Source: U.S. Food and Drug Administration (FDA)

STUDIES AND RECENT TOPICS

Will the World's Most Worrying Flu Virus Go Pandemic?

October 19, 2017

The Centers for Disease Control and Prevention (CDC) keeps a Most Wanted list for flu viruses. The agency evaluates every potentially dangerous strain, and gives them two scores out of 10—one reflecting how likely they are to trigger a pandemic, and another that measures how bad that pandemic would be. At the top of the list, with scores of 6.5 for emergence and 7.5 for impact, is H7N9.

Source: theatlantic.com

There's a third, newly-identified type of diabetes

October 24, 2017

Most people are familiar with type-1 and type-2 diabetes. Recently, though, a new type of diabetes has been identified: type-3c diabetes. Type-1 diabetes is where the body's immune system destroys the insulin producing cells of the pancreas. It usually starts in childhood or early adulthood and almost always needs insulin treatment. Type-2 diabetes occurs when the pancreas can't keep up with the insulin demand of the body. It is often associated with being overweight or obese and usually starts in middle or old age, although the age of onset is decreasing.

Source: qz.com

U.S. to promote use of opioid alternatives to treat addiction

October 25, 2017

The U.S. Food and Drug Administration plans to encourage widespread use among opioid addicts of less harmful opioid drugs such as methadone and buprenorphine, a radical shift in policy that could draw opposition from those in the addiction field who believe abstinence is the only effective treatment.

Source: reuters.com

'Alexa, order my meds' -- start-up NowRx pioneers prescription refills through Alexa and Google Home

October 14, 2017

NowRx wants to make standing in line at the pharmacy a thing of the past. This month, its users will have the option to order prescription medications via a virtual home assistant, such as the Amazon Echo or Google Home. A robot then registers to the request and dispenses the medication within minutes, and a car will deliver it within hours.

Source: biopharmadive.com

FDA bans Canadian OTC firm's products, issues it a warning letter

November 1, 2017

The FDA has banned the OTC products of a small Canadian drugmaker after discovering it was using ingredients from a supplier already on its import alert list. The FDA added Aztex Enterprises to its import alert list the day before it issued a warning letter to the Burlington, Ontario-based company. In that letter, the FDA suggested that if the company wants to do business in the U.S., it should get a consultant to help it learn the standards.

Source: fiercepharma.com

Proton pump inhibitors for acid reflux linked to higher stomach cancer risk in long term

November 1, 2017

They found the risk rose in tandem with the dose and duration of treatment following elimination of *Helicobacter pylori*, the bacteria implicated in the development of stomach cancer.

Eliminating *H. pylori* from the gut significantly lowers the risk of developing stomach cancer, but a considerable proportion of patients still develop the condition even after the bacteria's successful eradication, noted the researchers.

Source: nursingtimes.net

Most New Drug Patents Are for Old Remedies, Research Shows

November 1, 2017

The U.S. patent system was designed to protect new innovations, but drugmakers are more often than not using it to protect old ones.

At least 74 percent of drugs associated with new patents were medicines already on the market, according to research by Robin Feldman, director of the Institute for Innovation Law at the University of California Hastings College of the Law. The percentage reached 80 percent in three of the years studied in the 2005-2015 period.

Source: bloomberg.com

Opioids Not the Only Answer for Pain Relief in the ER

November 7, 2017

As the opioid epidemic continues to sweep across the United States, a new study suggests that a combination of Motrin and Tylenol may work as well as narcotic painkillers for ER patients who suffer sprains or fractures.

Source: healthday.com

Future of Biosimilars Uncertain

November 7, 2017

The use of biosimilars has become widespread in Europe, but significant challenges remain to biosimilar uptake in the United States. Although biosimilars offer the promise of an effective biologic treatment at

a fraction of the price of the reference product, the impact of these drugs on the market thus far has been limited, according to a session presented at the American College of Rheumatology Annual Meeting.

Source: specialtypharmacytimes.com

Recurrence Risk Lasts Decades After Breast Cancer Treatment

November 9, 2017

Women with hormone receptor (HR)-positive breast cancer had a steady risk of distant recurrence for 20 years after initial diagnosis and treatment, a meta-analysis of 88 clinical trials showed. After completing adjuvant endocrine therapy, patients with the most favorable disease status (T1N0) had <1% annual risk of distant breast cancer recurrence from years 5 to 20, resulting in a cumulative risk of 13% at year 20. The risk increased progressively with less favorable disease status, reaching a cumulative distant recurrence risk of 41% in patients with T2N4-9.

Source: medpagetoday.com

FDA Clears Nerve Stimulator to Aid Recovery From Opioids

November 15, 2017

WASHINGTON (AP) — U.S. health authorities have cleared a brain-stimulating device for patients suffering from debilitating withdrawal symptoms caused by addiction to heroin and other opioids. The nerve stimulator is the first device to treat such symptoms including joint pain, anxiety, stomach aches and insomnia. The announcement Wednesday by the Food and Drug Administration comes amid an epidemic of opioid abuse, which includes both illegal narcotics like heroin and prescription painkillers.

Source: usnews.com

Getting Doctors To Stop Prescribing Codeine To Kids Has Taken Years

November 16, 2017

For years the Food and Drug Administration has been trying to get doctors to quit prescribing codeine, an opioid painkiller, to children after getting their tonsils or adenoids out. But it can be hard to get clinicians to change their prescribing habits, even when children have died and other less risky medications are available.

Source: npr.org

RECALLS

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
Drugs	MAN OF STEEL capsules, 3000mgs/grain, 1-count packets, Packaged for: One Drop Solutions, LLC, POB 231693, Sacramento, California 95823; vitality@yahoo.com; www.manofsteelpills.com; UPC 1 0001001378 7	Class I	No Lot #: labeled Expires: 10-17-2018	Marketed Without An Approved NDA/ANDA: FDA analysis found this product to contain undeclared sildenafil, an FDA approved drug for the treatment of erectile dysfunction, making this an unapproved drug for which safety and efficacy have not been established and therefore, subject to recall.	Vitality 7283 Florin Mall Dr Apt #3 Sacramento, CA 95823-2748
Drugs	PIYANPING Anti-Itch (hydrocortisone) Lotion, 1%, Net Wt. 0.67 oz (20g) tube, Manufactured By: Jimin Pharmaceutical Co., LTD., Distributor: Lucky Mart, El Monte, CA 91733, NDC 68085-8012-4.	Class I	Lot #: C16001, C16002, Exp p 12/18	Incorrect Product Formulation: product contains dexamethasone instead of hydrocortisone.	Lucky Mart Inc. 2210 N Seaman Ave South El Monte, CA 91733-1926
Drugs	Intralipid 20%, A 20% I.V. Fat Emulsion, 100 ml bag, Rx only, Manufactured by Fresenius Kabi, Uppsala, Sweden for Baxter Healthcare Corporation, Deerfield, IL 60015 USA, NDC 0338-0519-58	Class I	Lot #: 10LE9597, Exp 04/01/19	Temperature Abuse: A portion of this product lot was exposed to subfreezing temperatures, which is outside of the acceptable storage range listed on the product labeling, during transit to a distribution facility.	Baxter Healthcare Corporation 1 Baxter Pkwy Deerfield, IL 60015-4625
Drugs	Oxytocin 10 units added to 1000 mL Lactated Ringer's Injection USP in 1000 mL bag, Rx Only , Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130, Sugar Land, TX 77478, NDC# 71019-237-03	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	ChloroPrep OneStep (Clear) (2% w/v chlorhexidine gluconate (CHG) and 70% v/v isopropyl alcohol (IPA)), 3 mL applicator, CareFusion, El Paso, TX 79912 --- NDC 054365-400-11	Class II	Lot 7096622, exp 3/21/2020	Labeling: Label Mixup; the immediate package is labeled incorrectly as Chloroprep Onestep (Clear), however, the correct label should be Chloroprep with Tint (Hi Lite Orange)	Becton Dickinson & Company 1 Becton Dr Franklin Lakes, NJ 07417-1815
Drugs	Oxytocin 10 units added to 500 mL Lactated Ringer's Injection USP in 500 mL bag ,Rx Only , Compounded by PharMEDium Services, LLC.	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
	12620 W. Airport Blvd. #130, Sugar Land, TX 77478, NDC# 71019-237-01				60045-2506
Drugs	Oxytocin 15 units added to 250 mL Lactated Ringer's Injection USP in 250 mL bag, Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130, Sugar Land, TX 77478, NDC# 71019-239-01	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 20 units added to 1000 mL Lactated Ringer's Injection USP in 1000 mL bag, Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130 Sugar Land, TX 77478, NDC# 71019-241-06	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 20 units added to 1000 mL Lactated Ringer's Injection USP in 1000 mL bag Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130 Sugar Land, TX 77478, NDC# 71019-241-04	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 20 units added to 1000 mL Lactated Ringer's Injection USP in 1000 mL bag Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130 Sugar Land, TX 77478, NDC# 71019-241-05.	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 20 units added to 500 mL Lactated Ringer's Injection USP in 500 mL bag Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130 Sugar Land, TX 77478, NDC# 71019-241-03	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 30 units added to 1000 mL 5% Dextrose/Lactated Ringer's USP in 1000 mL bag, Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130 Sugar Land, TX 77478,	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
	NDC# 71019-242-02				
Drugs	Oxytocin 30 units added to 500 mL 5% Dextrose/Lactated Ringer's USP in 500 mL bag, Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130 Sugar Land, TX 77478, NDC# 71019-242-01	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 30 units added to 500 mL Lactated Ringer's USP in 500 mL bag Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130, Sugar Land, TX 77478, NDC# 71019-243-01	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 30 units added to 1000 mL Lactated Ringer's USP in 1000 mL bag Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130 Sugar Land, TX 77478, NDC# 71019-243-04	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 40 units added to 1000 mL Lactated Ringer's USP in 1000 mL bag Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130 Sugar Land, TX 77478, NDC# 71019-245-02	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 30 units added to 500 mL Lactated Ringer's USP in 500 mL bag, Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130 Sugar Land, TX 77478, NDC# 71019-243-03	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 40 units added to 1000 mL Lactated Ringer's USP in 1000 mL bag, Rx Only, Compounded by PharMEDium Services, LLC. 12620 W. Airport Blvd. #130, Sugar Land, TX 77478, NDC# 71019-245-03	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL 60045-2506
Drugs	Oxytocin 40 units added to 1000 mL Lactated Ringer's USP in 1000 mL bag Rx Only, Compounded by PharMEDium Services, LLC. 12620	Class II	All unexpired lots.	Subpotent Drug	Pharmedium Services, LLC 150 N Field Dr Ste 350 Lake Forest, IL

