Your regional poison control center (PCC) is available for consultation concerning use of antidotes and/or any toxicological concerns or questions. 1-800-222-1222 (24h/365days); Hospital Tier C will provide amounts to support one patient (100kg) 8h or less, Tier B up to 24 hours, and Tier C would be a larger tertiary care center likely to receive patients for higher level care so amounts support 2 patients for 24 hours. These amounts do not take into account regular hospital supply for other therapy or procedures and are approximate recommendations only. Circumstances, populations, toxic exposures, and treatment guidelines can change in an unpredicatble manner, therefore a risk analysis should be completed when determining to stock or not to stock an agent. All recommendations are adapted from Goldfrank's Toxicologic Emergencies, 11th ed., Dart, et. al. Expert Consensus Guidelines for Stocking of Antidotes in Hospitals That Provide Emergency Care. Annals of Emergency Medicine (2017), and available package inserts.

Antidote	Brand Name	Indication	Dosing	Preparation	Administration	Suggested Stock			Other Considerations
						Tier A	Tier B	Tier C	
Acetylcysteine (PO)	Mucomyst®	Acetaminophen toxicity (there is no "therapeutic range" for APAP, please contact PCC for assistance interpreting the Matthews-Rumack nomogram)	Oral loading dose is 140 mg/kg followed by 70 mg/kg q 4h for 72 hours*	Dilute 3:1 in juice or soda on ice and use a cap and straw to mask the odor	Administered orally per dosing instructions	120 g or 20 vials (30ml) of 20% solution	60 g or 10 vials (30ml) of 20% solution	30 g or 5 vials (30ml) of 20% solution	*courses as short as 24 hours have been used successfully, contact PCC for APAP faxable guideline
Acetylcysteine (IV)	Acetadote®		IV loading dose is 150 mg/kg OVER 1 hour, then 50 mg/kg OVER 4 hours, then 100 mg/kg OVER 16 hours*	Diluted in D_5W - see package insert or contact PCC, final concentrations for adults and pediatrics are NOT the same	Administered IV per dosing instructions	60 g or 10 vials (30ml) of 20% solution	30 g or 5 vials (30ml) of 20% solution	24 g of 4 vials (30 ml) or 20% solution	16 hour bag should be repeated until criteria to stop NAC is met; Serious under-dosing/overdosing errors have occurred
Atropine	Atropen®, Mark I Nerve Agent Antidote Kit®, Duodote Autoinjector System®, Antidote Treatment Nerve Agent Autoinjector (ATNAA - Military Only)	Muscarinic agonists, muscarinic mushrooms & plants, acetylcholinesterase inhibitors (organophosphates and carbamate pesticides)	1-2 mg for mild-moderate poisoning and 3-5 mg for severe poisoning; double the dose every 3-5 minutes until improvement, then repeat doses as needed; (peds start with 0.02 mg/kg, titrate to the adult dose)	Use preservative free formulation for this dosing as some OP exposures have required 100 mg of atropine	Once atropinization is achieved, it may be necessary to start an hourly infusion at 10-20% of the loading dose with frequent monitoring/titration - can be diluted in NS and run at 0.5 - 1.5 mg/hr	400 mg or 52 vials (30 ml of 0.4 mg/ml solution) *antidote amount only - total hospital supply must take into account other general uses	200 mg or 26 vials (30 ml of 0.4 mg/ml solution) *antidote amount only - total hospital supply must take into account other general uses	100 mg or 13 vials (30 ml of 0.4 mg/ml solution) *antidote amount only - total hospital supply must take into account other general uses	Primary endpoint = absence of bronchorrhea, HR > 80 bpm, systolic BP > 90 mmHg; secondary endpoint = dry axilla and pupils no longer pin-point. DO NOT stop atropine administration for developing tachycardia. (also maintained in the SNS for release by CDC in nerve agent attack)
