

# CLINICAL GUIDELINE ON ANTIDOTE AVAILABILITY FOR EMERGENCY DEPARTMENTS

## 1. Aim/Purpose of this Guideline

- 1.1. This guideline applies to all staff treating patients who require an antidote.
- 1.2. It states the availability of antidotes for the emergency treatment of poisoning and aims to improve the treatment and outcomes of patients who suffer acute poisoning.

## 2. The Guidance

- 2.1. The following list describes which antidotes are available and where they are stored.
- 2.2. The drugs marked in red with \*, are available in the Emergency Department, stored in the Antidote Tray in Majors 1 Clean Utility.
- 2.3. The other drugs are available within the hospital and should be accessed within 1 hour.
- 2.4. West Cornwall Urgent Care carries a smaller supply of antidotes, these are specified in the 'location' column and are stored in the Antidote Trays in the top-up cupboards.
- 2.5. 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 0844 892 0111

Drug	Indication	Presentation	Quantity	Location	Location
Absolute alcohol 90% (ethanol)*	<b>Second line</b> for Ethylene glycol, methanol <b>N.B Fomepizole is the antidote of choice</b>	20ml amps	10	Emergency Department	Antidote tray
<b>Acetylcysteine *</b>	Paracetamol	2g in 10ml ampoule	80	Emergency Department	Antidote tray and Injections Cupboard
		2g in 10ml ampoule	10	Emergency Cupboard West Cornwall Urgent Care	
Activated charcoal suspension. *	Many oral poisons	250mls	7	Emergency Department	Antidote tray and Liquids Cupboard
		250mls	1	Emergency Cupboard West Cornwall Urgent Care	
Atropine sulphate *  (also in DoH pods for major incidents - see below).	organophosphorus or carbamate insecticides  Bradycardia	600mcg/ml pre-filled syringe or ampoules	10 x 1ml	Emergency Department  West Cornwall Urgent Care	Antidote tray
Calcium chloride * (10%)	Calcium channel blockers  Systemic effects of hydrofluoric acid	Pre-filled syringe 1g in 10ml	6	Emergency Department	Antidote tray
		Pre-filled syringe 1g in 10ml	1	Emergency Cupboard West Cornwall Urgent Care	
Calcium folinate	Methotrexate Methanol Formic acid	10mg/ml 30ml		Stock in technical services (Pharmacy)	
			15	Emergency Cupboard	Antidote tray
Calcium gluconate * (10%)	Local infiltration for hydrofluoric acid	10ml ampoule	20	Emergency Department West Cornwall Urgent Care	Antidote tray
Calcium gluconate gel * (2.5%)	Hydrofluoric acid	25 gram tube	1	Emergency Department	Antidote tray

Drug	Indication	Presentation	Quantity	Location	Location
<b>Cyanokit® *</b> (hydroxycobalamin) See also Dicobalt edetate Sodium nitrite Sodium thiosulphate	Cyanide – to be used for smoke inhalation victims who have severe lactic acidosis, are comatose, in cardiac arrest or have clear signs of cardiovascular extremis.	5g pack	2	Emergency Department	Antidote tray
Cyproheptadine	Serotonin syndrome	4mg tablets	30	Emergency Cupboard	Antidote tray
Dantrolene	Neuroleptic Malignant Syndrome (NMS)  Other drug-related hyperpyrexia – seek NPIS advice	20mg vial	36	Emergency Cupboard West Cornwall emergency cupboard	Antidote tray
Desferrioxamine (Desferal®)	Iron	500mg vial	40	Emergency Cupboard	Antidote tray
<b>Diazepam * (Diazemuls®)</b>	Convulsions, agitation	10mg in 2ml ampoule.	10	Emergency Department West Cornwall Urgent Care	Antidote tray
<b>Dicobalt edetate *</b>	Cyanide – antidote of choice in severe cases where there is a high clinical suspicion of cyanide salt exposure.	15mg/ml 20ml	6	Emergency Department	Antidote tray
Digoxin immune Fab (DigiFab)	Digoxin	40mg/ml vial	10	Pharmacy department fridge (via on-call pharmacist out of hours)	Fridge
<b>Flumazenil *</b>	Reversal of iatrogenic over sedation with benzodiazepines	100mcg/ml ampoule  100mcg/ml ampoule	10x 5ml  10x 5ml	Emergency Department  Emergency Cupboard  West Cornwall Urgent Care	Antidote tray
Fomepizole	Ethylene glycol, methanol	1g/ml 1.5ml vial	4 vials	Emergency Department	Antidote tray

