SIMulatED

Royal Darwin Hospital Emergency Department

Author: Rebecca Day

# Scenario Run Sheet: Tox-SIM

## Scenario Overview

**SIM Time: 20 mins**

**Estimated Guided Reflection Time: 25 mins**

**Target Group: ED Reg’s/ED Nurses**

**Brief Summary: 23M, 70kg presents after a suspected overdose. He was found by his brother in a pool of his own vomit. Multiple likely co-ingestants including panadeine forte, endone, propranolol and verapamil. He was last seen 6 hours ago when the family left for work at 8am. Past history of bipolar and personality disorders. Had not been engaging with mental health over the past few months. Airway patient, noisy breathing,bradycardic and hypotensive, pale and cool, GCS 6, pin point pupils.**

**Requires intubation and ventilation, HIET, Calcium, Naloxone, bicarb, NAcCysteine, atropine, inotropes, fluids. Arrests when intubated. Return of circ when bicarb given.**

## Learning Objectives

**General**

Communication and leadership

**Scenario Specific**

* Initial ABC approach to managing an unwell tox patient
* Resus-RSI-DEAD (resus, risk assess,supportive, investigations, decont,elimination, antidotes, dispo)
* Preoptomisation pre intubation for bradycardic/hypotensive patients (fluids/atropine/metaraminol/inotropes)
* Cardiac Arrest Algorithm – shockable, including charge and check script
* Early use of appropriate antidotes – Nac for paracetamol, naloxone for opiates, HIET/bicarb for propranolol/CCB and calcium for CCB (60mls 10% Cagluc/20mls 10% CaCl)
* Use of TOXINZ, poisons helpline and toxicology handbook for managing tox patients
* Awareness of management differences when slow release preparations are ingested
* Use of focussed investigations in tox e.g VBG/ECG/Panadol levels
* Use of atropine and pacing for resistant bradycardias
* Use of inotropes/HIET for resistant hypotension
* Consideration of WBI with the advice of poisons but NOT during resus phase
* Consideration of activated charcoal once intubated

## Equipment Checklist

**Equipment**

IVF

Resus Trolley

Intubation Kit

**Medications and Fluids**

Calcium gluconate

HIET

Naloxone

Bicarbonate

Inotropes – Nad/Ad

**Documents and Forms**

Triage form

Obs chart

Intubation checklist

## Scenario Preparation/Baseline Parameters

**Initial Parameters**

**P40 WCT**

**BP 80/60**

**Sats 81% RA (likely aspiration)**

**RR 34**

**Temp 37.6**

**Initial Progress**

* **When attempts are made to intubate the patient they have a cardiac arrest**
* **Shockable side of algorithm**

## Participants

**Staff**

**ED Reg x2**

**Nurses x3**

**ICU Reg (?)**

**ED Consultant (by phone)**

## Additional Information/Medical History

**Demographics: 23M, Luke Jones**

**PMH: Depression and personality disorder. H/0 self harm, not currently well engaged with mental health. Etoh excess**

## Proposed Scenario Progression

* No Hx from patient as obtunded/family en route
* Likely ingested doses max
	+ Panadol 30x500mg = 15g (Toxic = 70x150 = 10.5g)
	+ Codeine 900mg
	+ Endone 100mg
	+ Propranolol 50x10mg = 500mg
	+ Verapamil 30x180mg= 5.4g
* Arrives with haemodynamic instability (Wide complex bradyarrhythmia), hypoxia and reduced LOC
* Needs protection of airway, IVF, inotropes
* During preparation for intubation the patient arrests – VF – shockable side of algorithm
* 3 x cycles of CPR then return of circulation when bicarb given
* Intubation when possible
* Early antidotes naloxone/Bicarbonate/ HIET/Calcium (later NAc but not priority)
* Commencement of fluids and inotropes
* NG charcoal once airway e
* Consider WBI once stabilised – must be in discussion with toxicologist (rarely used)