Calcium Chloride	CaCl or $CaCl_2$	CCB, BB, hydrofluoric acid, fluoride releasing xenobiotics, phosphates, etc.…	Adult: 1 g (10 ml of 10% sln) over 10 min (deliver over 60 sec in extremis) then repeat every 10-20 minutes up to 3-4 doses as necessary [Peds: 20 mg/kg (0.2 ml/kg)]	CaCl 10% injection: 100 mg CaCl per 1 ml (27.3 mg or 1.36 mEq elemental calcium per 1 ml)	IV: administered slowly at a rate not to exceed 0.7 -1.8 mEq/min; one-half to one 10 ml vial of calcium chloride - can be use slow IV push in patient in extremis	20 g or 20 vials (10 ml of 10% sln) *antidote amount only - total hospital supply must take into account other general uses	10 g or 10 vials (10 ml of 10% sln) *antidote amount only - total hospital supply must take into account other general uses	10 g or 10 vials (10 ml of 10% sln) *antidote amount only - total hospital supply must take into account other general uses	A central line is recommended to avoid extravasation
Calcium Gluconate	Gluconate or Ca	CCB, BB, hydrofluoric acid, fluoride releasing xenobiotics, phosphates, etc.…	Adult: 3 g (30 ml of 10% sln) over 10 min (deliver over 60 sec in extremis) then repeat every 10-20 minutes up to 3-4 doses as necessary [Peds: 60 mg/kg (0.6 ml/kg)]	Calcium gluconate 10% injection: 100 mg calcium gluconate per 1 ml (9.3 mg or 0.464 mEq elemental calcium per 1 ml); HF: topical = 2.5% calcium gluconate gel in water soluble lubricant; nebulized = 1.5 ml of 10% sln in 4.5 ml SW or NS	IV: administered slowly at a rate not to exceed 0.7 -1.8 mEq/min; 1.5 - 3, 10 ml vials of calcium gluconate - can be use slow IV push in patient in extremis	60 g or 60 vials (10 ml of 10% sln) *antidote amount only - total hospital supply must take into account other general uses	30 g or 30 vials (10 ml of 10% sln) *antidote amount only - total hospital supply must take into account other general uses	30 g or 30 vials (10 ml of 10% sln) *antidote amount only - total hospital supply must take into account other general uses	Can be used intradermal and intra-arterially to treat to severe HF exposure in hands, not responding to topical calcium gluconate gel (intrateral: 10 ml of 10% calcium gluconate in 50 ml D_5W administered via the radial, brachial, or ulnar artery over 4 hours, repeat for persistent pain)
Calcium Gluconate Gel	Calgonate®	Topical solution for hydrofluoric acid burns	N/A	N/A	Place gel in a surgical glove and massage for 4 hours for pain relief; can be continued over the course of 24-48 hours if effective	10 tubes of 25 grams calcium gluconate	10 tubes of 25 grams calcium gluconate	6 tubes of 25 grams calcium gluconate	May not need to stock if compounding available 24 hours; consider to send home with patients - may take outpatient pharmacies 72 hours to acquire
Cyanide Antidote Kit	Nithiodote®	Contains sodium nitrite and sodium thiosulfate for cyanide toxicity	Adult: 300 mg (10 ml of 3% sln) sodium nitrite immediately followed by sodium thiosulfate 12.5 g (50 ml of 25% sln); Peds: 6 mg/kg sodium nitrite (not to exceed adult dose); 250 mg/kg (1 ml/kg of 25% sln) sodium thiosulfate (not to exceed adult dose); regimen can be repeated - contact PCC for assistance	Both sodium nitrite and sodium thiosulfate come in water for injection and neither contain additives or preservatives - they do not have to be diluted before use	Administer sodium nitrite IV 2.5 - 5 ml/min; administer sodium thiosulfate in the same needle / vein as sodium thiosulfate; sodium nitrite can be repeated but must evaluate hemoglobin; sodium thiosulfate can be repeated (1/2 initial dose)	6 kits or sodium nitrite: 6 vials (10 ml of 3% sln) / sodium thiosulfate: 6 vials (50 ml of 25% sln)	2 kits or sodium nitrite: 2 vials (10 ml of 3% sln) / sodium thiosulfate: 2 vials (50 ml of 25% sln)	2 kits or sodium nitrite: 2 vials (10 ml of 3% sln) / sodium thiosulfate: 2 vials (50 ml of 25% sln)	Additional doses in children must take into account hemoglobin (should be > 7 g/dl); sodium thiosulfate increases the rhodanese activity so onset of activity is slower; sodium nitrite and sodium thiosulfate can be used in addition to or as an alternative to hydroxocobalamin but are NOT compatible in the same IV line

Antidote	Brand Name	Indication	Dosing	Preparation	Administration	Suggested Stock Tier A	Tier B	Tier C	Other Considerations
Cyproheptadine	Periactin®	Severe Serotonin Syndrome (*consult PCC)	8 - 16mg PO repeated hourly to achieve muscle relaxation in severe cases	Available as tablets (4 mg) and a liquid (2 mg/5 ml)	Dosing information limited to case reports, consider limiting to 32 mg/24 hours	64 mg or 16 tabs	32 mg or 8 tabs	32 mg or 8 tabs	Only available in oral formulation; This is an antihistamine, consult PCC for determining appropriate patient