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
	W. Airport Blvd. #130 Sugar Land, TX 77478, NDC# 71019-245-04				60045-2506
Drugs	Diltiazem HCL 125 mg added to 0.9% Sodium Chloride 100 ml bag, 125 mL bag, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 85226, NDC 7025018601	Class II	Lot #: 071817S1, Exp 10/18/2017; 072417S1, Exp 10/24/2017; 072517S1, Exp 10/25/2017; 081117S1, Exp 11/11/2017; 081517S1, Exp 11/15/2017; 082217S1, Exp 11/22/2017	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410
Drugs	ePHEDrine sulfate 50 mg/10 ml syringes in 0.9% Sodium Chloride, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 85226, NDC 7025024801	Class II	Lot #: 072717S1, Exp 10/25/2017; 080217S1, 10/31/2017; 081517S2, Exp 11/13/2017; 082917S1, Exp 11/27/2017.	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410
Drugs	fentaNYL citrate 1000 mcg (10 mcg/mL) 100 mL Cassette in 0.9% Sodium Chloride, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 85226, NDC 7025011001	Class II	Lot #: 041317S1, Exp 10/10/2017; 041817S1, Exp 10/15/2017; 042017S1, 10/17/2017; 042517S1, 10/22/2017; 042717S1, Exp 10/24/2017; 050217S1, Exp 10/29/2017; 050417S2, Exp 10/31/2017; 050917S1, 11/5/2017; 051117S1, 051117S4, 11/7/2017; 051617S1, 11/12/2017; 051817S1, Exp 11/14/2017; 052317S1, Exp 11/19/2017; 053017S1, Exp 11/26/2017; 060617S1, Exp 12/3/2017; 060917S1, Exp 12/6/2017; 061317S1, Exp 12/10/2017; 061517S2, Exp 12/12/2017; 062017S1, Exp 12/17/2017; 062217S1, Exp 12/19/2017; 062717S1, Exp 12/24/2017; 62817S1, Exp 12/25/2017; 070417S1, Exp 12/31/2017; 070517S1, Exp 1/1/2018; 071317S1, Exp 1/7/2018; 071817S2, Exp 1/14/2018; 072017S1, Exp 1/16/2018; 72517S2, Exp 1/21/2018; 080817S1, Exp 2/4/2018; 080917S1, Exp 2/5/2018; 081617S1, Exp 2/12/2018; 081717S1, Exp 2/13/2018	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410
Drugs	fentanyl citrate (PF) 1100 mcg (20 mcg/mL) 55 mL syringes in 0.9% Sodium Chloride, Rx Only, Banner	Class	Lot # :051717S1, Exp 11/13/2017; 052417S1, Exp 11/20/2017; 062117S1, Exp	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
	Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 95226, NDC 7025011001	II	12/18/2017; 071217S1, Exp p. 1/8/2017; 071917S1, Exp p 1/15/2018; 072617S1, E xp 1/22/2018; 081017S1, Exp 2/6/2018		Chandler, AZ 85226-2410
Drugs	Hydromorphone HCl 10 mg (0.2mg/ml) 50 mL syringes in 0.9% Sodium Chloride, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 95226, NDC 7025001001.	Class II	Lot #: 041817S5, Exp 10/1 5/2017; 052417S2, Exp 11 /20/2017; 071117S4, Exp 1/7/2018; 0712217S4, Exp 1/8/2018; 080317S6, Exp 1/30/2018; 082217S5, Exp 2/1/2018	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410
Drugs	Magnesium sulfate 10 Gm added to Lactated Ringer's 250 mL bags, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 95226, NDC 7025003201	Class II	Lot #: 042017S4, Exp 10/2 0/2017; 042517S2, 10/25/ 2017; 042617S3, Exp 10/2 6/2017; 050317S2, Exp 11 /2/2017; 050517S3, Exp 1 1/4/2017; 051217S2, Exp 11/11/2017; 051917S1, Ex p 11/18/2017; 052917S4, Exp 11/28/2017; 061317S 5, Exp 12/13/2017; 06161 7S1, Exp 12/16/2017; 062 317S1, Exp 12/23/2017; 0 62817S2, 12/28/2017; 062 917S1, Exp 12/29/2017; 0 70717S1, Exp 1/6/2018; 0 71317S4, Exp 1/12/2018; 072017S3, Exp 1/19/2018; 072617S6, Exp 1/25/2018; 072717S3, Exp 1/26/2018; 073117S1, Exp 1/30/2018; 080317S2, Exp 2/2/2018; 080717S1, Exp 2/6/2018; 081017S3, Exp 2/9/2018; 081717S2, Exp 2/16/2018; 082417S2, 082417S5 Exp 2/23/2018;	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410
Drugs	Midazolam HCL 100 mg (1mg/mL) 100 mL Cassette in 0.9% Sodium Chloride, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 95226, NDC 7025016201	Class II	Lot #: 042617S4, Exp 10/2 3/2017; 060817S1, Exp 12 /5/2017; 070517S2, Exp 1/ 1/2018; 072817S1, Exp 1/ 24/2018; 080117S2, Exp 1 /28/2018; 083017S1, Exp, 2/26/2018	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410
Drugs	Norepinephrine Bitartrate 8 mg added to 0.9% Sodium Chloride 250 mL in a bag, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 95226, NDC	Class II	Lot #: 071217S2, Exp 10/1 1/2017; 071417S1, Exp 10 /13/2017; 071917S2, 0719 17S3, Exp 10/18/2017; 07 2117S1, Exp 10/20/2017; 072617S2, 072617S3, Exp	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm	
	7025011501		10/25/2017; 072817S2, Exp 10/27/2017; 073117S2, 10/30/2017; 080217S2, Exp 11/1/2017; 080717S2, Exp 11/6/2017; 081117S2, Exp 11/10/2017; 081417S2, Exp 11/13/2017; 081617S2, Exp 11/15/2017; 08217S2, Exp 11/21/2017; 082317S2, Exp 11/22/2017; 082917S2, Exp 11/28/2019			85226-2410
Drugs	OXYtocin 30 units added to 0.9% Sodium Chloride 500 mL bag, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 95226, NDC 7025000101	Class II	Lot#: 072017S4, Exp 11/16/2017; 072117S2, Exp 11/17/2017; 072417S2, Exp 11/20/2017; 072717S5, Exp 11/23/2017; 072817S3, Exp 11/24/2017; 073117S3, Exp 11/27/2017; 080217S3, Exp 11/29/2017; 080317S3, Exp 11/30/2017; 080917S3, Exp 12/6/2017; 081117S4, Exp 12/8/2017; 081717S3, Exp 12/14/2017; 081817S1, Exp 12/15/2017; 082217S3, Exp 12/19/2017; 082317S3, 082317S5, Exp 12/20/2017; 082417S3, Exp 12/21/2017; 082517S2, Exp 12/22/2017	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410	
Drugs	Ropivacaine HCL (PF) 0.2% (2mg/mL) 100 mL Cassette Rx Only Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 95226 NDC 7025006301	Class II	Lot #: 041117S2, Exp 10/11/2017; 041817S3, Exp 10/18/2017; 042517S3, 10/25/2017; 050117S2, Exp 10/31/2017; 053017S3, Exp 11/29/2017; 060117S3, Exp 12/1/2017; 060617S3, Exp 12/6/2017; 061217S1, 12/12/2017; 062017S3, Exp 12/20/2017; 062717S2, Exp 12/27/2017; 062817S3, Exp 12/28/2017; 071117S2, Exp 1/10/2018; 071817S3, Exp 1/17/2018; 072117S3, Exp 1/20/2018; 072417S3, Exp 1/23/2018; 072517S3, Exp 1/24/2018; 080217S4, Exp 2/1/2018; 081117S3, Exp 2/10/2018; 081817S2, Exp 2/17/2018; 082317S4, Exp 2/22/2018.	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410	
Drugs	Succinylcholine 200 mg/10 mL Syringe, Rx Only, Banner Health Compounding Pharmacy 7300 W	Class	Lot #: 071917S5 Exp 10/17/2017; , 072717S7, Exp 10/25/2017; 080817S3, Exp	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St	

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
	Detroit St Chandler, AZ 95226, NDC 7025088801	II	11/6/2017; 082317S6, Exp 11/21/2017; 082417S6, Exp 11/22/2017; 082517S3, Exp 11/23/2017.		Chandler, AZ 85226-2410
Drugs	VANCOMycin 1.5 grams added to 0.9% Sodium Chloride 500 mL bag, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 95226, NDC 7025002501	Class II	Lot #: 082817S3, Exp. 10/14/2017	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410
Drugs	VANCOMycin 1.25 grams added to 0.9% Sodium Chloride 500 mL bag, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 95226, NDC 7025007001	Class II	Lot #: 082817S2, Exp 10/14/2017	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410
Drugs	VANCOMycin 1.25 grams added to 0.9% Sodium Chloride 500 mL bag, Rx Only, Banner Health Compounding Pharmacy 7300 W Detroit St Chandler, AZ 95226, NDC 7025007001	Class II	Lot #: 082817S2, Exp 10/14/2017	Lack of Assurance of Sterility.	Banner Pharmacy Services, LLC 7300 W Detroit St Chandler, AZ 85226-2410
Drugs	A1 Slim, Dietary Supplement Beautifully Slim, capsule, 350 mg, 30-count bottle, A1 Slim LLC Pearland TX 77584, www.A1SLIM.COM, info@a1slim.com Bar-Code A105212014	Class II	All lots remaining within expiry.	. Marketed Without An Approved NDA/ANDA: FDA analysis found this product to contain undeclared sibutramine, phenolphthalein, and n-desmethyl sibutramine, making this an unapproved drug for which safety and efficacy have not been established and therefore, subject to recall.	Kiriko, LLC. 3522 Ewing Dr Manvel, TX 77578-3218
Drugs	Duloxetine Delayed-release Capsules USP, 20 mg, 50 Capsules (5 x 10) Unit Dose per carton, unit dose blister UPC 5026828311), Rx only, Manufactured for: AvKARE, Inc., Pulaski, TN 38478, NDC 50268-283-15.	Class II	Lot: 18103 Exp. 11/18	Failed Impurities/Degradation Specifications: slightly elevated levels of phthalic acid.	AVKARE Inc. 615 N 1st St Pulaski, TN 38478-2403
Drugs	SUCcinylcholine 20 mg per mL, Total Volume 10 mL in single-dose syringe, (SUCcinylcholine 200 mg / 10 ml) Rx Only, SCA Pharmaceuticals 8821 Knoedl Ct Little Rock, AR NDC	Class II	Lot: 20170726@35 BUD: 10/24/2017	Lack Of Assurance Of Sterility.	SCA Pharmaceuticals, LLC 8821 Knoedl Ct Little Rock, AR

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
	70004-0910-29				72205-4600
Drugs	HYDROmorphine HCL 1 mg per mL in 0.9% Sodium Chloride 25 mL Fill in 30 mL single-dose syringe (Total Dose Hydromorphone 25 mg/25 mL) Rx Only SCA Pharmaceuticals 8821 Knoedl Ct Little Rock, AR NDC 70004-0303-17	Class II	Lot: 20170808@52 BUD: 11/06/2017	Lack Of Assurance Of Sterility.	SCA Pharmaceuticals, LLC 8821 Knoedl Ct Little Rock, AR 72205-4600
Drugs	HYDROmorphine HCl 20 mcg / mL BUPivacaine HCl 0.075% in 0.9% Sodium Chloride 50 mL (HYDROmorphine Total Dose 1000 mcg) Rx Only, SCA Pharmaceuticals 8821 Knoedl Ct Little Rock, AR 72205, NDC 70004-0331-22	Class II	Lot: 20170816@65 BUD: 10/30/2017	Lack Of Assurance Of Sterility.	SCA Pharmaceuticals, LLC 8821 Knoedl Ct Little Rock, AR 72205-4600
Drugs	fentanyl as citrate 2 mcg per mL BUPivacaine HCl 0.125% (Total FentaNYL Dose 500 mcg/250 mL) in 0.9% Sodium Chloride 250 mL Bag, Rx Only, SCA Pharmaceuticals, 8821 Knoedl Ct, Little Rock, AR 72205. NDC 70004-0231-40	Class II	Lot: 20170815@26 BUD: 11/13/2017	Lack Of Assurance Of Sterility.	SCA Pharmaceuticals, LLC 8821 Knoedl Ct Little Rock, AR 72205-4600
Drugs	morphine sulfate 1 mg per mL in 0.9% Sodium Chloride a) Total Volume 100 mL in Single Dose CADD Cassette (Total morphine Dose 100 mg per 100 mL) (NDC 70004-0100-63) b) Total Volume 50 mL in Single Dose Syringe (Total morphine Dose 50 mg / 50 mL) (NDC 70004-0100-22) Rx Only, SCA Pharmaceuticals 8821 Knoedl Ct Little Rock, AR 72205	Class II	Lots: a) 20170905@24 BUD: 12/04/2017 b) 20170901@25 BUD: 11/30/2017	Lack Of Assurance Of Sterility.	SCA Pharmaceuticals, LLC 8821 Knoedl Ct Little Rock, AR 72205-4600
Drugs	oxyTOCIN 30 units added to Lactated Ringers 500 mL Bag, Rx Only, SCA Pharmaceuticals 8821 Knoedl Ct Little Rock, AR 72205, NDC 70004-0086-44	Class II	Lot: 20170912@13 BUD: 10/22/2017	Lack Of Assurance Of Sterility.	SCA Pharmaceuticals, LLC 8821 Knoedl Ct Little Rock, AR 72205-4600
Drugs	PHENYLEphrine HCl 100 mcg per mL In 0.9% Sodium Chloride 10 mL Fill Volume in a Single Dose Syringe (1,000 mcg / 10 ml Total Dose), Rx Only, SCA Pharmaceuticals 8821 Knoedl Ct Little Rock, AR, NDC	Class II	Lot: 20170920@53 BUD: 12/19/2017	Lack Of Assurance Of Sterility.	SCA Pharmaceuticals, LLC 8821 Knoedl Ct Little Rock, AR 72205-4600

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
	70004-0810-12				
Drugs	Calcium GLUCONate 2 g added to 0.9% Sodium Chloride 50 mL Bag, Each bag contains 9.3 mEq Ca++ Rx Only, SCA Pharmaceuticals 8821 Knoedl Ct Little Rock, AR 72205, NDC 70004-0510-30	Class II	Lot: 20170920@20 BUD: 11/09/2017	Lack Of Assurance Of Sterility.	SCA Pharmaceuticals, LLC 8821 Knoedl Ct Little Rock, AR 72205-4600
Drugs	ROCuronium Bromide 10 mg per mL, 5 mL Fill in single dose syringe, (50 mg / 5 mL Total Dose) Rx Only SCA Pharmaceuticals 8821 Knoedl Ct Little Rock, AR 72205, NDC 70004-850-09	Class II	Lot: 20171004@4 BUD: 01/09/2018	Lack Of Assurance Of Sterility.	SCA Pharmaceuticals, LLC 8821 Knoedl Ct Little Rock, AR 72205-4600
Drugs	Dutasteride and Tamsulosin HCl Capsules, 0.5 mg/ 0.4 mg, packaged in a) 30-count bottle (NDC 0591-3771-30), b) 90-count bottle (NDC 0591-3771-19), Rx only, Manufactured by: Actavis Laboratories FL, Inc. Fort Lauderdale, FL 33314 USA; Distributed by: Actavis Pharma, Inc. Parsippany, NJ 07054 USA.	Class II	Lot Numbers: a) 1089376 A, 1089382A, 1095210M, 1117768M, 1117769A, Exp. 11/17; 1128452A, 1128453A, 1137658A, 1154207 A, 1156087A, Exp. 03/18; b) 1089379A, 1091533M, 1125206A, Exp. 11/17; 1128456A, 1147665A, 1154208A, 1156088A, Exp. 03/18.	Failed dissolution specifications; all lots within expiry are being recalled due to out of specification dissolution results.	Teva Pharmaceuticals USA 1090 Horsham Rd North Wales, PA 19454-1505
Drugs	Betadine Solution Swabstick Povidone-Iodine Solution USP, 10% Dist.by: Purdue Products LP. Stamford, CT 06901-3431 NDC 67618-153-01	Class II	Lots: 62823 Exp. 12/31/18 ; 64304 Exp. 05/31/2019; 64711 Exp. 08/31/2019; 65915 Exp. 12/31/2019	Subpotent Drug: The laminate used to make the pouches was reversed such that the aluminum layer was in contact with the product causing an exothermic reaction between the free iodine and the aluminum.	Purdue Pharma, LP 1 Stamford Forum Stamford, CT 06901-3516
Drugs	Succinylcholine 20 MG/ML INJ (QUELICIN), 10 ML Vials, Rx only, Distributed by: ACE Surgical Co., Inc., Brockton, MA	Class II	Lot # 64340EV, exp 07/2018 ACE ITEM # 1671018	Labeling: Incorrect or Missing Lot and/or Exp Date; incorrect expiration date on the labeling of the outer poly bag	Ace Surgical Supply Co., Inc. 1034 Pearl St Brockton, MA 02301-5411
Drugs	Fosphenytoin Sodium Injection, USP, 500 mg PE/10 mL (50 mg PE/mL. 10 mL Single Dose Vial, Rx Only. Distributed by: Amneal Biosciences, Bridgewater, NJ 08807. NDC: 70121-1390-7	Class II	Lot # AP160016; Exp. 05/18	Presence of Particulate Matter	Amneal Pharmaceuticals LLC 118 Beaver Trl Glasgow, KY 42141-1273

