Royal College of Emergency Medicine and National Poisons Information Service Guideline on Antidote Availability for Emergency Departments January 2017

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.

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), glyceryl trinitrate or isosorbide dinitrate 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 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. - **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
Intralipid 20%	Severe, systemic local anaesthetic toxicity
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
ViperaTAb*	European adder, *Vipera berus*

** ViperaTAb does not need to be held in hospitals in Northern Ireland*

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)) **Fomepizole is the antidote of choice**. Ethanol only needs to be held if fomepizole is unavailable.	Ethylene glycol, diethylene glycol, methanol
Idarucizumab	Dabigatran related active bleeding (discuss with local haematologists and NPIS)
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
Phytomenadione (Vitamin K1)	Vitamin K dependent anticoagulants
Protamine sulphate	Heparin
Pyridoxine, high dose injection	Isoniazid

#There have been recently been availability and supply problems with phentolamine, advice on alternative treatment strategies is available on TOXBASE if phentolamine is not available.

The following drugs are rarely used and are suitable to be held supra-regionally. In the absence of nationally agreed arrangements, this needs to be organised locally. Use of these antidotes should be discussed with NPIS and/or a clinical toxicologist	
Prussian Blue (Berlin Blue)	Thallium
Botulinum antitoxin	Botulism
Glucarpidase	Methotrexate
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, Dimercaprol, Methionine, Penicillamine Physostigmine

** Antivenoms for non-indigenous venomous animals*:* Public Health England (PHE) holds a stock of exotic antivenoms for use in cases of venomous bites from non-indigenous animals. These are held by Movianto UK on behalf of PHE in sites at Bedford and Knowsley to ensure stock is available in good time across the UK. In the event of a bite, advice should be sought from NPIS. If antivenom is indicated an order will be placed with Movianto by either a national antivenom expert or NPIS for both in hours and out of hours delivery. Any unused antivenom should be stored in the fridge for collection by Movianto.