Dantrolene Sodium	Ryanodex® (recommended)	Malignant Hyperthermia	2.5 mg/kg adults and peds (Ryanodex: loading dose for 100 kg patient is 1 vial vs. Revonto: 12.5 vials); Repeat dose every 15 minutes until hyperthermia is reversed or cumulative dose of 10 mg/kg; continue for at least 24 hr (1 mg/kg IV q 4h or 0.25 mg/kg/hr CI); after 24 hours, D/C or increase bolus intervals to 8-12 hours [Malignant Hyperthermia Association of America hotline and national registry: 1-800-644-9737 (800-MH-HYPER); www.mhaus.org]	Ryanodex® = 250 mg dantrolene sodium and 125 mg mannitol: reconstitute with 5 ml preservative free SW and shake for 10 sec until uniform orange color	Ryanodex®: Administer the reconstituted solution via IV bolus into free running line of D_5W or NS	Discuss with Anesthesia Team: Recommend at least 3 vials			Recommended for any institution using inhaled anesthetics or succinylcholine; has been used in NMS but efficacy data is limited; due to less sterile water required for reconstitution, the necessary amount of mannitol is less than Revonto®
Dantrolene Sodium	Revonto® (Dantrium) (not recommended)	Malignant Hyperthermia		Revonto® = 70 ml vials contains 20 mg dantrolene sodium and 3 g mannitol: add 60 ml of SW and shake for 20 sec until solution is clear (must be protected from light and used with-in 6 hours)	Revonto®: Administer via rapid IV push beginning with minimum 1 mg/kg and continuing until symptoms resolve or max cumulative dose of 10 mg/kg	Discuss with Anesthesia Team: if stocked consider at least 36 vials			Revonto has compatibility issues with D_5W and NS so only SWFI can be used to dilute and will precipitate in some glass bottles if transferred (Ryanodex® is preferred)
Deferoxamine Mesylate (DFO)	Desferal®	Iron Toxicity	Consider in patients manifesting acidosis, coma, or shock: limit dose to 8 grams in 24 hours; IM dosing is 90 mg/kg in mild toxicity but generally not recommended due to pain and difficulty in peds	500 mg or 2 g per vial: add 5ml or 20ml SWFI (respectively); once completely dissolved dilute further with NS, D_5W, or LR for IV administration; For IM admin can be further concentrated to 200mg/ml by adding 2 or 8 ml respectively (solution will be stronger yellow)	Start with 5 mg/kg/hr and increase to 15 mg/kg/hr if tolerated; after the first 1000 mg is infused (first hour), reduce the rate to infuse the remaining 6-8 grams over the next 23 hours. Alternative dosing schemes have been used, please contact PCC for recommendations	36 grams or 18 (2 gram) vials	36 grams or 18 (2 gram) vials	12 grams or 6 (2 gram) vials	Administration is limited to 24 hours due to the increased risk of ARDS; No relationship between urinary iron excretion, clinical iron toxicity, and effectiveness of DFO has been established - urinary color change may also be hard to appreciate without a baseline; *Yersinia* sepsis has been reported after treatment of acute iron overload with DFO
Digoxin Immune Fab	DigiFab®	Acute and chronic digoxin toxicity or empirically for plant/animal based cardioglycoside	For acute symptomatic overdose or ingestion of cardiaoglycoside containing plants, empiric dose is 5-10 or 15-20 vials; for chronic toxicity with level available: # vials = [serum dig level (ng/ml) X weight (kg)] / 100	Reconstitute each vial with 4 ml SWFI and mix gently; can be diluted further with NS	Administer slowly IV over 30 minutes; if critically ill - give as a bolus: each vial binds ~0.5 mg digoxin; chronic toxicity rarely requires more than 2 vials for reversal	20 vials	20 vials	15 vials	Consult PCC for assessment and recommendations; hyperkalemia may not be diagnostic in chronic toxicity, especially in the face of ARF; do not obtain serum digoxin levels for one week after administration due to false elevation
Dimercaprol (BAL)	BAL in oil®	Chelation of heavy metals (arsenic, lead, and mercury)	consult PCC - dosing is specific to metal and symptoms	Available as 3 ml ampoules containing 100mg/ml BAL, 200 mg/ml benzobenzoate, and 700 mg/ml **peanut oil**	Administer via deep IM injection; Lead encephalopathy = the 1st dose should precede $CaNa_2EDTA$ to prevent lead redistribution to the brain	6 amps	6 amps	3 amps	Due to presence of peanut oil, injections are painful and have caused abscesses; urinary alkalinization prevents dissociation of the dimercaprol-metal chelate