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
Drugs	Urin D/S Tablets Methenamine 81.6 mg, Sodium Biphosphate 40.8 mg, Phenyl Salicylate 36.2 mg, Methylene Blue 10.8 mg, Hyoscyamine Sulfate 0.12 mg, Rx Only, 100-count bottle, Manufactured For: Llorens Pharmaceutical Corp., International Division, Miami, FL 33166. NDC: 54859-701-10	Class II	Lots: 22811601, 22811602 , Exp. 05/18; 202U1601 Ex p. 11/18	Superpotent Drug: Subpotent Drug. FDA analysis found this product to be Out of Specification for assay which could result in either Subpotent and/or Superpotent tablets	Llorens Pharmaceutical Corp. Carr. #1 Km 34.3 Caguas, PR 00725
Drugs	Estriol, For Prescription Compounding, packaged in a) 1 G bottle (NDC: 51552-1392-1), b) 5 G bottle (NDC: 51552-1392-2), c) 25 G bottle (NDC: 51552-1392-3) and d) 100 G bottle (NDC 51552-1392-5), Rx only, Distributed by Fagron, Inc., 2400 Pilot Knob Rd, St. Paul, MN 55120 Tel. 1-(800) 423-6967	Class II	Lot #, Expiration Date: a) 1 G bottle: 16F23-U05-033657, Exp. 5/26/2017. b) 5 G bottle: 16F23-U05-033656 , Exp. 5/26/2018; 17C02-U02-035890, Exp. 1/19/2019. c) 25 G bottle: 16F23-U05-033655, Exp. 5/26/2018; 17C02-U02-035887, Exp. 1/19/2019. d) 100 G bottle: 17C02-U02-035888, Exp. 1/19/2019	cGMP Deviations: lack of quality assurance at the API manufacturer.	Fagron, Inc 2400 Pilot Knob Rd Saint Paul, MN 55120-1118
Drugs	Hydromorphone HCl 0.5 mg per mL in 0.9% Sodium Chloride Injection 1 mL, packaged in syringes, Rx Only , PharMEDium Services, LLC. 913 N. Davis Ave Cleveland, MS 38732, NDC 61553-352-40	Class II	Lot#: 172820134M, Exp 0 1/18	Superpotent drug: out of specification result for potency	PharMEDium Services, LLC. 6100 Global Dr Memphis, TN 38141-8385
Drugs	Doan's Pain Relieving Cream with 4% Lidocaine Plus Menthol, (lidocaine 4%, menthol 1%), Net Wt. 2.75 oz. (77.3 g) Tube, Distributed by: Ducere Pharma, LLC New Hope, PA 18938 USA --- UPC 849648000023	Class III	lots #2462100R, Exp 11/2018; 2583800R, Exp 09/2018	Labeling: Incorrect or Missing Lot and/or Exp Date; lot number on the secondary packaging doesn't match the lot number printed on the bottle	Dr. Reddy's Laboratories, Inc. 107 College Rd E Princeton, NJ 08540-6623
Drugs	Clofarabine injection, 20 mg/20 mL, 20 mL Single-Use Vial, Rx only, Mfd by: Teva Pharmachemle, Swensweg 5, Haarlem, The Netherlands; Mfd for: Winthrop U.S., a business of Sanofi-Aventis U.S. LLC, Bridgewater, NJ 08807; NDC 0955-1746-01.	Class III	Lot #: K5006Y02, Exp 31A UG18	Labeling: Incorrect or Missing Package Insert: authorized generic product was packaged with the incorrect insert for the brand name product Clolar (clofarabine) injection	Sanofi-Aventis U.S. LLC 55 Corporate Dr Bridgewater, NJ 08807-1265
Drugs	Carbamazepine Oral Suspension USP, 100 mg/5 mL, 5 mL Unit Dose Cups (NDC 68094-301-59), packaged	Class III	Lot number: 500105, Exp 04/30/18	Subpotent Drug: low out of specification results.	Precision Dose Inc. 722 Progressive Ln South Beloit, IL

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
	in 10-count cups per tray, 3 trays per case containing a total of 5 mL x 30 Unit Dose Cups per case (NDC 68094-301-62), Rx only, Pkg: Precision Dose, Inc., S. Beloit, IL 61080				61080-2616
Drugs	Enalapril Maleate tablets, USP, 5mg, 1000-count bottles, Rx only, Manufactured by: Wockhardt Limited H-14/2, M.I.D.C. Area, Waluj, Aurangabad, Maharashtra, India, Distributed by: Wockhardt, USA LLC, 20 Waterview Blvd, Parsippany, NJ 07054, USA. NDC: 64679-924-03;	Class III	Lot # DR10635, EXP 05/2019; DR10636, EXP 05/2019.	Failed Impurities/Degradation Specifications: 5mg strength being recalled for out of specification results for related compound.	Wockhardt Usa Inc. 20 Waterview Blvd Ste 3 Parsippany, NJ 07054-1271
Drugs	Equate Beauty Clarifying Face Daily Moisturizer 4 fl. oz. (118 mL) Distributed by: Wal-Mart Stores, Inc. Bentonville, AR 72716, NDC # 4903594126 UPC # 681131150774. Studio 35 Beauty Daily Clarifying Face Daily Moisturizer 4 fl. oz. (118 mL) Distributed By: Walgreen Co. 200 Wilmot Rd., Deerfield, IL 60015, NDC # 0363001726, UPC # 049022889125	Class III	Lot #: 0342373, 0342656; Exp. 12/18 Lot #: 0307223 Exp. 12/17 Lot #: 0345361 Exp. 02/19	Failed Stability Specifications	Vi-Jon, Inc. 1 Swan Dr Smyrna, TN 37167-2099
Drugs	AndroGel (testosterone gel) 1.62%, 88 gm metered-dose pump, 20.25 mg of testosterone per pump actuation, 60 metered pump actuations, Rx Only, Marketed by: AbbVie Inc., North Chicago, IL 60064 USA. NDC: 0051-8462-33	Class III	Lot: 91122, EXP. 01/2020	Temperature Abuse: Prolonged exposure to temperatures outside of labeled storage conditions.	AbbVie Inc. 1 N Waukegan Rd North Chicago, IL 60064-1802
Drugs	AndroGel (testosterone gel) 1.62%, 40.5mg in 2.5g aluminum foil packet, 30 Packets per carton. Rx Only. Marketed by: AbbVie Inc., North Chicago, IL 60064 USA. NDC: 0051-8462-30	Class III	Lot: D60010A, EXP. 01/2019	Temperature Abuse: Prolonged exposure to temperatures outside of labeled storage conditions.	AbbVie Inc. 1 N Waukegan Rd North Chicago, IL 60064-1802
Drugs	Methylphenidate Hydrochloride Tablets USP, 20 mg, 100-count bottles, Rx only, Manufactured by: Watson Laboratories, Inc., Corona, CA 92880 USA, NDC 0591-5884-01	Class III	Lot Number # 1156086M, Exp 08/18	Failed Dissolution Specifications: Low out of specification results for dissolution.	Teva Pharmaceuticals USA 1090 Horsham Rd North Wales, PA 19454-1505

Product Type	Product Description	Class	Code Information	Reason for Recall	Recalling Firm
Drugs	ENALAPRIL MALEATE Tablets, USP, 5MG, 90-count bottles, Rx only, MFG: Wockhardt Ltd., India; Packaged By: Aidarex Pharmaceuticals; NDC 33261-0693-90.	Class III	Lot #: 55097-2, 56085-1, Exp 11/30/2018	Failed Impurities/Degradation Specifications: manufacturer of product recalled this repackaged lot due to out of specification results for related compound.	Aidarex Pharmaceuticals LLC 595 N Smith Ave Ste B Corona, CA 92880-6920
Drugs	Clolar (clofarabine) 20 mg/20 mL (1 mg/mL) Injection, for intravenous use, Rx Only, Mfd. by: Teva Pharmachemie Swensweg 5 Haarlem, The Netherlands Mfd. for: Genzyme Corporation, Cambridge, MA 02142, NDC 0024-5860-01.	Class III	Lot #: K5006Y01; Exp. 08/31/18 Lot #: K5006Y03; Exp. 08/31/18 Lot #: K6001Y01; Exp. 03/31/19	Labeling: Incorrect or Missing Package Insert.	Genzyme Corporation 11 Forbes Rd Northborough, MA 01532-2501
Drugs	Combigan (brimonidine tartrate/timolol maleate ophthalmic solution) 0.2%/0.5%, Rx only, packaged in a) 2.5 mL NDC# 0023-9211-03; b) 5 mL (NDC# 0023-9211-05); c) 10 mL (NDC# 0023-9211-10); d) 15 mL (NDC# 0023-9211-15) bottles, Manufactured By: Allergan, Irvine, CA 92612..	Class III	Lot #: a) 94659 Exp. FEB-2019; b) 94715, Exp. JAN-2019; 94757, Exp. FEB-2019, 94715A, Exp. JAN-2019; 95297, Exp. MAR-2019; c) 95223 Exp. MAR-2019; d) 95220 Exp. MAR-2019	Failed Impurities/Degradation Specifications.	Allergan Sales, LLC 8301 Mars Dr Waco, TX 76712-6578
Drugs	Enalapril Maleate Tablets, USP, 5 mg, 100 Tablets (10 x 10), Rx Only. Packaged and Distributed by: American Health Packaging, Columbus, Ohio 43217. NDC: 68084-390-01	Class III	Lot #:167194; Exp. 12/31/2018	Failed Stability Specifications	Amerisource Health Services 2550 John Glenn Ave Ste A Columbus, OH 43217-1188
Drugs	Lumigan (bimatoprost ophthalmic solution) 0.01%, 2.5 mL bottle, Rx only, Allergan, Irvine, CA 92612. NDC# 0023-3205-03	Class III	Lot #: 92575 Exp. JUN-2018	Failed Impurities/Degradation Specifications.	Allergan Sales, LLC 8301 Mars Dr Waco, TX 76712-6578
Drugs	Meclizine hydrochloride tablets USP, 12.5 mg, 100 count HDPE bottle, Rx only, Manufactured by: Jubilant Cadista Pharmaceuticals Inc., Salisbury, MD 21801, NDC 59746-122-06	Class III	Lot # 17P0430, Exp 05/19	Marketed without an approved NDA/ANDA: Bottles were released prior to final approval.	Jubilant Cadista Pharmaceuticals, Inc. 207 Kiley Dr Salisbury, MD 21801-2249

*Please refer to FDA website for further information; <http://www.fda.gov/Safety/Recalls/EnforcementReports/default.htm>

CURRENT DRUG SHORTAGES

Procainamide Hydrochloride Injection

October 20, 2017

Reason for the Shortage

- Pfizer did not provide a reason for the shortage.
- Nexus Pharmaceuticals launched procainamide injection in October 2017.

Estimated Resupply Dates

- Pfizer has procainamide 100 mg/mL 10 mL vials on back order and the company estimates a release date of late-January 2018.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=868>

Octreotide Injection

October 25, 2017

Reason for the Shortage

- Fresenius Kabi did not provide a reason for the shortage.
- Mylan Institutional has octreotide available.
- Sagent has octreotide on shortage due to manufacturing delays.
- Sun Pharma refuses to provide availability information for any of their products including octreotide.
- Teva has octreotide available.
- Novartis has Sandostatin available.
- West-Ward has octreotide available.

Estimated Resupply Dates

- Fresenius Kabi has octreotide 50 mcg/mL 1 mL vials on back order and the company estimates a release date of 1st quarter 2018.
- Sagent has octreotide 50 mcg/mL 1 mL vials on back order and the company estimates a release date in November 2017. The 500 mcg/mL 1 mL vials and 1000 mcg/mL 5 mL vials are on back order and the company estimates a release date of October 2017. There are short-dated octreotide 1000 mcg/mL 5 mL vials available.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=803>

Levetiracetam Injection

October 25, 2017

Reason for the Shortage

- American Regent has product available.
- AuroMedics did not provide a reason for the shortage.
- Caraco will not provide availability information on levetiracetam.
- Fresenius Kabi had levetiracetam injection on shortage due to manufacturing delays.
- Mylan has product available.
- Pfizer has product available.
- Sagent had levetiracetam injection on shortage due to manufacturing delays.
- UCB has product available.

- West-Ward has product available.
- X-Gen has product available.

Estimated Resupply Date

- AuroMedics has levetiracetam 100 mg/mL 5 mL vials on intermittent back order and the company is releasing product as it becomes available.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1183>

Dipyridamole Injection

October 25, 2017

Reason for the Shortage

- West-Ward did not provide a reason for the shortage.

Estimated Resupply Date

- West-Ward has dipyridamole 5 mg/mL 10 mL vials on back order and the company estimates a release date in late-November to December 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=465>

0.9% Sodium Chloride Small Volume Bags (<150 mL)

October 27, 2017

Reason for the Shortage

- Baxter has 0.9% sodium chloride small volume bags on shortage due to manufacturing delays.
- BBraun has 0.9% sodium chloride small volume bags on shortage due to increased demand.
- ICU Medical has 0.9% sodium chloride small volume bags on shortage due to increased demand.

Estimated Resupply Date

- Baxter has all 0.9% sodium chloride small volume bags on allocation.
- BBraun has all 0.9% sodium chloride small volume bags on allocation.
- ICU Medical has all 0.9% sodium chloride small volume bags on allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1287>

Penicillin G Procaine Injection

October 30, 2017

Reason for the Shortage

- Pfizer has penicillin G procaine on shortage due to manufacturing delays.
- Pfizer is the sole supplier of penicillin G procaine.

Estimated Resupply Date

- Pfizer has penicillin G procaine 600,000 unit/mL 1 mL and 2 mL vials on back order and the company estimates a release date of 4th quarter 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1238>

Penicillin G Benzathine/Penicillin G Procaine

October 30, 2017

Reason for the Shortage

- Pfizer has Bicillin C-R on shortage due to manufacturing delays.

Estimated Resupply Date

- Pfizer has Bicillin C-R 1,200,000 units/2 mL prefilled syringes and 1,200,000 units/2 mL pediatric prefilled syringes on allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1249>

Moxifloxacin Injection

October 30, 2017

Reason for the Shortage

- Bayer did not provide a reason for the shortage.
- Fresenius Kabi has moxifloxacin injection on shortage due to increased demand.

Estimated Resupply Date

- Fresenius Kabi has moxifloxacin 400 mg/250 mL premixed bags on back order and the company estimates a release date of mid-February 2018.
- Bayer has Avelox I.V. 400 mg/250 mL premixed bags on back order and the company estimates a release date of late-November 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1151>

Methadone Injection

October 30, 2017

Reason for the Shortage

- Mylan Institutional did not provide a reason for the shortage

Estimated Resupply Date

- Mylan Institutional has methadone 10 mg/mL 20 mL vials on back order and the company estimates a release date of mid-December 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1291>

Dorzolamide Ophthalmic Solution

October 30, 2017

Reason for the Shortage

- Akorn has dorzolamide ophthalmic solution on shortage due to manufacturing delays.
- Merck did not provide a reason for the shortage.
- Sandoz did not provide a reason for the shortage.
- Teva did not provide a reason for the shortage.
- Valeant has dorzolamide ophthalmic solution on shortage due to manufacturing delays.