Drug	Indication	Presentation	Quantity	Location	Location
Glucagon *	Beta-adrenoreceptor blockers; Other indications eg calcium channel blocker/TCA overdose.	1mg syringe  1mg syringe	50 syringes 5 syringes	Emergency Department  Emergency Cupboard  West Cornwall Urgent Care	Fridge
Intralipid 20%	Local anaesthetic toxicity / TCA overdose.	500ml bag	2 bags	Emergency Department  West Cornwall Urgent Care	Fridge
Isosorbide dinitrate *	Hypertension	10mg/10ml	10x10ml	Emergency Department  West Cornwall Urgent Care	Antidote tray
Klean-Prep® Macrogol '3350' (polyethylene glycol)	Gut decontamination for agents not bound by activated charcoal e.g. iron, lithium, bodypackers	Sachets	12  8	Emergency Department  Emergency Cupboard	Antidote tray
Mesna	Cyclophosphamide	400mg tablet 1g/10ml ampoule	10 15	Emergency Cupboard	Antidote tray
Methylthioninium chloride (methylene blue injection) *	Methaemoglobinaemia	5mg/ml 10ml ampoules	5	Emergency Department	Antidote tray
Naloxone injection *	Opioids	400mcg in 1ml ampoule /pre-filled syringe	30  20 50	Emergency Department  Emergency Cupboard  West Cornwall Urgent Care	Antidote tray
Octreotide injection	Sulphonylureas	50mcg/ml  100mcg/ml	5 x 50mcg  5 x 100mcg	Emergency Department  Emergency Department	Fridge  Fridge
Phentolamine (Alpha-blocker)	Resistant hypertension related by sympathomimetic drugs of abuse, MAOIs, clonidine Digital ischaemia related to injection of epinephrine	10mg/1ml	5	Emergency Department	Fridge

Drug	Indication	Presentation	Quantity	Location	Location
Pralidoxime chloride  (also in DoH pods for major incidents).	Organophosphorus insecticides; nerve agents	1g vial	6	Emergency Cupboard	Antidote tray
Procyclidine injection*	Dystonic reactions	10mg/2mls  10mg/2mls	5x2ml  5x 2ml	Emergency Department  Emergency Cupboard  West Cornwall Urgent Care	Antidote tray
Protamine sulphate	Heparin	10mg/1ml	10x5ml  10x5ml	Emergency Department  Emergency Cupboard	Antidote tray
Pyridoxine (high dose injection)	Isoniazid	50mg/ml	100 x 1ml amp	Emergency Cupboard	Antidote tray
Sodium bicarbonate 8.4%*	Tricyclic antidepressants and class Ia and Ic antiarrhythmic drugs	250ml polyfusor	3	Emergency Department West Cornwall Urgent Care	Antidote tray
Sodium bicarbonate isotonic 1.26%	Urinary alkalinisation	500ml polyfusor		Emergency Department  West Cornwall Urgent Care	Antidote tray
Sodium nitrite*	Cyanide	30mg/ml 10ml	5	Emergency Department	Antidote tray
Sodium thiosulphate (50%)*	Cyanide	500mg/ml 10ml amps	5	Emergency Department	Antidote tray
Viper venom antiserum (European)	European adder ( <i>Vipera berus</i> ).	10ml amp	2	Emergency Department	Fridge
Vitamin K (phytomenadione)	Vitamin K dependent anticoagulants	10mg in 1ml  10mg in 1ml 1mg in 0.5ml  10mg tablet	10x1.1ml  10x1.1ml  2	Emergency Department  Emergency Cupboard  West Cornwall Urgent Care	Antidote tray

### 3. Monitoring compliance and effectiveness

Element to be monitored	Compliance with the availability of the antidotes within the hospital
Lead	Joanna Lawrence, ED Pharmacist
Tool	Monitoring of stock availability on EPMA
Frequency	In response to incidents
Reporting arrangements	Reports will be discussed at the Medication Practice Committee and ED Governance group and documented in the minutes
Acting on recommendations and Lead(s)	Recommendations will be acted on by the Governance Lead for ED and the Lead Pharmacist for ED
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned within one month. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders

### 4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the ['Equality, Diversity & Human Rights Policy'](#) or the [Equality and Diversity website](#).