DMSA (succimer)	Chemet®	Chelation of heavy metals (arsenic, lead, and mercury)	Peds (≤ 5 years): 350 mg/m² TID X 5 days then BID for 14 days; Age > 5 years: 10mg/kg TID for 5 days then BID for 14 days	Available only as 100 mg bead filled capsules - capsule can be opened and beads sprinkled apple sauce, ice cream, etc….)	see dosing	6.5 g or 65 capsules (first 72 hours)	3 grams or 30 capsules (first 24 hours)	not necessary to stock	Do not use in lead encephalopathy or lead levels ≥ 100 mcg/dl; can be repeated - consult PCC

Antidote	Brand Name	Indication	Dosing	Preparation	Administration	Suggested Stock			Other Considerations
						Tier A	Tier B	Tier C	
Edetate Calcium Disodium ($CaNA_2EDTA$);	Calcium Disodium Versenate®	Chelation of heavy metals (arsenic, lead, and mercury)	Consult PCC - dosing is specific to metal and symptoms; can be used in combination with BAL and succimer	One amp contains 1 gram (200 mg/ml X 5ml)	Continuous infusion 0.5% in D_5W or NS IV over 24 hours; higher concentrations can cause thrombophlebitis; avoid IM injection	3 grams or 3 amps (1000 mg/5 ml)	1 gram or 1 amp (1000 mg/5 ml)	not necessary to stock	DO NOT CONFUSE W/ disodium edetate (sodium EDTA) = risk of fatal hypocalcemia (ISMP)
Ethanol	Vodka (recommended)	Toxic alcohols (methanol, ethylene glycol)	Goal blood alcohol level is 100-150 mg/dl (see separate printable handout)	5% and 10% IV formulation no longer available	recommend PO only, even through NG, unless absolutely unable to use gut	At least 750 ml	1 pint	1 pint	keep on hand in pharmacy if fomepizole is unavailable
Flumazenil	Romazicon®	Benzodiazepine overdose	Consult PCC: 1 mg adults, (0.2 mg peds); not recommended first line (airway is key); consider in benzo naïve patients only; absolute contraindication w/ TCAs - (also see relative contraindications)	Can be diluted in D_5W, NS, and LR; administer into large free-running vein to reduce pain; some case reports of continuous infusion but not recommended	Slow IV titration (0.1 mg/min) up to a max of 1 mg with 1 min b/n doses; peds: 0.01 mg/kg (up to 0.2 mg); patients may re-sedate 20-120 min after admin	12 mg or 12 vials (1 mg/10ml)	12 mg or 12 vials (1 mg/10ml)	6 mg or 6 vials (1 mg/10ml)	Respiratory depression is due to upper airway resistance/obstructive apnea; relative contraindications include history of seizures, habituation to benzos, and multiple drug ingestion (may unmask seizures)
Fomepizole	Antizol®	Toxic alcohols (methanol, ethylene glycol)	15 mg/kg q 12h; increase frequency to q 4h during hemodialysis; continue until the toxic alcohol level $\leq$ 25 mg/dl with NO acid-base disturbance	Dilute in 100 ml NS or D_5W (stable for 24h at room temp or refrigerated -below 25°C will solidify but can be safely used if rewarmed)	Infuse IV over 30 minutes to avoid venous irritation/thrombophlebitis	12 g or 4 vials (1 g/ml X 1.5 ml)	6 g or 4 vials (1 g/ml X 1.5 ml)	1.5 g or 1 vial (1 g/ml X 1.5 ml)	CRRT/CVVH are not recommended in place of HD - if used, continue to dose fomepizole at least q 8 h; PI recommends dose adjustments due to autoinduction, we use 15 mg/kg to reduce errors
Glucagon	Glucagen®, Glucagon Emergency Kit®, GlucaGen HypoKit®	BB, CBB Overdose	3-5 mg bolus, may be repeated then run the cumulative effective dose per hour as continuous infusion (usually consider 10 mg to be max limit/hr but higher doses reported)	Reconstitute with 1 ml SWFI and shake gently until powder completely dissolves; Can be diluted in D_5W for intravenous infusion (do not use concentrations > 1mg/ml)	Infuse IV over 3-10 minutes to reduce incidence of nausea and vomiting; can be tapered as the patient improves or as insulin efficacy is achieved	250 mg or 250 kits (1 mg/kit) - covers 1 patient for 24 hours	130 mg or 130 kits (1 mg/kit) - covers 1 patient for 12 hours	90 mg or 90 kits (1 mg/kit) - consider patient transfer time when determining stock amount (covers 8 hrs)	Must be able to protect airway - causes vomiting; too small of an initial dose may DECREASE SVR and worsen hypotension; [stock amount here not accounting for normal hospital use outside of antidote stock]