Estimated Resupply Date

- Akorn has dorzolamide ophthalmic solution on shortage due to manufacturing delays.
- Merck did not provide a reason for the shortage.
- Sandoz did not provide a reason for the shortage.

- Teva did not provide a reason for the shortage.
- Valeant has dorzolamide ophthalmic solution on shortage due to manufacturing delays.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1293>

Dorzolamide 2% and Timolol 0.5% Ophthalmic Solution

October 30, 2017

Reason for the Shortage

- Akorn has dorzolamide and timolol ophthalmic solution on shortage due to manufacturing delays.
- Sandoz did not provide a reason for the shortage.
- Teva did not provide a reason for the shortage.
- Valeant did not provide a reason for the shortage

Estimated Resupply Date

- Akorn has dorzolamide 2% and timolol 0.5% ophthalmic solution on allocation. The company has Cosopt 2%/0.5% ophthalmic solution on back order and the company cannot estimate a release date. Cosopt PF 0.2 mL preservative-free vials are available.
- Sandoz has dorzolamide 2% and timolol 0.5% ophthalmic solution on back order and the company estimates a release date of early-November 2017.
- Teva has dorzolamide 2% and timolol 0.5% ophthalmic solution on back order and the company estimates a release date of mid-December 2017.
- Valeant has dorzolamide 2% and timolol 0.5% ophthalmic solution on back order and the company estimates a release date of early-November 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1292>

Cisplatin Injection

October 30, 2017

Reason for the Shortage

- Fresenius Kabi did not provide a reason for the shortage.¹
- Mylan Institutional could not provide a reason for the shortage.²
- Teva has cisplatin on allocation due to increased demand.³
- WG Critical Care has cisplatin available.⁴

Estimated Resupply Date

- Fresenius Kabi has cisplatin 100 mL vials on back order and the company estimates a release date of mid-November 2017.¹
- Mylan Institutional has cisplatin 50 mL and 100 mL vials temporarily unavailable and the company cannot estimate a release date.²
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=57>

Carboplatin Solution for Injection

October 31, 2017

Reason for the Shortage

- Bedford discontinued carboplatin in May, 2011 to concentrate on the manufacturing of other products.

- Fresenius Kabi has carboplatin available.
- Mylan Institutional cannot provide a reason for the shortage.
- Pfizer has carboplatin injection on shortage due to manufacturing delays.
- Sagent states the reason for the shortage is increased demand for the product and manufacturing delays.
- Sandoz has discontinued carboplatin injection.
- Teva has carboplatin on allocation due to increased demand.

Estimated Resupply Date

- Mylan Institutional has all carboplatin injection on back order and the company cannot estimate a release date.³
- Sagent has carboplatin 10 mg/mL 5 mL and 15 mL vials on back order and the company cannot estimate a release date.⁵
- Pfizer has carboplatin 10 mg/mL 60 mL vials available in limited supply.⁴
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1005>

Yellow Fever Vaccine Injection

November 1, 2017

Reason for the Shortage

- Sanofi Pasteur states the shortage is due to production delays.¹
- There are no other suppliers of yellow fever vaccine.
- Additional information on the yellow fever shortage.

Estimated Resupply Date

- Sanofi Pasteur has YF-Vax multi-dose vials and single dose vials on back order and the company cannot estimate a release date.¹
- FDA accepted an investigational new drug application in October 2016. This is for the importation of another yellow fever vaccine from France. The trade name of the imported product is Stamaril.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=383>

Ofloxacin Ophthalmic Solution

November 2, 2017

Reason for the Shortage

- Allergan has Ocuflax ophthalmic solution available.
- Akorn did not provide a reason for the shortage.
- Rising has ofloxacin ophthalmic solution available.
- Valeant did not provide a reason for the shortage.

Estimated Resupply Date

- Valeant has ofloxacin ophthalmic solution in 10 mL bottles available with an expiration date of August 2018.
- Akorn has ofloxacin ophthalmic solution in 5 mL bottles on back order and the company estimates a release date of mid-November 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1235>

Methylene Blue Injection

November 2, 2017

Reason for the Shortage

- Akorn has methylene blue on shortage due to manufacturing delays.¹
- American Regent has recently launched an FDA approved presentation, ProvayBlue and product is available.²

Estimated Resupply Date

- Akorn has methylene blue 10 mg/mL 1 mL vials on back order and the company cannot estimate a release date.¹
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=27>

Indomethacin Capsules

November 2, 2017

Reason for the Shortage

- Glenmark had indomethacin on shortage due to manufacturing delays.
- Heritage did not provide a reason for the shortage. Heritage discontinued indomethacin 50 mg capsule presentations.
- Mylan did not provide a reason for the shortage.
- Sandoz discontinued indomethacin in mid-2016.
- Teva did not provide a reason for the shortage.

Estimated Resupply Date

- Glenmark has indomethacin 25 capsules in 100 count and 1,000 count and 50 mg capsules in 500 count on back order and the company cannot estimate a release date.
- Heritage has indomethacin 25 mg capsules in 100 count and 1,000 count bottles on long-term back order, and the company cannot estimate a release date.
- Mylan has indomethacin 25 mg capsules in 1,000 count on back order and the company estimates a release date of mid-December 2017. The 50 mg capsules in 100 count unit-dose presentations are available with an expiration date of May 2018.
- Teva has all indomethacin presentations temporarily unavailable and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1236>

Hydromorphone Hydrochloride Injection

November 2, 2017

Reason for the Shortage

- Pfizer did not provide a reason for the shortage.
- Purdue discontinued Dilaudid and Dilaudid HP in May 2017 for marketing reasons.
- Teva did not provide a reason for the shortage.
- West-Ward did not provide a reason for the shortage.

Estimated Resupply Date

- Fresenius Kabi has Dilaudid 0.5 mg/mL 0.5 mL syringes and 1 mg/mL 1 mL syringes on back order and the company estimates a release date of late-November 2017. The 2 mg/mL 1 mL syringes are on back order and the company estimates a release date of 1st quarter 2018.
- Pfizer has hydromorphone 0.5 mg/0.5 mL 0.5 mL iSecure syringes, 1 mg/mL 1 mL ampules, and 2 mg/mL 1 mL vials on back order and the company estimates a release date of early-December 2017. The 1 mg/mL 1 mL Carpuject syringes and 1 mg/mL 1 mL iSecure syringes are on back order and the company estimates a release date of mid-November 2017. The 10 mg/mL 1 mL and 5 mL vials are on back order and the company estimates a release date of mid-December 2017. The 2 mg/mL 1 mL ampules are on back order and the company estimates a release date of 1st quarter 2018. The 2 mg/mL 1 mL Carpuject syringes are on back order and the company estimates a release date of late-January 2018. The 2 mg/mL 1 mL iSecure syringes and 4 mg/mL 1 mL Carpuject syringes are on back order and the company estimates a release date of 3rd quarter 2018.
- Teva has hydromorphone 10 mg/mL 1 mL vials on allocation. The hydromorphone 10 mg/mL 5 mL vials are on intermittent back order and the company is allocating product upon release.
- West-Ward has hydromorphone 2 mg/mL 1 mL and 20 mL vials on allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=856>

Furosemide Tablets

November 2, 2017

Reason for the Shortage

- Major states the shortage is due to supply and demand issues.
- Mylan and Teva did not provide a reason for the shortage.
- West-Ward states the shortage is due to manufacturing delays.
- Sandoz discontinued furosemide tablets in late-August 2017.

Estimated Resupply Date

- Mylan has furosemide 20 mg tablets in 100 count on back order and the company estimates a release date of late-November 2017. The furosemide 20 mg tablets in unit-dose blister packs are on back order and the company estimates a release date of mid-November 2017. The furosemide 20 mg tablets in 1000 count 40 mg tablets in 100 count and 1000 count bottles on back order and the company estimates a release date of early-November 2017. The furosemide 80 mg tablets in 1000 count bottles are on back order and the company estimates a release date of mid-December 2017.
- Teva has furosemide 20 mg and 40 mg tablets in 100 and 1000 count bottles temporarily unavailable and the company cannot estimate a release date.
- West-Ward has furosemide 20 mg 100 count unit-dose blister pack and in 100 count and 1000 count bottles on allocation. The 40 mg tablets in 100 count and 1000 count bottles and 100 count unit-dose blister packs are on allocation. The 80 mg tablets in 100 count bottles and 100 count unit-dose blister packs are on allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1281>

Doxorubicin Injection

November 2, 2017

Reason for the Shortage

- West-Ward has Adriamycin available.¹
- Teva has doxorubicin solution for injection available.²
- Fresenius Kabi has doxorubicin solution for injection available.³
- Caraco has discontinued doxorubicin solution for injection 25 mL and 100 mL vials.⁴
- Pfizer has doxorubicin solution for injection available.⁵
- Sagent has doxorubicin solution for injection on back order due to manufacturing delays.⁶
- Mylan Institutional has doxorubicin lyophilized powder for injection available.⁷
- Actavis had doxorubicin on shortage due to increased demand.⁸
- FDA is allowing temporary importation of doxorubicin lyophilized powder for injection 50 mg vials. These vials were manufactured for Hospira UK Limited. The labeling as well as bar coding for the imported product is different from the US version. FDA has the Dear Healthcare Professional Letter linked on their website. The letter includes a link to both the US and United Kingdom package inserts to help explain the differences in labeling and packaging.^{10,9}

Estimated Resupply Date

- Mylan Institutional has doxorubicin lyophilized powder 10 mg and 50 mg vials available with an expiration date of August 2018.⁷
- Sagent has doxorubicin 2 mg/mL 5 mL, 25 mL, and 100 mL vials on back order and the company cannot estimate a release date.⁶
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=464>

Ampicillin Sulbactam

November 2, 2017

Reason for the Shortage

- Pfizer has discontinued generic ampicillin sulbactam.
- Sandoz cannot provide a reason for the shortage.
- Sagent has ampicillin sulbactam vials on allocation due to manufacturing delays.
- WG Critical Care states the shortage was due to increased demand.

Estimated Resupply Date

- AuroMedics has ampicillin sulbactam 1.5 gram and 3 gram vials on intermittent back order and the company is releasing product as it becomes available.
- Fresenius Kabi has ampicillin sulbactam 1.5 gram, 3 gram, and 15 gram vials on long-term back order and the company cannot estimate a release date.
- Mylan Institutional has ampicillin sulbactam 3 gram vials on back order and the company cannot estimate a release date.
- Sagent has ampicillin sulbactam 1.5 gram, 3 gram, and 15 gram vials on back order and the company estimates a release date of November 2017 for the 3 gram vials and December 2017 for the 1.5 gram and 15 gram vials. Short-dated product is available.
- Sandoz has ampicillin sulbactam 1.5 gram, 3 gram, and 15 gram vials temporarily unavailable and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=805>

Amoxicillin and Clavulanate 1000 mg/62.5 mg Extended-Release Tablets

November 2, 2017

Reason for the Shortage

- Dr. Reddy's states they are having raw ingredient issues.
- Sandoz did not provide a reason for the shortage.

Estimated Resupply Date

- Dr. Reddy's has Augmentin XR and generic amoxicillin/clavulanate 1000 mg / 62.5 mg tablets on back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1259>

Vancomycin Hydrochloride Injection

November 3, 2017

Reason for the Shortage

- Pfizer has vancomycin vials on back order due to manufacturing delays.¹
- Fresenius Kabi has vancomycin injection on shortage due to increased demand.²
- Mylan Institutional has vancomycin injection available.³
- Sagent has vancomycin injection on shortage due to manufacturing delays.⁶
- Baxter has vancomycin injection available.⁴
- Samson Medical Technologies has vancomycin injection available.⁵

Estimated Resupply Date

- Fresenius Kabi has vancomycin 750 mg, 1 gram, 5 gram and 10 gram vials on intermittent back order with regular releases.
- Pfizer has vancomycin 1 gram vials on back order and the company estimates a release date of early-November 2017. The 750 mg vials are on back order and the company estimates a release date of mid-November 2017. The 750 mg ADD-vantage vials and 1 gram ADD-Vantage vials are on back order and the company estimates a release date of early-December 2017. The 500 mg, 5 gram, and 10 gram vials are available in limited supply. The 500 mg ADD-Vantage vials are available in limited supply.¹
- Sagent has vancomycin 5 gram and 10 gram vials on back order and the company estimates a release date of November 2017.⁶
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=132>

Mupirocin Calcium 2% Nasal Ointment

November 3, 2017

Reason for the Shortage

- GlaxoSmithKline states the shortage is due to manufacturing issues. GlaxoSmithKline is looking for an alternative supply source

Estimated Resupply Date

- GlaxoSmithKline has Bactroban Nasal 2% Ointment in 1 gram tubes on long-term back order and the company cannot estimate a release date.¹
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1094>

Mupirocin Calcium 2% Cream

November 3, 2017

Reason for the Shortage

- GlaxoSmithKline is looking for an alternative supply source.
- Prasco discontinued mupirocin calcium 2% cream in February 2016.

Estimated Resupply Date

- GlaxoSmithKline has Bactroban 2% cream in 15 gram and 30 gram sizes on long-term back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1206>

Fluorescein Sodium Ophthalmic Strips

November 3, 2017

Reason for the Shortage

- Hub did not provide a reason for the shortage.
- Akorn did not provide a reason for the shortage

Estimated Resupply Date

- Akorn has Ful-Glo 1 mg strips on back order and the company estimates a release date of late-December 2017.
- Hub has Bio-Glo 1 mg strips on back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1295>

Trace Elements Injection

November 7, 2017

Reason for the Shortage

- American Regent did not provide a reason for the shortage.