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

## Appendix 1. Governance Information

<b>Document Title</b>	Clinical Guideline on Antidote Availability for Emergency Departments			
<b>Date Issued/Approved:</b>	June 2015			
<b>Date Valid From:</b>	June 2015			
<b>Date Valid To:</b>	June 2018			
<b>Directorate / Department responsible (author/owner):</b>	Joanna Lawrence, Clinical Pharmacist Teacher Practitioner			
<b>Contact details:</b>	01872 253507			
<b>Brief summary of contents</b>	Availability of antidotes within the Royal Cornwall Hospital			
<b>Suggested Keywords:</b>	Antidote, poison			
<b>Target Audience</b>	RCHT ✓	PCH	CFT	KCCG
<b>Executive Director responsible for Policy:</b>	Medical Director			
<b>Date revised:</b>	N/A			
<b>This document replaces (exact title of previous version):</b>	N/A			
<b>Approval route (names of committees)/consultation:</b>	Medication Practice Committee (12.06.15) CSSC Governance DMB			
<b>Divisional Manager confirming approval processes</b>	Sally Rowe, Divisional Director CSSC			
<b>Name and Post Title of additional signatories</b>	Janet Gardner, Divisional Governance Lead CSSC			
<b>Signature of Executive Director giving approval</b>				
<b>Publication Location (refer to Policy on Policies – Approvals and Ratification):</b>	Internet & Intranet	✓	Intranet Only	
<b>Document Library Folder/Sub Folder</b>	Clinical / Pharmacy			
<b>Links to key external standards</b>				
<b>Related Documents:</b>	BNF College of Emergency Medicine and National Poisons Information Service			

	Guideline
<b>Training Need Identified?</b>	<b>No</b>

### Version Control Table

<b>Date</b>	<b>Version No</b>	<b>Summary of Changes</b>	<b>Changes Made by (Name and Job Title)</b>
13/5/15	V1.0	Initial Issue	Joanna Lawrence Clinical Pharmacist Teacher Practitioner

**All or part of this document can be released under the Freedom of Information Act 2000**

**This document is to be retained for 10 years from the date of expiry.**

**This document is only valid on the day of printing**

#### **Controlled Document**

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## Appendix 2. Initial Equality Impact Assessment Form

Name of strategy / policy / proposal / service function to be assessed (hereafter referred to as <i>policy</i> ): <b>Clinical Guideline on Antidote Availability for Emergency Departments</b>	
Directorate and service area: Clinical Support Services and Cancer, Pharmacy	Is this a new or existing Policy? New
Name of individual completing assessment: Joanna Lawrence	Telephone: 01872 253507
1. Policy Aim* Who is the strategy / policy / proposal / service function aimed at?	To ensure antidotes are readily available for the emergency treatment of poisoning
2. Policy Objectives*	To improve the availability of antidotes for the emergency treatment of poisoning
3. Policy – intended Outcomes*	To improve the treatment and outcomes of patients who suffer acute poisoning.
4. *How will you measure the outcome?	Ongoing clinical audit
5. Who is intended to benefit from the policy?	Patients
6a) Is consultation required with the workforce, equality groups, local interest groups etc. around this policy?	Yes
b) If yes, have these *groups been consulted?	Yes
C). Please list any groups who have been consulted about this procedure.	ED prescribers and nurses

<b>7. The Impact</b>			
Please complete the following table.			
Are there concerns that the policy <b>could</b> have differential impact on:			
Equality Strands:	Yes	No	Rationale for Assessment / Existing Evidence
<b>Age</b>		x	

<b>Sex</b> (male, female, trans-gender / gender reassignment)		X	
<b>Race / Ethnic communities /groups</b>		X	
<b>Disability -</b> learning disability, physical disability, sensory impairment and mental health problems		X	
<b>Religion / other beliefs</b>		X	
<b>Marriage and civil partnership</b>		X	
<b>Pregnancy and maternity</b>		X	
<b>Sexual Orientation,</b> Bisexual, Gay, heterosexual, Lesbian		X	
<p>You will need to continue to a full Equality Impact Assessment if the following have been highlighted:</p> <ul style="list-style-type: none"> <li>You have ticked "Yes" in any column above and</li> <li>No consultation or evidence of there being consultation- this <u>excludes</u> any <i>policies</i> which have been identified as not requiring consultation. <b>or</b></li> <li>Major service redesign or development</li> </ul>			
8. Please indicate if a full equality analysis is recommended.		<b>Yes</b>	<b>No x</b>
9. If you are not recommending a Full Impact assessment please explain why.			
No potential differential impact identified			
Signature of policy developer / lead manager / director		Date of completion and submission 13.05.2015	
Names and signatures of members carrying out the Screening Assessment	1. Joanna Lawrence 2.		

**Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead,**  
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa,  
Truro, Cornwall, TR1 3HD

A summary of the results will be published on the Trust's web site.

Signed \_\_\_\_\_

Date \_\_\_\_\_