Glucarpidase (carboxypeptidase G_2, $CPDG_2$)	Voraxaze®	Methotrexate toxicity	one dose 50 unit/kg - do NOT repeat; although not FDA approved, some institutions have rounded dose down to nearest vial	Reconstitute with 1 ml sterile NS; can be refrigerated up to 4 hours	After reconstitution, administer single dose of 50 units/kg via IV injection over 5 minutes; separate from leucovorin administration by 2 hours	5 vials (1000U/vial) [BTG specialty drug: 1-855-786-7292]	not necessary to stock	not necessary to stock	*Use in conjunction with leucovorin - not a substitute; intrathecal administration off-label (consult PCC)
Hydroxocobalamin	Cyanokit®	Cyanide toxicity	Adults: initial dose 5g; can be repeated Peds: 70 mg/kg up to the adult dose	Each kit = one 250 ml vial of 5 g of hydroxocobalamin; reconstitute with 200 ml NS and invert or rock for 60 seconds to dissolve completely (this may actually take several minutes) - do not shake	Infuse 5 grams intravenously at 15 ml/min over 15 min; if patient remains symptomatic, consider a second 5 gram dose infused over 15 min - 120 min	20 g or 4 kits	10 g or 2 kits	10 g or 2 kits	Will cause discoloration of skin, blood, and urine and interfere with colorimetric lab tests; sodium nitrite and sodium thiosulfate can be used in addition to, or as an alternative to hydroxocobalamin but are NOT compatible in the same IV line
Leucovorin	N/A	Folic Acid Antagonists; methanol	Methanol: 50 mg IV q 6 h; MTX overdose: leucovorin dose based on MTX dose ingested; admin should not be delayed to obtain a MTX level - contact PCC for dosing; continue until MTX < 0.01 mmol/L	For the 100 mg vial: reconstitute with 10 ml SWFI to achieve a final concentration of 10mg/ml then dilute in 100-1000ml D_5W or NS; This is stable for 30 days when protected from light	Administration rate should not exceed 160 mg/min in adults; for intrathecal overdose, leucovorin is given IV and NOT intrathecally	600 mg or 6 vials (100mg/vial)	300 mg or 3 vials (100mg/vial)	300 mg or 3 vials (100mg/vial)	These dosing instructions are not for treatment of therapeutic MTX or MTX rescue; Leucovorin also comes in tablets, it's use in toxicology is not defined; for methanol, treatment can also be accomplished with 50 mg folic acid q 6 h

Antidote	Brand Name	Indication	Dosing	Preparation	Administration	Suggested Stock			Other Considerations
						Tier A	Tier B	Tier C	
Levocarnitine	Carnitor®	Valproic acid induced hyperammonemia	Optimal dose not established IV: 100 mg/kg (max 6) as a loading dose followed by 15 mg/kg every 6 hours; Enteral: 100 mg/kg/day divided q 8 (max of 3g/day)	IV: single use vials of 1 g/5ml can be diluted in NS or LR at concentrations up to 8 mg/ml; PO solution does not require dilution, but this does make it more palatable and masks taste	For IV: the loading dose should be administered over 30 minutes and subsequent doses should be administered over 10-30 minutes	40g or 40 vials (1g/vial)	20g or 20 vials (1g/vial)	10 g or 10 vials (1g/vial)	Although large oral doses have caused diarrhea, no toxicity has been observed with this product
Lipid Emulsion	N/A	Local Anesthetic Systemic Toxicity (LAST); Possibly for overdose of lipophilic xenobiotics	1.5 ml/kg bolus followed by 0.25 ml/kg/min infusion for 30 to 60 min; can be repeated but suggested max is 10ml/kg to minimize risk of lipid emboli and fat infusion syndrome	The 20% solution is preferred (if stocking the 30% solution, this would have to be diluted prior to administration)	see dosing	3500 ml of 20% intralipid: 3 bags(100 ml) + 6 bags(500ml); for examples of lipid rescue kits, recommendations, and case reports see www.lipidrescue.org			Efficacy is mostly based on animal data and case reports; the current position statements of the AACT and ACMT conclude its use be considered after all other accepted therapies have been OPTIMIZED but are not sufficient