Estimated Resupply Date

- American Regent has trace elements-4 pediatric vials on back order and the company cannot estimate a release date. The Multitrace-4 Pediatric 3 mL vials, Multitrace-4 Neonatal 2 mL vials, and Multitrace-5 Concentrate 10 mL vials are available in limited supply.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=785>

Hydroxyzine Hydrochloride Injection

November 7, 2017

Reason for the Shortage

- American Regent would not provide a reason for the shortage. They are the sole supplier of hydroxyzine injection

Estimated Resupply Date

- American Regent has hydroxyzine 50 mg/mL 10 mL vials on back order and the company cannot estimate a release date. The 25 mg/mL 1 mL vials and 50 mg/mL 1 mL vials are available in limited supply.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1185>

Hepatitis B Vaccine Recombinant

November 7, 2017

Reason for the Shortage

- Merck has Recombivax HB on shortage due to increase in global demand.
- GlaxoSmithKline discontinued Egerix B pediatric vials in October 2017.

Estimated Resupply Date

- Merck has Recombivax HB adult formulation vials and syringes on back order and the company estimates this will continue through 2018.
- Merck has Recombivax HB pediatric/adolescent formulation syringes and pediatric/adolescent vials on back order and the company does not anticipate these products will be available in 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=520>

5% Lidocaine and 7.5% Dextrose Injection

November 7, 2017

Reason for the Shortage

- Pfizer has 5% lidocaine and 7.5% dextrose 2 mL ampules on shortage due to manufacturing delays.
- Pfizer is the sole supplier of this combination

Estimated Resupply Date

- Pfizer has 5% lidocaine and 7.5% dextrose 2 mL ampules on long-term back order and the company estimates a release date of 2nd quarter 2018.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1245>

Vitamin A Injection

November 10, 2017

Reason for the Shortage

- Pfizer has Aquasol A injection on shortage due to manufacturing delays.

Estimated Resupply Date

- Pfizer has Aquasol A 50,000 units/mL 2 mL vials on back order and the company estimates a release date of late-December 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=704>

Vecuronium Bromide Injection

November 10, 2017

Reason for the Shortage

- Pfizer has vecuronium on shortage due to manufacturing delays.^{1,2}
- Teva has vecuronium available.³
- Pfizer sold vecuronium injection to Mylan Institutional in December 2013.^{4,5}
- Ben Venue has stopped production in its plant in Bedford, Ohio and closed in 2014.⁶
- Sun Pharma refuses to provide information on availability of any of their products.⁷
- Sagent is not marketing vecuronium 10 mg and 20 mg vials.⁸

- Fresenius Kabi has vecuronium on shortage due to manufacturing delays.⁹

Estimated Resupply Date

- Mylan Institutional has vecuronium 10 mg and 20 mg vials on back order with an estimated release date of mid- to late-December 2017 for the 10 mg vials and late-January to early-February 2018 for the 20 mg vials.⁵
- Pfizer has vecuronium 10 mg and 20 mg vials on back order and the company estimates a release date of 1st quarter 2018.²
- Fresenius Kabi has vecuronium 10 mg and 20 mg vials on back order and the company estimates a release date of 4th quarter 2017.⁹
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=490>

Tobramycin Injection

November 10, 2017

Reason for the Shortage

- Akorn has tobramycin injection on shortage due to manufacturing delays.
- Pfizer did not provide a reason for the shortage.

Estimated Resupply Date

- Akorn has tobramycin 40 mg/mL 2 mL vials on back order and the company cannot estimate a release date.
- Fresenius Kabi has tobramycin 1.2 gram preservative-free powder 50 mL vials on back order and the company estimates a release date of mid- to late-December 2017.
- Teva has temporarily discontinued tobramycin 40 mg/mL 2 mL vials.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=701>

Penicillin G Benzathine

November 10, 2017

Reason for the Shortage

- Pfizer states the shortage was due to a delay in the manufacturing process.

Estimated Resupply Date

- Pfizer has Bicillin L-A 600,000 unit/ 1 mL syringes, 1,200,000 unit/ 2 mL syringes, and 2,400,000 unit/ 4 mL syringes available.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1232>

Mitoxantrone Hydrochloride Injection

November 10, 2017

Reason for the Shortage

- Fresenius Kabi has mitoxantrone available.¹
- Pfizer has mitoxantrone injection on shortage due to manufacturing delays.²
- Teva has mitoxantrone injection available except for the 10 mL vials which are temporarily discontinued.³

Estimated Resupply Date

- Fresenius Kabi has mitoxantrone 2 mg/mL 15 mL vials available with an expiration date of <7 months. The mitoxantrone 2 mg/mL 10 mL vials are on back order and the company estimates a release date of late-November 2017.¹
- Pfizer has mitoxantrone 2 mg/mL 12.5 mL and 15 mL vials on back order and the company estimates a release date of 4th quarter 2017.²
- Teva has temporarily discontinued mitoxantrone 10 mL vials and the company cannot estimate a release date.³
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1212>

Famotidine Injection

November 10, 2017

Reason for the Shortage

- Ben Venue stopped production in its plant in Bedford, Ohio and closed in July 2014.¹
- West-Ward stated the shortage was due to manufacturing delays.²
- Oral famotidine products are not affected by this shortage.
- Pfizer launched famotidine injections in March 2012.³
- Mylan Institutional acquired famotidine injections from Pfizer on December 6, 2013.⁴
- Baxter has famotidine premixed bags available.⁶
- Fresenius Kabi has famotidine vials available.⁵

Estimated Resupply Date

- Baxter has famotidine 20 mg/50 mL premixed bags available in limited supply.⁶
- West-Ward has famotidine 10 mg/mL 20 mL vials on intermittent back order and the company is releasing product as it becomes available.²
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=810>

Erythromycin Lactobionate Injection

November 10, 2017

Reason for the Shortage

- Pfizer has Erythrocin on shortage due to manufacturing delays.

Estimated Resupply Date

- Pfizer has Erythrocin 500 mg ADD-Vantage vials and regular vials on back order and the company estimates a release date of late-January 2018.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=546>

Dextrose (25%) Injection

November 10, 2017

Reason for the Shortage

- Pfizer has 25% dextrose injection on shortage due to manufacturing delays.

Estimated Resupply Date

- Pfizer has 25% dextrose 10 mL Ansyr syringes on back order and the company estimates a release date of late-November 2017.

- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1011>

Cefuroxime Sodium Injection

November 10, 2017

Reason for the Shortage

- Teligent has Zinacef on shortage due to increased demand.
- West-Ward did not provide a reason for the cefuroxime injection shortage.

Estimated Resupply Date

- Sagent has cefuroxime 750 mg and 1.5 gram vials on back order and the company estimates a release date of November 2017. The 7.5 gram vials on back order and the company cannot estimate a release date.
- Teligent has Zinacef 750 mg vials, 750 mg ADD-Vantage vials, 1.5 gram vials, and 7.5 gram vials on long-term back order and the company cannot estimate a release date.
- West-Ward has cefuroxime 750 mg vials and 7.5 gram vials on allocation. The 1.5 gram vials are on back order and the company cannot estimate a release date.

Cefotaxime Injection

November 10, 2017

Reason for the Shortage

- Hospira has discontinued Claforan. Sanofi-Aventis manufactured Claforan for Hospira and is no longer making the product.
- Baxter discontinued Claforan in late-2015.
- West-Ward has cefotaxime on shortage due to manufacturing and issues with raw material.

Estimated Resupply Date

- West-Ward has cefotaxime 500 mg, 1 gram, 2 gram, and 10 gram vials on long-term back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=826>

Bumetanide Injection

November 10, 2017

Reason for the Shortage

- Pfizer has bumetanide injection on shortage due to manufacturing delays.
- West-Ward did not provide a reason for the shortage.

Estimated Resupply Date

- Pfizer has bumetanide 0.25 mg/mL 4 mL and 10 mL vials on back order and the company estimates a release date of August 2018.
- West-Ward has bumetanide 0.25 mg/mL 4 mL and 10 mL vials on a weekly allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=674>

Aminocaproic Acid Injection

November 10, 2017

Reason for the Shortage

- Pfizer has aminocaproic acid 250 mg/mL 20 mL vials on back order and the company estimates a release date of late-November 2017.

Estimated Resupply Date

- Pfizer has aminocaproic acid 250 mg/mL 20 mL vials on back order and the company estimates a release date of December 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=789>

Amino Acid Products with Electrolytes in Dextrose with Calcium (Clinimix E)

November 10, 2017

Reason for the Shortage

- Baxter has all Clinimix E with electrolytes plus calcium presentations on allocation due to delays because of the hurricane in Puerto Rico.

Estimated Resupply Date

- Baxter has all amino acid products with electrolytes plus calcium on allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1024>

Torsemid Injection

November 11, 2017

Reason for the Shortage

- Roche discontinued Demadex injection for business reasons. Demadex tablets are not affected by this shortage.
- American Regent has tosemid on shortage due to manufacturing delays.

Estimated Resupply Date

- American Regent has tosemid injection on long-term back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=344>

Talc, Sterile

November 11, 2017

Reason for the Shortage

- Lymol has Sclerosol and talc powder on shortage due to manufacturing delays.¹
- Novatech SA has Steritalc powder available.²

Estimated Resupply Date

- Lymol has Sclerosol and talc powder on long-term back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1248>

Potassium Phosphate Injection

November 11, 2017

Reason for the Shortage

- American Regent has not had potassium phosphate injection available since 2012. It is unclear if and when product will return to market.
- Fresenius Kabi has potassium phosphate injection on shortage due to increased demand.
- Pfizer had potassium phosphate injection on shortage due to manufacturing delays.

Estimated Resupply Date

- Fresenius Kabi has potassium phosphate 3 mmol/mL 50 mL vials on intermittent back order and the company is releasing product as it becomes available.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=709>

Nitroglycerin Injection

November 11, 2017

Reason for the Shortage

- American Regent did not provide a reason for the shortage.
- The premixed bags are not affected by this shortage.

Estimated Resupply Date

- American Regent has nitroglycerin 50 mg/mL 10 mL vials available in limited supply.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=786>

Morrhuate Sodium Injection

November 11, 2017

Reason for the Shortage

- American Regent has morrhuate sodium injection on shortage due to manufacturing delays.

Estimated Resupply Date

- American Regent has morrhuate sodium 50 mg/mL 30 mL vials on long-term back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=903>

Methyldopate Injection

November 11, 2017

Reason for the Shortage

- American Regent has methyldopate injection on shortage due to manufacturing delays.
- There are no other suppliers of methyldopate injection.

Estimated Resupply Date

- American Regent has methyldopate injection on long-term back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=844>

Doxycycline Hyclate Injection

November 11, 2017

Reason for the Shortage

- Mylan Institutional did not provide a reason for the shortage.
- Fresenius Kabi has doxycycline injection on shortage due to increased demand.

Estimated Resupply Date

- Mylan Institutional has doxycycline 100 mg vials temporarily unavailable and the company cannot estimate a release date.
- Fresenius Kabi has doxycycline 100 mg vials on intermittent back order with regular releases.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=431>

Ciprofloxacin Oral Suspension

November 11, 2017

Reason for the Shortage

- Lupin did not provide a reason for the shortage.
- Bayer has Cipro oral suspension available.

Estimated Resupply Date

- Lupin has ciprofloxacin oral suspension on long-term back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1247>

Calcium Chloride Injection

November 11, 2017

Reason for the Shortage

- American Regent had calcium chloride on shortage due to manufacturing delays.
- Amphastar has calcium chloride on shortage due to increased demand.
- Pfizer has calcium chloride on shortage due to manufacturing delays.
- Mylan Institutional has withdrawn calcium chloride syringes from the market. The company recalled the syringes in April 2015 due to incompatibility of the syringes and some needless adaptors.
- Pfizer had methotrexate injection on shortage due to increased demand.
- Teva has methotrexate injection on shortage due to increased demand.

Estimated Resupply Date

- American Regent has calcium chloride 100 mg/mL 10 mL vials on back order and the company cannot estimate a release date.
- Amphastar has calcium chloride 100 mg/mL 10 mL syringes on intermittent back order with regular releases.
- Pfizer has calcium chloride 100 mg/mL 10 mL Ansyr syringes on back order and the company estimates a release date of early-December 2017. The 100 mg/mL 10 mL LifeShield syringes are on back order and the company estimates a release date of mid-November 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=941>

Ammonium Molybdate Injection

November 11, 2017

Reason for the Shortage

- American Regent has ammonium molybdate injection on shortage due to manufacturing delays.
- American Regent is the sole supplier of ammonium molybdate injection.

Estimated Resupply Date

- American Regent has ammonium molybdate injection on back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1003>

Thiotepa for Injection

November 12, 2017

Reason for the Shortage

- West-Ward launched thiotepa in August 2015.
- Amneal launched Tepadina in early 2017. They have product available.

Estimated Resupply Date

- West-Ward has thiotepa on back order and the company estimates a release date of December 2017 to January 2018.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=589>

Electrolyte Concentrate

November 12, 2017

Reason for the Shortage

- American Regent has Nutrilite and Nutrilite II on back order due to manufacturing delays.

Estimated Resupply Date

- American Regent has Nutrilite and Nutrilite II presentations on long-term back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1054>

Mannitol Injection

November 13, 2017

Reason for the Shortage

- American Regent did not provide a reason for the mannitol shortage.
- Baxter did not provide a reason for the mannitol shortage.
- Fresenius Kabi did not provide a reason for the mannitol shortage.
- Pfizer has mannitol on shortage due to manufacturing delays.

Estimated Resupply Date

- American Regent has mannitol 250 mg/mL 50 mL vials on back order and the company cannot estimate a release date.

- Baxter has Osmitrol 50 mg/mL 1000 mL premixed bags on back order and the company cannot estimate a release date. The 200 mg/mL 250 mL and 500 mL premixed bags are available in limited supply.
- Fresenius Kabi has mannitol 250 mg/mL 50 mL vials on back order and the company estimates a release date of mid-December 2017.
- ICU Medical has mannitol 200 mg/mL 250 mL and 500 mL premixed bags on back order and the company estimates a release date of late-November 2017 for the 250 mL bags and late-December 2017 for the 500 mL bags.
- Pfizer has mannitol 250 mg/mL 50 mL vials on back order and the company estimates a release date of mid-December 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=863>

Flurbiprofen Sodium Ophthalmic Solution

November 13, 2017

Reason for the Shortage

- Allergan discontinued Ocufen ophthalmic solution in February 2017.
- Valeant has flurbiprofen sodium on shortage due to manufacturing delay.

