College of Emergency Medicine and National Poisons Information Service Guideline on Antidote Availability for Emergency Departments December 2013

TOXBASE and/or the BNF should be consulted for further advice on doses and indications for antidote administration and, if necessary, the National Poisons Information Service (NPIS) should be telephoned for more patient-specific advice. Contact details for NPIS are available on TOXBASE.

The decision on the quantity of these drugs to hold will depend on the local epidemiology of poisoning

Additional drugs that are used in the poisoned patient that are widely available in ED are not listed in the table – in particular it is important to ensure that insulin, benzodiazepines (diazepam and/or lorazepam) and magnesium are immediately available in the ED.

The following drugs should be immediately available in the ED or any area where poisoned patients are initially treated. <u>These drugs should be held in a designated storage facility</u>
The stock held there should be sufficient to initiate treatment (stocking guidance is in Appendix 1).

Drug	Indication
Acetylcysteine	Paracetamol
Activated charcoal	Many oral poisons
Atropine	Organophosphorus or carbamate insecticides
	Bradycardia
Calcium chloride	Calcium channel blockers Systemic effects of hydrofluoric acid
Calcium gluconate Calcium gluconate gel	Local infiltration for hydrofluoric acid Hydrofluoric acid
Cyanide antidotes Dicobalt edetate Hydroxocobalamin (Cyanokit®) Sodium nitrite Sodium thiosulphate	Cyanide The choice of antidote depends on the severity of poisoning, certainty of diagnosis and cause of poisoning/source of cyanide. - **Oxygen** should be administered in all cases. - **Dicobalt edetate** is the antidote of choice in severe cases when there is a high clinical suspicion of cyanide poisoning e.g. after cyanide salt exposure. - **Hydroxocobalamin** (Cyanokit®) should be considered in smoke inhalation victims who have a severe lactic acidosis, are comatose, in cardiac arrest or have significant cardiovascular compromise - **Sodium nitrite** may be used if dicobalt edetate is not available. - **Sodium thiosulphate** is used generally as an adjuvant to other antidotes.
Flumazenil	Reversal of iatrogenic over-sedation with benzodiazepines. Use with caution in patients with benzodiazepine poisoning, particularly in mixed drug overdoses. Should not be used as a "diagnostic" agent and is contraindicated in mixed tricyclic antidepressant (TCA)/ benzodiazepine overdoses and in those with a history of epilepsy.
Glucagon	Beta-adrenoceptor blocking drugs. Other indications e.g. calcium channel blocker (CCB) / TCA
Glyceryl trinitrate *OR* isosorbide dinitrate	Hypertension
Methylthioninium chloride (methylene blue)	Methaemoglobinaemia
Naloxone	Opioids
Procyclidine injection	Dystonic reactions
Sodium bicarbonate 8.4% and 1.26% or 1.4%	TCAs & class Ia & Ic antiarrhythmic drugs Urinary alkalinisation
Viper venom antiserum, European**	European adder, *Vipera berus*

The following drugs should be available within 1 hour (i.e. within the hospital)	
Drug	**Indication**
Calcium folinate	Methotrexate (MTX)
	Methanol, formic acid
Cyproheptadine	Serotonin syndrome
Dantrolene	Neuroleptic malignant syndrome (NMS)
	Other drug-related hyperpyrexia (consult TOXBASE)
Desferrioxamine	Iron
Digoxin specific antibody fragments (Digibind or Digifab)	Digoxin and related glycosides
Fomepizole (*or* Ethanol (IV or oral))	Ethylene glycol, methanol **Fomepizole is the antidote of choice** in view of the difficulty in maintaining and monitoring ethanol infusions.
Macrogol '3350' (polyethylene glycol) *Klean-Prep®*	Whole bowel irrigation for agents not bound by activated charcoal e.g. iron, lithium, also for bodypackers and for slow release preparations
Mesna *(in hospitals commonly using cyclophosphamide)*	Cyclophosphamide
Octreotide	Sulphonylureas
Phentolamine	Digital ischaemia related to injection of epinephrine
	Resistant hypertension caused by sympathomimetic drugs of abuse, monoamine-oxidase inhibitors (MAOIs), clonidine
Phytomenadione (Vitamin K1)	Vitamin K dependent anticoagulants
Protamine sulphate	Heparin
Pyridoxine, high dose injection	Isoniazid

The following drugs are rarely used and can be held supra-regionally. Use should be discussed with NPIS and/or clinical toxicologist	
Antivenoms for non-indigenous venomous animals**	Significant envenomation
Berlin Blue soluble (Prussian Blue)	Thallium
Botulinum antitoxin	Botulism
Dimercaprol (BAL)	Arsenic
Glucarpidase	Methotrexate
Penicillamine	Copper, Wilson's disease (**NOT** recommended for lead poisoning)
Pralidoxime chloride	Organophosphorus insecticides
Sodium calcium edetate	Heavy metals (particularly lead)
Succimer (DMSA)	Heavy metals (particularly lead and arsenic)
Unithiol (DMPS)	Heavy metals (particularly mercury)

It is not considered essential to hold the following drugs
Benzatropine *Methionine* *Physostigmine*

*** European viper venom antiserum does not need to be held in hospitals in Northern Ireland*
****held by the pharmacy, Royal Liverpool Hospital and Guy's & St Thomas' NHS Foundation Trust*