Methylene Blue	Provayblue®	Methemoglobinemia	1 mg/kg with repeat doses up to max cumulative dose of 7 mg/kg (indication for use based on clinical signs/symptoms and not methemoglobin level)	Dilute in 50 ml D_5W - do not dilute in NS because chloride decreases solubility of methylene blue	Administer IV 1 mg/kg (1ml/kg, 10% sln) over 5 minutes followed by a flush of 15-30 ml to reduce local pain; can repeat in 30-60 minutes; stop administration after two doses if no response	700 mg or 7 vials (10 mg/ml X 10 ml)	600 mg or 6 vials (10 mg/ml X 10 ml)	400 mg or 4 vials (10 mg/ml X 10 ml)	The pulse oximeter cannot distinguish the dark blue color from deoxyhemoglobin and will alert for low O_2Sat - remove pulseOx prior to administration; not effective in G6PD patients and excess doses may cause hemolysis
Naloxone Hydrochloride	Narcan®	Opioid overdose	0.4 mg is sufficient to reverse respiratory depression for most opioids, but will cause withdrawal in opioid dependency - in non-naïve patients, start with 0.04 mg and repeat up to 0.12 mg - if not sufficient, stop and intubate; there is no dosage adjustment for pediatrics	To dilute the 0.4mg/ml solution to achieve 0.04 mg, add 9 ml NS; although IV is preferred, IM, IO, IN, SQ, and ETT are all effective	Begin with dose of 0.04-0.4 mg and repeat and double dose as necessary to achieve adequate respiration (max cumulative dose 10mg) - **goal is to restore breathing NOT wake the patient**; when using route other than IV, provide time for onset of action	The stocking recommendations are highly dependent on your patient population: our recommendations range from 20-80 mg			Naloxone is used to prevent intubation and should therefore be reserved for patients with significantly decreased respirations; naloxone will not reverse AMS from non-opioid drugs and should not be used for changes in LOC alone; many opioids have activity that outlasts naloxone - monitor for re-sedation
Octreotide	Sandostatin®	Sulfonylurea overdose	Adults: 50mcg SQ every 6 hours for 24 hours Peds: 4-5 mcg/kg/day divided q 6 up to the adult dose	If necessary to give IV, dilute in NS or D_5W and infuse over 15-30 minutes or give by IV bolus over 3 minutes	Although this can be given IV, SQ is preferred as kinetics were determined by this route; once d/c, monitor for 12-24 hours for recurrent hypoglycemia	400 mcg or 8 vials (50 mcg/ml X 1 ml)	200 mcg or 4 vials (50 mcg/ml X 1 ml)	100 mcg or 2 vials (50 mcg/ml X 1 ml)	Sulfonylureas can have delayed onset (18-48 h) and therefore, all patients should be admitted for observation for at least 24 hours - total duration can exceed 24 h
Physostigmine	Antilirium®	Anticholinergic poisoning	Not a regularly recommended antidote-consult with PCC for patient appropriateness; Adults: 1-2 mg; Peds: 0.02 mg/kg (max 0.5mg/dose); usually a max dose of 4 mg (divided in 24h) is sufficient	N/A	Prior to administration, connect to cardiac monitor, have atropine and ativan at bedside: Infuse IV over 5 minutes; can repeat in 10-15 minutes if not effective; if atropine is required to reverse effect, provide at 1/2 the physostigmine dose	20 mg or 10 vials (1mg/ml X 2ml)	4 mg or 2 vials (1mg/ml X 2ml)	4 mg or 2 vials (1mg/ml X 2ml)	Contraindications include cardiac conduction delays, patients at risk for seizures, and TCA toxicity; most anticholinergic toxicity outlasts the effects of physostigmine and would therefore require multiple doses as the effect of physostigmine may be as short as 1 hour
Pralidoxime Chloride (2-PAM)	Protopam®, Mark I Nerve Agent Antidote Kit®, Duodote Autoinjector System®, Antidote Treatment Nerve Agent Autoinjector (ATNAA - Military Only)	Organophosphate toxicity	Optimal dose unknown: 1-2g loading dose followed by 500 mg/hr OR 30 mg/kg loading dose (max 2g) followed by 8-10 mg/kg/h (adults) or 10-20 mg/kg/h (peds) - max 650 mg/h	Inject 20 ml SWFI into the 20ml vial to achieve a 5% solution then further dilute to a volume of 100 ml or to a concentration of 10-20 mg/ml in NS	Infuse the loading dose over 15-30 min (in the presence of pulmonary edema, the contents of the 20ml vial can be infused over 5 min); IM administration is acceptable (contact PCC)	36g or 36 vials (1g/20ml)	18g or 18 vials (1g/20ml)	7g or 7 vials (1g/20ml)	Although end-point is unclear, consider continuing infusion until 24 hrs beyond when atropine was last needed; (also maintained in the SNS for release by CDC in nerve agent attack)