Estimated Resupply Date

- Valeant has flurbiprofen sodium on back order and the company estimates a release of late-November 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1283>

Belatacept Injection

November 13, 2017

Reason for the Shortage

- Bristol-Myers Squibb has Nulojix in short supply due to manufacturing delays.

Estimated Resupply Date

- Bristol-Myers Squibb has limited the distribution of Nulojix. They have product only for existing patients available through the US Nulojix Distribution Program. They have no estimated recovery date, but do not expect full recovery before the end of 2017. Nulojix is distributed by McKesson Plasma Biologics.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1265>

Metronidazole Hydrochloride Injection

November 14, 2017

Reason for the Shortage

- Pfizer has metronidazole injection on shortage due to manufacturing delay.
- Baxter, BBraun, and Claris did not provide a reason for the metronidazole injection shortage.

Estimated Resupply Date

- Baxter has metronidazole 100 mL bags on available only through direct orders.
- BBraun has metronidazole 100 mL bags on back order and the company cannot estimate a release date.

- Claris has metronidazole 100 mL bags on long-term back order and the company cannot estimate a release date.
- Pfizer has metronidazole 100 mL bags in 24 count and 80 count on back order and the company estimates a release date of mid-November 2017 for the 24 count size and mid-December 2017 for the 80 count size.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1272>

Metoprolol Injection

November 14, 2017

Reason for the Shortage

- Alvogen has metoprolol injection available.¹
- American Regent has had metoprolol injection on long-term back order for several years.²
- Athenex has metoprolol injection available.³
- Claris has metoprolol injection available.⁴
- Fresenius Kabi has metoprolol injection available.⁵
- Mylan Institutional acquired metoprolol injection from Sagent.⁶
- Pfizer has metoprolol injection on shortage due to manufacturing delays.⁷
- West-Ward has metoprolol injection available.⁸

Estimated Resupply Date

- Mylan Institutional has metoprolol 1 mg/mL 5 mL vials available with an expiration date of July 2018.⁶
- Pfizer has metoprolol 1 mg/mL 5 mL vials on back order and the company estimates a release date of early-January 2018. The 1 mg/mL 5 mL ampules are on back order and the company estimates a release date of September 2018. The 1 mg/mL 5 mL Carpuject syringes are on back order and the company estimates a release date of 3rd quarter 2018.⁷
- West-Ward has metoprolol 1 mg/mL 10 mL vials on back order and the company estimates a release date of December 2017 to January 2018.⁸
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=813>

Sodium Bicarbonate Injection

November 15, 2017

Reason for the Shortage

- Amphastar has sodium bicarbonate injection on shortage due to increased demand.¹
- Pfizer has sodium bicarbonate injection on shortage due to manufacturing delays.²
- Fresenius Kabi has reintroduced sodium bicarbonate injection in response to the shortage.³

Estimated Resupply Date

- Amphastar has 8.4 % sodium bicarbonate 50 mL syringes on allocation.¹
- Fresenius Kabi has 8.4% bicarbonate 50 mL vials on intermittent back order and the company is releasing product as it becomes available. Check wholesalers for inventory.³
- Pfizer has 8.4 % sodium bicarbonate 10 mL and 50 mL syringes available in limited supply. The 8.4% sodium bicarbonate 50 mL vials are on back order and the company estimates a release date of late-November 2017. The 4.2% sodium bicarbonate 10 mL syringes are available in limited supply. The 7.5% sodium bicarbonate 50 mL syringes are available in limited supply.²

- Pfizer has Neut 4% additive solution in 5 mL vials on back order and the company estimates a release date of January 2018.²
- To help alleviate the shortage, FDA is granting Athenex Pharmaceutical Division (APD) the ability to import 10 mL vials of sodium bicarbonate from Phebra, an Australian company. Supplies are limited and only available via direct orders. Orders may be placed by contacting customer service at 855-273-0154 or apdorders@dlss.com.⁴
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=788>

Norepinephrine Bitartrate Injection

November 15, 2017

Reason for the Shortage

- Claris has norepinephrine injection available.
- Pfizer has Levophed on shortage due to manufacturing delays.
- Teva has norepinephrine injection on allocation due to increased demand.

Estimated Resupply Date

- Pfizer has Levophed 1 mg/mL 4 mL ampules on back order and the company estimates a release date of early-December 2017.
- Teva has norepinephrine 1 mg/mL 4 mL vials on allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1262>

Labetalol Injection

November 15, 2017

Reason for the Shortage

- Akorn has labetalol injection available.¹
- Alvogen has labetalol injection available.²
- Pfizer has labetalol injection on shortage due to manufacturing delays.³
- West-Ward has labetalol injection available.⁴

Estimated Resupply Date

- Pfizer has labetalol 5 mg/mL 4 mL syringes on back order and the company estimates a release date of early-December 2017.³
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=397>

Epinephrine Injection

November 15, 2017

Reason for the Shortage

- Amphastar stopped distributing epinephrine 1 mg/mL 30 mL vials on May 10, 2017. They are continuing to supply 0.1 mg/mL 10 mL syringes. These are on shortage due to increased demand.¹
- Pfizer stopped distributing epinephrine 1 mg/mL presentations on May 10, 2017.²
- BPI has epinephrine 1 mg/mL 2 mL ampules available.³
- Par has Adrenalin 1 mg/mL 1 mL and 30 mL vials available.⁴

Estimated Resupply Date

- Amphastar has epinephrine 0.1 mg/mL 10 mL syringes on allocation.¹
- Pfizer has epinephrine 0.1 mg/mL 10 mL syringes on back order and the company estimates a release date of late-November 2017.²
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=685>

Dobutamine Injection

November 15, 2017

Reason for the Shortage

- Baxter has dobutamine on shortage due to manufacturing delays.
- Pfizer has dobutamine on shortage due to manufacturing delays.

Estimated Resupply Date

- Baxter has all dobutamine premixed bags on allocation only through direct orders. Product is not available through wholesalers.
- Pfizer has dobutamine 12.5 mg/mL 20 mL and 40 mL latex-free vials on back order with an estimated release date of 2018. The 12.5 mg/mL 20 mL regular vials in single count are on back order and the company estimates a release date of January 2018.
- Pfizer has dobutamine 1 mg/mL in 250 mL bags on back order and the company estimates a release date of early-December 2017. The dobutamine 2 mg/mL 250 mL bags are on back order and the company estimates a release date of late-November 2017. The dobutamine 4 mg/mL 250 mL bags are on back order and the company estimates a release date of late-December 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=929>

Dextrose (50%) Injection

November 15, 2017

Reason for the Shortage

- Amphastar has 50% dextrose injection on shortage due to increased demand.
- Pfizer has 50% dextrose injection on shortage due to manufacturing delays.

Estimated Resupply Date

- Amphastar has 50% dextrose 50 mL syringes on allocation and is regularly releasing product.
- Pfizer has 50% dextrose 50 mL LifeShield syringes and 50 mL Ansy II syringes available in limited supply. The 50% dextrose 50 mL vials are on back order and the company estimates a release date of early-December 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1012>

Rocuronium Injection

November 16, 2017

Reason for the Shortage

- Fresenius Kabi has rocuronium on shortage due to delay of raw materials.
- Pfizer has rocuronium on shortage due to manufacturing delays.
- Sagent has rocuronium on shortage due to increased demand.
- AuroMedics launched rocuronium in mid-2017.

Estimated Resupply Date

- Auromedics has rocuronium 10 mg/mL 5 mL and 10 mL vials available with intermittent releases.
- Fresenius Kabi has rocuronium 10 mg/mL 5 mL vials on back order and the company cannot estimate a release date.
- Pfizer has rocuronium 10 mg/mL 5 mL vials on back order and the company estimates a release date of mid-December 2017. Rocuronium 10 mg/mL 10 mL vials are on back order and the company estimates a release date of early-January 2018.
- Sagent has rocuronium 10 mg/mL 5 mL vials on back order and the company estimates a release date of December 2017. The 10 mL vials are on allocation.
- Sandoz has rocuronium 10 mg/mL 5 mL vials available in limited quantities.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=434>

Morphine Injections

November 16, 2017

Reason for the Shortage

- Astramorph injection has been unavailable since 2012. Fresenius Kabi changed manufacturing sites and cannot estimate if Astramorph will return.
- Pfizer states the shortage is due to manufacturing delays. Pfizer discontinued morphine ADD-Vantage vials in January 2017.
- Pfizer anticipates a shortage of several prefilled syringe products, including morphine, starting in late-July 2017 due to issues at a manufacturing facility. To minimize the impact of the shortage, Pfizer is prioritizing production of certain morphine Carpuject syringes. Pfizer expects the shortage of prefilled syringe products to recover by late-first quarter 2018.
- West-Ward launched several new morphine sulfate products in late-September 2015. They are not actively marketing the 15 mg/mL 1 mL vials or the 8 mg/mL 1 mL vials (NDC 00641-6075-25). They are still marketing the 8 mg/mL 1 mL vials with NDC 00641-6126-25.

Estimated Resupply Date

- Astramorph injection has been unavailable since 2012. Fresenius Kabi changed manufacturing sites and cannot estimate if Astramorph will return.
- Pfizer states the shortage is due to manufacturing delays. Pfizer discontinued morphine ADD-Vantage vials in January 2017.
- Pfizer anticipates a shortage of several prefilled syringe products, including morphine, starting in late-July 2017 due to issues at a manufacturing facility. To minimize the impact of the shortage, Pfizer is prioritizing production of certain morphine Carpuject syringes. Pfizer expects the shortage of prefilled syringe products to recover by late-first quarter 2018.
- West-Ward launched several new morphine sulfate products in late-September 2015. They are not actively marketing the 15 mg/mL 1 mL vials or the 8 mg/mL 1 mL vials (NDC 00641-6075-25). They are still marketing the 8 mg/mL 1 mL vials with NDC 00641-6126-25.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=664>

Methotrexate Injection

November 16, 2017

Reason for the Shortage

- Accord did not provide a reason for the shortage.¹
- Fresenius Kabi had methotrexate injection on shortage due to increased demand.²
- Mylan did not provide a reason for the shortage.³
- Pfizer had methotrexate injection on shortage due to increased demand.⁴
- Teva had methotrexate injection on shortage due to increased demand.⁵

Estimated Resupply Date

- Accord has methotrexate 25 mg/mL 2 mL, 10 mL, and 40 mL vials on back order and the company cannot estimate a release date.
- Mylan Institutional has methotrexate injection temporarily unavailable and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=26>

Dopamine Hydrochloride Injection

November 16, 2017

Reason for the Shortage

- American Regent has dopamine on shortage due to manufacturing delays.
- Baxter has all dopamine presentations on shortage due to manufacturing delays.
- Pfizer states the shortage is due to manufacturing delays. The dopamine 200 mg/250 mL and 400 mg/500 mL premixed bags were discontinued in August 2017.

Estimated Resupply Date

- American Regent has all dopamine presentations on back order and the company cannot estimate a release date.
- Baxter has all dopamine premixed bags on allocation only through direct orders. Product is not available through wholesalers.
- Pfizer has dopamine 40 mg/mL 10 mL vials on back order and the company estimates a release date of 2018. The 40 mg/mL 5 mL vials are on back order and the company cannot estimate a release date. The 400 mg/250 mL bags are on back order and the company estimates a release date of late-November 2017. The 800 mg/500 mL premixed bags are on back order and the company estimates a release date of early-December 2017. The 800 mg/250 mL premixed bags are on back order and the company estimates a release date of mid-November 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1243>

Dexamethasone Sodium Phosphate

November 16, 2017

Reason for the Shortage

- American Regent has dexamethasone sodium phosphate on shortage due to manufacturing delays.
- AuroMedics has dexamethasone sodium phosphate on intermittent back order.
- Fresenius Kabi has dexamethasone sodium phosphate presentations available.
- Mylan Institutional did not provide a reason for the shortage.
- West-Ward has dexamethasone sodium phosphate available.

Estimated Resupply Date

- American Regent has dexamethasone sodium phosphate 4 mg/mL products on back order and the company cannot estimate a release date.
- AuroMedics has dexamethasone sodium phosphate 4 mg/mL 1 mL, 5 mL, and 30 mL vials on intermittent back order and the company is releasing product as it becomes available.
- West-Ward has dexamethasone sodium phosphate 4 mg/mL 1 mL and 5 mL vials on back order and the company cannot estimate a release date. The 10 mg/mL 1 mL vials are on back order and the company estimates a release date of November 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=751>

Sincalide Injection

November 17, 2017

Reason for the Shortage

- Bracco Diagnostics has Kinevac injection on shortage due to a supply disruption.
- There are no approved alternatives to Kinevac for the labeled indications.

Estimated Resupply Date

- Bracco has Kinevac on back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1032>

Lactated Ringer's Injection

November 17, 2017

Reason for the Shortage

- Baxter did not provide a reason for the shortage.
- BBraun states the reason for the shortage is increased demand.
- ICU Medical states the reason for the shortage is increased demand.

Estimated Resupply Date

- Baxter has lactated ringer's injection solution products on allocation.
- BBraun has lactated ringer's injection solution and lactated ringer's with 5% dextrose injection solution products on allocation.
- ICU Medical has lactated ringer's 250 mL and 500 mL bags on allocation. Lactated ringer's 1000 mL bags and lactated ringer's with 5% dextrose 500 mL bags are on back order and the company estimates a release date in late-November 2017. Lactated ringer's with 5% dextrose 1000 mL bags are on back order and the company estimates a release date in early-December 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1294>

Haloperidol Lactate Injection

November 17, 2017

Reason for the Shortage

- Mylan Institutional has haloperidol lactate injection available.
- Patriot Pharmaceuticals has haloperidol lactate available.
- Sagent has haloperidol lactate on shortage due to manufacturing delays.
- Teva is not currently marketing haloperidol lactate.
- West-Ward is not actively marketing haloperidol lactate at this time.
- Janssen has Haldol injection available.

Estimated Resupply Date

- Sagent has haloperidol lactate 5 mg/mL 10 mL vials on back order and the company estimates a release date in December 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=527>

Ceftriaxone Sodium Injection

November 17, 2017

Reason for the Shortage

- Apotex states the reason for the shortage is manufacturing delays. Apotex has updated the NDC numbers for ceftriaxone 500 mg and 1 gram vials.
- Fresenius Kabi states the reason for the shortage is increased demand.
- Pfizer has ceftriaxone injection available.
- Sagent states the reason for the shortage is manufacturing delay.
- Sandoz has most ceftriaxone available.
- West-Ward states the reason for the shortage is manufacturing delay.
- WG Critical Care states the reason for the shortage is increased demand.
- Wockhardt relaunched their ceftriaxone presentations in October 2017.