Antidote	Brand Name	Indication	Dosing	Preparation	Administration	Suggested Stock			Other Considerations
						Tier A	Tier B	Tier C	
Pyridoxine HCl	Vitamin B6	Isoniazid, *Gyromitra* , other hydrazine toxicity	INH: 1g pyridoxine for every 1g of INH ingested; unknown amount or other hydrazine: Adult: 5g and Peds: 70mg/kg	Reconstitution and dilution are not required, however if stocking only the 1 ml vials, treating one patient will likely take 50 vials	Administer via slow IV infusion at 0.5g/min until seizing stops or reach max of 5 grams; when seizures stop, infuse the remainder of the dose over 4-6 h	24 g [8 vials (100mg/ml X 30 ml)] or 20g [200 vials (100mg/ml X 1 ml)]	9 g [3 vials (100mg/ml X 30 ml)] or 10g [100 vials (100mg/ml X 1 ml)]	6 g [2 vials (100mg/ml X 30 ml)] or 5g [50 vials (100mg/ml X 1 ml)]	1st line for seizures from hydrazine poisoning - will work synergistically with benzodiazepines, but benzos will not be effective alone in this scenario; oral pyridoxine can be administered if IV unavailable
Suggamadex	Bridion®	Reversal agent for rocuronium and vecuronium	Emergent reversal depends on the depth of paralysis and dose ranges from 2 mg/kg to 16 mg/kg (dosed on actual body weight)	N/A	Can be injected directly into a line running with NS, D_5W, and LR (flush line after administration) - depth of paralysis assessed by twitch response to TOF stimulation	Stock depends on typical use of rocuronium/vecuronium and dose depends on depth on paralysis (see dosing) - for a 100 kg patient, this can be up to 800 mg; this product comes in boxes of 10 vials at either concentration of 200mg/2ml or 500 mg/5ml			Cases of severe bradycardia resulting in cardiac arrest have occurred minutes after administration; has not been studied for reversal in the ICU - only surgical patients
Uridine Triacetate	Vistogard®	5-FU, capcetabine	10 g orally q 6 h for a total of 20 doses (peds: 6.2g/m^2 up to adult dose)	For pediatric patients, dose conversion is in the package insert; mix with 3-4 ounces soft foods to be ingested in 30 min and follow with 4 ounces of water. Pretreat patient 30 min prior with ondansetron	Must be administered within 6 hours of dose if toxicity is present; if the dose is vomited with-in two hours, administer the full dose again within 15 min of vomiting and continue schedule	2 Cartons (40 single dose packets containing 10 g each)	One Carton (20 single dose packets containing 10 g each)	Single 24-Hour pack (4 single dose packets containing 10g each)	Due to time-dependent administration, the decision to carry a dose will depend on the ability to get patient to a facility that carries this; manufacturer supply ordering: 1-844-293-0007
Antivenoms									
Crotalidae Polyvalent Immune FAB	Crofab®	North American Crotalid Snake Envenomation	4-6 Vials IV repeated as needed to achieve "control", followed by 2 vials every 6 hours X 3 doses (maintenance); Severe envenomations may require a starting dose of 8-12 vials	Reconstitute each vial with 25 ml SWFI (this is more than the 10 ml recommended in PI) and hand roll to reconstitute in 1 min and avoid frothing - further dilute in 250 ml NS (all 6 vials in 1 bag)	begin initial rate at 10 ml/hr and if no adverse reaction, double every 5 minutes with a goal to finish the infusion in 1 hour; there are no dose adjustments for pediatric patients	24 vials (can consider reduced stocking November - March)	12 vials	12 vials	Additional "maintenance dosing" may not be necessary in copperhead envenomation - contact the PCC for consultation and faxable management guide
Crotalidae Immune F(ab')2	Anavip®	North American Rattlesnake Envenomation	10 vials repeated as needed to achieve control	Reconstitute each vial with 25 ml SWFI (this is more than the 10 ml recommended in PI) and hand roll to reconstitute in 1 min and avoid frothing - further dilute in 250 ml NS (all 10 vials can be diluted in 1 bag)	Begin initial rate of 25-50 ml/hr and if no adverse reaction after 10 minutes, increase rate to 250 ml/hr	Not recommended by the PCC at this time	Not recommended by the PCC at this time	Not recommended by the PCC at this time	Most snake bites in KY are from copperheads and do not exhibit delayed coagulopathy