Estimated Resupply Date

- Apotex has ceftriaxone 250 mg and 500 mg on back order and the company cannot estimate a release date.
- Fresenius Kabi has ceftriaxone 500 mg vials on back order and the company cannot estimate a release date.
- Lupin has all ceftriaxone presentations on allocation.
- Sandoz has ceftriaxone 2 gram and 10 gram vials on back order and the company estimates a release date of early-December 2017.
- Pfizer has ceftriaxone 1 gram ADD-Vantage and 2 gram ADD-Vantage vials on allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1101>

Bupivacaine Injection

November 17, 2017

Reason for the Shortage

- AuroMedics has not provided a reason for the shortage.
- Fresenius Kabi had Sensorcaine on shortage due to increased demand for the product.
- Pfizer has bupivacaine on shortage due to manufacturing delays.

Estimated Resupply Date

- Pfizer has 0.25% Marcaine 10 mL and 30 mL preservative-free vials on back order and the company estimates a release date of 2nd quarter 2018. The 0.25% Marcaine 50 mL vials are on back order and the company estimates a release date in January 2018. The 0.5% Marcaine 10 mL and 30 mL preservative-free vials are on back order and the company estimates a release date of 2nd quarter 2018. The 0.5% Marcaine 50 mL vials are on back order and the company estimates a release date in January 2018. The 0.75% Marcaine 10 mL and 30 mL preservative-

free vials are on back order and the company estimates a release date of 1st quarter 2018 for the 10 mL vials and September 2018 for the 30 mL vials.

- Pfizer has 0.25% bupivacaine 10 mL preservative-free vials on back order and the company estimates a release date of January 2018. The 0.25% bupivacaine 30 mL preservative-free vials are on allocation. The 0.5% bupivacaine 30 mL preservative-free vials and 30 mL glass ampules are on back order and the company estimates a release date of mid-November 2017 for the preservative-free vials and the company cannot estimate a release date for the glass ampules.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=864>

Acetylcysteine Oral and Inhalation Solution

November 17, 2017

Reason for the Shortage

- American Regent has acetylcysteine oral and inhalation solution on shortage due to manufacturing delays.
- Fresenius Kabi has acetylcysteine oral and inhalation solution available.
- Pfizer has acetylcysteine oral and inhalation solution on shortage due to manufacturing delays.
- Roxane Labs discontinued acetylcysteine oral and inhalation solution in April 2014.

Estimated Resupply Date

- American Regent has acetylcysteine solution 100 mg/mL 10 mL vials, and 200 mg/mL 10 mL and 30 mL vials on back order and the company cannot estimate a release date. Acetylcysteine 100 mg/mL and 200 mg/mL 4 mL in 25 count is available in limited quantities.
- Fresenius Kabi has acetylcysteine solution 200 mg/mL 30 mL vials on back order and the company estimates a release date of late-November 2017.
- Pfizer has acetylcysteine solution 200 mg/mL 10 mL and 30 mL vials on back order and the company estimates a release date in late-November 2017. The 100 mg/mL 4 mL and 30 mL vials are on back order and the company estimates a release date in mid-November 2017 for the 4 mL vials and early- to mid-January 2018 for the 30 mL vials.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=932>

5% Dextrose Injection (PVC-free and DEHP-free)

November 17, 2017

Reason for the Shortage

- ICU Medical states the shortage is due to increased demand and manufacturing delays. ICU Medical discontinued the 500 mL VisIV bags in 2011 due to leaking around the administration and medications ports.
- ICU Medical is now the IV fluid business of Pfizer after the acquisition of Hospira.
- Baxter is not currently marketing 5% dextrose PVC/DEHP-free bags.
- BBraun has 250 mL, 500 mL, and 1,000 mL PVC/DEHP-free bags on back order due to manufacturing delays.

Estimated Resupply Date

- BBraun has 5% dextrose 250 mL, 500 mL, and 1,000 mL PVC/DEHP-free bags on back order and the company cannot estimate a release date.

- ICU Medical has 5% dextrose in 50 mL, 100 mL, and 250 mL PVC/DEHP-free bags on back order and the company estimates a release date of early-December 2017 for the 50 mL bags, mid-December 2017 for the 100 mL bags, and late-November 2017 for the 250 mL bags.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1269>

5% Dextrose Injection

November 17, 2017

Reason for the Shortage

- ICU Medical states the shortage was due to increased demand.
- ICU Medical is now the IV fluid business of Pfizer after the acquisition of Hospira.
- Baxter did not provide a reason for the shortage.
- 5% dextrose 1,000-mL bags are not affected at this time.

Estimated Resupply Date

- Baxter has 5% dextrose 250 mL, 500 mL, and 1,000 mL bags on allocation.
- ICU Medical has 5% dextrose 250 mL, 500 mL, and 1,000 mL bags available in limited quantities.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1268>

0.9% Sodium Chloride Large Volume Bags Injection Bags

November 17, 2017

Reason for the Shortage

- Baxter discontinued 0.9% sodium chloride 250 mL and 500 mL AVIVA bags. The 250 mL Viaflex bags are available in limited supply. All other presentations are available.¹
- BBraun did not provide a reason for the shortage.²
- Pfizer cited increased demand as the reason for the shortage.³
- Fresenius Kabi is no longer importing product.⁷
- Baxter has received FDA approval for 0.9% sodium chloride in Viaflo containers manufactured in an FDA-approved facility in Spain.

Estimated Resupply Date

- BBraun has 0.9% sodium chloride 250 mL, 500 mL, and 1,000 mL PVC/DEHP-free bags on back order and the company cannot estimate a release date.²
- Baxter has 0.9% sodium chloride 250 mL bags and 500 mL PVC/DEHP-free bags on back order and the company cannot estimate a release date.¹
- Pfizer has 0.9% sodium chloride 250 mL, 250 mL PVC/DEHP-free, and 250 mL 2-port bags on back order and the company estimates a release date of late-November 2017. The 150 mL bags are on back order and the company estimates a release date of mid-November 2017. The other presentations are on allocation. All product will be allocated upon release.³
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1288>

Lidocaine Injection

November 20, 2017

Reason for the Shortage

- Amphastar had lidocaine 2% emergency syringes on shortage due to increase demand for the product.

- AuroMedics introduced lidocaine injection in February 2014.
- Fresenius Kabi had generic lidocaine presentations on shortage due to a supply interruption of raw ingredients.
- Pfizer has lidocaine presentations on shortage due to manufacturing delays.

Estimated Resupply Date

- AuroMedics has 1% lidocaine 5 mL ampules on intermittent back order and the company is releasing product as it becomes available. AuroMedics has 2% lidocaine 2 mL ampules on intermittent back order and the company is releasing product as it becomes available.
- Fresenius Kabi has 1% Xylocaine 50 mL vials on intermittent back order and the company is releasing product as it becomes available. The 1% Xylocaine-MPF 30 mL vial and 30 mL vial sterile packs are on back order and the company estimates a release date in late-December 2017 for the 30 mL vials and mid-December 2017 for the 30 mL vial sterile packs. The 2% Xylocaine-MPF 5 mL vials are on intermittent back order and the company is releasing product as it becomes available.
- Pfizer has 1% lidocaine 50 mL vials are on back order and the company estimates a release date in early-December 2017. The 0.5% lidocaine 50 mL tear drop vials are on back order and the company estimates a release date in mid-January 2018. The 1% lidocaine 20 mL vials, 30 mL preservative-free vials, 2 mL preservative-free ampules, and 5 mL LifeShield syringes are on back order and the company estimates a release date of late-November 2017. The 1% lidocaine 5 mL preservative-free ampules are on back order and the company estimates a release date in January 2018. The 1% lidocaine 5 mL Ansyng syringes are available in limited supply. The 2% lidocaine 5 mL vials are on back order and the company estimates a release date of early-January 2018. The 2% lidocaine 10 mL ampules and 2% lidocaine 5 mL LifeShield syringes are on back order and the company estimates release dates of late-November 2017 for the ampules and late-December 2017 for the syringes. The 2% lidocaine 5 mL Ansyng syringes are available in limited supply.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=859>

Potassium Chloride Injection

November 21, 2017

Reason for the Shortage

- Baxter has their highly concentrated potassium chloride in sterile water on shortage because a manufacturing facility has been affected by Hurricane Maria. Baxter has removed these products from distribution and they can be purchased directly if they are in stock. Baxter is also adjusting the allocation of these products. Baxter did not provide a reason for the shortage of their other potassium chloride products.
- Fresenius Kabi did not provide a reason for the shortage.
- Pfizer has potassium chloride injection on shortage due to increase demand and manufacturing delays.

Estimated Resupply Date

- Baxter has potassium chloride 10 mEq/1000 mL in 5% dextrose and 0.45% sodium chloride, potassium chloride 20 mEq/1000 mL in 5% dextrose and 0.2% sodium chloride, and potassium chloride 20 mEq/1000 mL in 0.45% sodium chloride available in limited quantities. Potassium chloride 20 mEq/1000 mL in 5% dextrose and 0.9% sodium chloride and potassium chloride 40

mEq/1000 mL in 5% dextrose and 0.9% sodium chloride on back order and the company cannot estimate a release date.

- Baxter has all potassium chloride in sterile water presentations in sterile water on allocation.
- Fresenius Kabi has potassium chloride 2 mEq/mL 5 mL, 10 mL, 20 mL, and 30 mL vials on back order and the company estimates a release date of early-December 2017 for the 5 mL and 10 mL vials, early- to mid-January 2018 for the 20 mL vials, and mid- to late-December 2017 for the 30 mL vials.
- Pfizer has potassium chloride 10 mEq/5 mL vials on back order and the company estimates a release date of late-January 2018.
- ICU Medical has the 10 mEq/50 mL in sterile water, 10 mEq/100 mL in sterile water, 20 mEq/1000 mL in 5% dextrose and 0.45% sodium chloride premixed bags, 40 mEq/1000 mL 5% dextrose and 0.9% sodium chloride premixed bags, and 20 mEq/1000 mL lactated ringers and 5% dextrose premixed bags on back order and the company estimates a release date of late-November 2017. The 20 mEq/100 mL in sterile water and 40 mEq/100 mL in sterile water are on back order and the company estimates a release date of early-January 2018 for the 20 mEq/100 mL and November 2017 for the 40 mEq/100 mL. Potassium chloride 10 mEq/500 mL in 5% dextrose and 0.225% sodium chloride premixed bags are on long-term back order. Several potassium chloride presentations are on allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=696>

Pantoprazole Injection

November 21, 2017

Reason for the Shortage

- Pfizer has Protonix injection on shortage due to manufacturing delays.
- AuroMedics has pantoprazole injection available.

Estimated Resupply Date

- Pfizer has Protonix 40 mg vials in 10 count and 25 count packs available in limited supply.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1153>

Multiple Vitamins for Infusion

November 21, 2017

Reason for the Shortage

- Pfizer states the shortage is due to manufacturing delays.
- Baxter has all presentations fully available at this time.

Estimated Resupply Date

- Pfizer has M.V.I. adult 50 mL Dual vials on back order and the company estimates a release date of early-January 2018.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=831>

Magnesium Sulfate Injection

November 21, 2017

Reason for the Shortage

- American Regent has had magnesium sulfate unavailable since late 2012.

- Fresenius Kabi had magnesium sulfate injection on shortage due to increased demand for the product.
- Pfizer has magnesium sulfate injection on shortage due to manufacturing delays.
- X-Gen has magnesium sulfate injection available.

Estimated Resupply Date

- Fresenius Kabi has magnesium sulfate 500 mg/mL 20 mL and 50 mL vials on back order and the company estimates a release date of late-December 2017 for the 20 mL vials and mid- to late-December 2017 for the 50 mL vials.
- Pfizer has magnesium sulfate 500 mg/mL 20 mL vials on back order and the company estimates a release date of 2nd quarter 2018. The 500 mg/mL 10 mL Ansyf syringes are available in limited supply. The magnesium sulfate 40 mg/mL 500 mL and 1000 mL bags are on back order and the company estimates a release date of November 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=757>

Carbidopa and Levodopa Extended-Release Tablets

November 21, 2017

Reason for the Shortage

- Accord has discontinued carbidopa and levodopa 25 mg/100 mg extended-release tablets due to problems obtaining active ingredient. The 50 mg/ 200 mg tablets remain available.
- Caraco refuses to provide availability information. However, per FDA, Caraco has carbidopa and levodopa extended-release tablets available.
- Merck could not provide a reason for the Sinemet CR shortage.
- Mylan could not provide a reason for the shortage.

Estimated Resupply Date

- Merck has Sinemet CR 25 mg/100 mg and 50 mg/200 mg tablets on back order and the company estimates a release date in late-October 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1181>

Calcium Gluconate Injection

November 21, 2017

Reason for the Shortage

- American Regent has calcium gluconate on shortage due to manufacturing delays.
- Fresenius Kabi has calcium gluconate available with alternating short-dating due to manufacturing process of the vials.
- American Regent has issued a statement that all lots of calcium gluconate may contain glass particles and filters must be used. Do not use if there are visible glass particles and filter all other product.

Estimated Resupply Date

- American Regent has calcium gluconate 100 mg/mL 50 mL and 100 mL vials on back order and the company cannot estimate a release date.
- Fresenius Kabi has calcium gluconate 100 mg/mL 10 mL, 50 mL, and 100 mL vials available with an expiration date of <8 months for the 10 mL vials and <9 months for the 50 mL and 100 mL vials.

- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=48>

Atropine Sulfate Injection

November 21, 2017

Reason for the Shortage

- American Regent has atropine injection on shortage due to market demand.
- Pfizer has atropine injection on shortage due to manufacturing delays.

Estimated Resupply Date

- American Regent has atropine 0.4 mg/mL 1 mL ampules on back order and the company cannot estimate a release date. The 1 mg/mL 1 mL vials are available in limited supply.
- Pfizer has atropine 0.1 mg/mL 10 mL Ansyng syringes available in limited supply. The 0.1 mg/mL 5 mL LifeShield syringes and 0.1 mg/mL 10 mL LifeShield syringes are on back order and the company estimates a release date of late-December 2017 for the 5 mL LifeShield syringes and early-December 2017 for the 10 mL LifeShield syringes.
- West-Ward has atropine 0.4 mg/mL 20 mL vials on allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=814>

23.4% Sodium Chloride Injection

November 21, 2017

Reason for the Shortage

- Fresenius Kabi has 23.4% sodium chloride injection on shortage due to increased demand.
- Pfizer has 23.4% sodium chloride injection on shortage due to increased demand.