Antivenin *Lactrodectus mactans*	Merck BW-AV®	Black Widow Spider Envenomation	1 vial	Reconstitute with 2.5 ml SWFI then dilute in 50 ml NS	Infuse IV over 15 minutes (avoid IM injection)	Must be requested from Merck upon patient presentation 1-800-672-6372			Serum sickness occurs in 3.5% of patients and deaths have resulted although likely from improper administration
Anticoag Exposures									
Andexanet Alfa	Andexxa®	Hemorrhage from Factor Xa inhibitors (rivaroxaban and apixaban)	Low dose/high dose protocol: if factor Xa inhibitor was administered > 7 hours before Andexxa, load with 400 mg and follow with infusion of 480 mg; if less than 7 hours before Andexxa, load is 800 mg followed by 960mg infusion	Reconstitute each vial with 10 ml SWFI (100 mg vials) / 20 ml SWFI (200 mg vials); gently swirl for 3-5 mins until dissolved - do not shake; withdrawal all vials into a large syringe (60+ ml) and transfer to 250 ml IV bag	loading dose administered at 30 mg/min IV over 15 to 30 minutes followed immediately by an infusion dose at 4 mg/min for up to 120 min	No recommendations at this time - Many institutions have opted not to stock this product as it is unclear it's place in practice and the evidence showing benefit over risk is not definitive. If you choose to stock this product, we recommend keeping enough for the high dose protocol for one patient			If bleeding is life-threatening or patient requires emergent surgical intervention, 4 factor-PCC is first-line; thrombotic events occurred in 18% of patients within 30 days of administration; (discuss stocking requirements with neuro and/or GI if they have developed a protocol for your institution)

Antidote	Brand Name	Indication	Dosing	Preparation	Administration	Suggested Stock			Other Considerations
						Tier A	Tier B	Tier C	
Idarucizumab	Praxbind®	Dabigatrin reversal	Initial dose is 5 g; repeat 12-24 hours later if clinically relevant bleeding or a second procedure is required (no studies have been evaluated)	vials come ready to be infused without need for reconstitution	Either intravenously infuse each 2.5g vial consecutively or use a syringe to bolus inject both vials IV	20 g or 8 vials (2.5g/50ml)	10 g or 4 vials (2.5g/50ml) It may not be necessary to stock this product depending on your patient population. Consider doing a risk analysis.		Coagulation parameters may not accurately predict bleeding risk; (discuss stocking requirements with neuro and/or GI if they have developed a protocol for your institution)
Prothrombin Complex Concentrates	Kcentra® (4F-PCC), Bebulin® (3F-PCC), FEIBA® (aPCC)	Reversal of vitamin-K antagonists	Kcentra® dosing is variable and based on the factor IX content of the vial and the patient INR - contact PCC for more information	Kcentra®: Reconstituted via the included Mix2 Vial and Diluent Vial - must be used within 4 hours and stored at 20-25°C prior to administration in a separate infusion line	Rate of administration: Should be started at 0.12 ml/kg/min(~3 units/kg/min) up to a max of 8.4 ml/kg/min (~210 units/min)	No Recommendations at this time - Many institutions have their own protocols which will determine stocking amounts			Kcentra® has been more favorable than Bebulin®; *Only FEIBA contains activated factor-VII
SPECIALTY ITEMS									
Botulism Antitoxin	N/A	Accidental or Iatrogenic botulinin toxicity	Contact CDC for access and assistance 1-770-488-7100						ANY suspicion of botulism toxicity warrants consultation with CDC, poison center, or local health department
Calcium-DPTA (pententate calcium trisodium)	N/A	Radioactive plutonium, americum, and curium	Special Access - part of strategic national stockpile (SNS): Contact REAC/TS (radiation emergency assistance center / Training Site for assistance; business hours 1-865-576-3131; afterhours 1-865-576-1005						
Zinc-DPTA (pententate zinc trisodium)	N/A	Radioactive plutonium, americum, and curium							
Potassium Iodide	Iosat®, ThyroSafe®, Thyroshield®, Pima Syrup®, SSKI®	Thyroid radioiodine Protection							
Prussian Blue	Radiogardase®	Thallium or radiocesium toxicity							