Estimated Resupply Date

- Fresenius Kabi has 23.4% sodium chloride 30 mL and 200 mL vials on intermittent back order and the company is releasing product as it becomes available. The 100 mL vials are on back order and the company estimates a release date of early-January 2018.
- Pfizer has 23.4% sodium chloride 200 mL vials on back order and the company estimates a release date of late-November 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1279>

0.9% Sodium Chloride 10 mL, 20 mL, and 50 mL Preservative Free Vials

November 21, 2017

Reason for the Shortage

- Fresenius Kabi has 0.9% sodium chloride preservative free vials available.
- Pfizer could not provide a reason for the shortage.

Estimated Resupply Date

- Pfizer has 0.9% sodium chloride preservative free 20 mL vials on back order and the company estimates a release date of early-December 2017. The 50 mL vials are available in limited supply
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1276>

Mepivacaine Injection

November 22, 2017

Reason for the Shortage

- Pfizer states the reason for the shortage is manufacturing delays.

Estimated Resupply Date

- Pfizer has Carbocaine 1% in 50 mL multiple-dose vials on back order and the company estimates a release date of late-November 2017. Carbocaine 1% 30 mL preservative-free vials are on back order and the company estimates a release date of early-December 2017. Carbocaine 1.5% in 30 mL preservative-free vials are on back order and the company estimates a release date of September 2018. Carbocaine 2% in 20 mL preservative-free vials are on back order and the company estimates a release date of early-December 2017. Carbocaine 2% in 50 mL multiple-dose vials are back order and the company estimates a release date of late-December 2017.

Meperidine Hydrochloride Injection

November 22, 2017

Reason for the Shortage

- Pfizer has Demerol injection on shortage due to manufacturing delays.

Estimated Resupply Date

- Pfizer has Demerol 50 mg/mL 0.5 mL ampules on intermittent back order and the company is releasing product as it becomes available. The 100 mg/mL 20 mL vials are on back order and the company estimates a release date of 1st quarter 2018. The 50 mg/mL 1 mL Carpuject syringes are on back order and the company estimates a release date of 3rd quarter 2018. The 25 mg/mL 1 mL Carpuject syringes, 75 mg/mL 1 mL Carpuject syringes, and 100 mg/mL 1 mL Carpuject syringes are on back order and the company estimates a release date of September 2018. The 50 mg/mL 30 mL vials are on back order and the company estimates a release date of January 2018.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1285>

Lidocaine with Epinephrine Injection

November 22, 2017

Reason for the Shortage

- Fresenius Kabi has Xylocaine with epinephrine presentations on shortage due to increased demand for the product and manufacturing delays.
- Pfizer has lidocaine with epinephrine presentations on shortage due to manufacturing delays.

Estimated Resupply Date

- Pfizer has 0.5% lidocaine with epinephrine (1:200,000) 50 mL on back order and the company estimates a release date of 2nd quarter 2018. The 1% lidocaine with epinephrine (1:100,000) 20 mL vials are on back order and the company estimates a release date of early-December 2017. The 1% lidocaine with epinephrine (1:100,000) 50 mL vials are on intermittent back order and the company is releasing product as it becomes available. The 1% lidocaine with epinephrine (1:100,000) 30 mL vials are on back order and the company estimates a release date of mid-December 2017. The 1.5% lidocaine with epinephrine (1:200,000) 30 mL vials are on back order and the company estimates a release date of 1st quarter 2018. The 1.5% lidocaine with epinephrine (1:200,000) 5 mL ampules are available in limited supply. The 2% lidocaine with epinephrine (1:200,000) 20 mL vials are on back order and the company estimates a

release date of 2nd quarter 2018. The 2% lidocaine with epinephrine (1:100,000) 20 mL, 30 mL, and 50 mL vials are on back order and the company estimates a release date of 2nd quarter 2018 for the 20 mL and 30 mL vials and 1st quarter 2018 for the 50 mL vials.

- Fresenius Kabi has 0.5% Xylocaine with epinephrine (1:200,000) 50 mL vials on back order and the company cannot estimate a release date. The 1% Xylocaine with epinephrine (1:200,000) 20 mL and 50 mL vials are on intermittent back order and the company is releasing product as it becomes available. The 1% Xylocaine-MPF with epinephrine (1:200,000) 30 mL vials are on intermittent back order and the company is releasing product as it becomes available. The 1% Xylocaine with epinephrine (1:200,000) 10 mL vials and 1% Xylocaine-MPF with epinephrine (1:200,000) 10 mL vials are on back order and the company cannot estimate a release date. The 1% Xylocaine-MPF with epinephrine (1:200,000) 30 mL vials in sterile packs are on intermittent back order and the company is releasing product as it becomes available. The 1.5% Xylocaine-MPF with epinephrine (1:200,000) 10 mL and 30 mL vials are on back order and the company cannot estimate a release date. The 2% Xylocaine with epinephrine (1:200,000) 20 mL vials are on intermittent back order and the company is releasing product as it becomes available. The 2% Xylocaine with epinephrine (1:200,000) 50 mL vials are on back order and the company cannot estimate a release date. The 2% Xylocaine-MPF with epinephrine (1:200,000) 10 mL vials are on back order and the company cannot estimate a release date. The 2% Xylocaine-MPF with epinephrine (1:200,000) 20 mL vials are on intermittent back order and the company is releasing product as it becomes available. The 2% Xylocaine-MPF with epinephrine (1:200,000) 20 mL vials in sterile packs are on back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=860>

Leucovorin Calcium Injection

November 22, 2017

Reason for the Shortage

- Fresenius Kabi has leucovorin available.
- Sagent has leucovorin on shortage due to manufacturing delay.
- Teva has leucovorin available.
- West-Ward did not provide a reason for the current shortage.

Estimated Resupply Date

- Fresenius Kabi has leucovorin 500 mg vials on back order and the company estimates a release date of late-November 2017.
- Sagent has leucovorin 100 mg vials on back order and the company estimates a release date of December 2017.
- West-Ward has leucovorin 350 mg vials on allocation. The 100 mg and 200 mg vials are on back order and the company estimates a release date of December 2017.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=488>

Ketorolac Tromethamine Injection

November 22, 2017

Reason for the Shortage

- Amphastar did not provide a reason for the shortage.¹
- BD RX is now part of Fresenius Kabi.²
- Fresenius Kabi did not provide a reason for the shortage.³

- Pfizer has ketorolac injection on back order due to manufacturing delays.⁴
- Sagent states the reason for the shortage is manufacturing delay.⁵
- West-Ward is not actively marketing ketorolac injection.⁶
- Ben Venue closed its plant in Bedford, Ohio in July 2014.⁷
- FDA imposed an import ban in mid-2013 on several Wockhardt products including ketorolac.⁸
- Sprix Nasal Spray is not affected by this shortage.⁹

Estimated Resupply Date

- Amphastar has ketorolac 30 mg/mL 1 mL vials on back order and the company cannot estimate a release date.¹
- Fresenius Kabi has ketorolac 30 mg/mL 1 mL prefilled syringes on back order and the company estimates a release date of mid- to late-December 2017.³
- Pfizer has ketorolac 30 mg/mL 1 mL Carpuject syringes on back order and the company estimates a release date of early-December 2017. The 2 mL Carpuject syringes for intramuscular injection are on back order and the company estimates a release date of September 2018. The 30 mg/mL 2 mL vials for intramuscular injection are on back order and the company estimates a release date of early-December 2017.⁴
- Sagent has ketorolac 15 mg/mL 1 mL vials and 30 mg/mL 2 mL vials for intramuscular injection on back order and the company estimates a release date of December 2017. The 30 mg/mL 1 mL vials are on back order and the company estimates a release date of November 2017.⁵
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=593>

Heparin Injection

November 22, 2017

Reason for the Shortage

- Fresenius Kabi did not provide a reason for the shortage.
- Pfizer did not provide a reason for the shortage.
- Sagent has all heparin presentations available.
- West-Ward did not provide a reason for the shortage.

Estimated Resupply Date

- West-Ward has 1,000 mL 30 mL vials and 5,000 unit/mL 10 mL vials are on back order and the company cannot estimate a release date.
- Pfizer has 10,000 unit/mL 0.5 mL preservative-free Carpuject syringes on back order and the company estimates a release date of late-November 2017. The 5,000 unit/mL 10 mL vials are on back order and the company estimates a release date in late-February 2017. The 1,000 unit/mL 10 mL glass vials and 30 mL glass vials are on back order and the company estimates a release date of mid-December 2017. The 1,000 unit/mL 10 mL vials are on back order and the company estimates a release date of 1st quarter 2018. The 10,000 unit/mL 1 mL vials and 1,000 unit/mL 30 mL vials are on back order and the company estimates a release date of January 2018.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1289>

Folic Acid Injection

November 22, 2017

Reason for the Shortage

- Fresenius Kabi had folic acid on shortage due to a delay in getting the active ingredient.

Estimated Resupply Date

- Fresenius Kabi has folic acid 5 mg/mL 10 mL vials available.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=584>

Fentanyl Citrate Injection

November 22, 2017

Reason for the Shortage

- Akorn has fentanyl injection on shortage due to increased demand.
- West-Ward has fentanyl injection on shortage due to supply and demand issues.
- Pfizer has fentanyl injection on shortage due to manufacturing delays.

Estimated Resupply Date

- Akorn has Sublimaze 50 mcg/mL 2 mL ampules in 10 count and 25 count and 5 mL ampules in 10 count and 25 count on allocation.
- Pfizer has fentanyl 50 mcg/mL 5 mL ampules on intermittent back order and the company is releasing product as it becomes available. The 20 mL ampules are on back order and the company cannot estimate a release date. The 2 mL Carpuject syringes are on back order and the company estimates a release date of 3rd quarter 2018. The 10 mL, 20 mL, and 50 mL vials are on intermittent back order and the company is releasing product as it becomes available.
- West-Ward has fentanyl 50 mcg/mL 2 mL, 5 mL, 10 mL, 20 mL, and 50 mL vials on back order and the company estimates a release date of late-November 2017 for the 2 mL vials, mid-December 2017 for the 5 mL and 10 mL vials, and early-December 2017 for the 20 mL and 50 mL vials. The 5 mL ampules are on back order and the company estimates a release date of early-December 2017. The 20 mL ampules are on back order and the company cannot estimate a release date.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1273>

Diazepam Injection

November 22, 2017

Reason for the Shortage

- Pfizer has diazepam on shortage due manufacturing delays.

Estimated Resupply Date

- Pfizer has diazepam 5 mg/mL 2 mL Carpuject syringes on back order and the company estimates a release date of late-December 2017. The 5 mg/mL 10 mL vials are available in limited supply.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=492>

Bupivacaine with epinephrine Injection

November 22, 2017

Reason for the Shortage

- Fresenius Kabi has bupivacaine and epinephrine on shortage due to increased demand and manufacturing delays.
- Pfizer has bupivacaine with epinephrine on shortage due to manufacturing delays.

Estimated Resupply Date

- Fresenius Kabi has 0.25% Sensorcaine-MPF with epinephrine 30 mL vials on intermittent back order and the company is releasing product as it becomes available. The 0.25% Sensorcaine-MPF with epinephrine 10 mL vials are on back order and the company cannot estimate a release date. The 0.25% Sensorcaine with epinephrine 50 mL vials are on intermittent back order and the company is releasing product as it becomes available. The 0.5% Sensorcaine-MPF with epinephrine 30 mL vials are on intermittent back order and the company is releasing product as it becomes available. The 0.5% Sensorcaine-MPF with epinephrine 10 mL vials are on back order and the company cannot estimate a release date. The 0.5% Sensorcaine-MPF with epinephrine 30 mL sterile packs are on back order and the company cannot estimate a release date. The 0.5% Sensorcaine with epinephrine 50 mL vials are on back order and the company cannot estimate a release date. The 0.75% Sensorcaine with epinephrine 30 mL vials are on back order and the company cannot estimate a release date.
- Pfizer has 0.25% bupivacaine with epinephrine 10 mL and 30 mL preservative-free vials on back order and the company estimates a release date of 1st quarter 2018. The 0.25% bupivacaine with epinephrine 50 mL vials are on back order and the company estimates a release date of 1st quarter 2018. The 0.5% bupivacaine with epinephrine 10 mL and 30 mL preservative-free vials are on back order and the company estimates a release date of 1st quarter 2018 for the 10 mL vials and early-January 2018 for the 30 mL vials. The 0.5% bupivacaine with epinephrine 50 mL vials are on back order and the company estimates a release date of 1st quarter 2018.
- Pfizer has 0.25% Marcaine with epinephrine 10 mL and 30 mL preservative-free vials on back order and the company estimates a release date of 3rd quarter 2018 . The 0.25% Marcaine with epinephrine 50 mL vials are on back order and the company estimates a release date of 3rd quarter 2018 . The 0.5% Marcaine with epinephrine 10 mL and 30 mL preservative-free vials are on back order and the company estimates a release date of 3rd quarter 2018. The 0.5% Marcaine with epinephrine 50 mL vials are on back order and the company estimates a release date of 3rd quarter 2018.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=937>

0.9% Sodium Chloride Small Volume Bags (<150 mL)

November 22, 2017

Reason for the Shortage

- Baxter has 0.9% sodium chloride small volume bags on shortage due to manufacturing delays.
- BBraun has 0.9% sodium chloride small volume bags on shortage due to increased demand.
- ICU Medical has 0.9% sodium chloride small volume bags on shortage due to increased demand.

Estimated Resupply Date

- Baxter has all 0.9% sodium chloride small volume bags on allocation.
- BBraun has all 0.9% sodium chloride small volume bags on allocation.
- ICU Medical has all 0.9% sodium chloride small volume bags on allocation.
- <https://www.ashp.org/Drug-Shortages/Current-Shortages/Drug-Shortage-Detail.aspx?id=1287>

*Please refer to ASHP website for more information at:
<http://www.ashp.org/menu/DrugShortages/CurrentShortages/>