

## USE OF GLUCAGON FOR DRUG OVERDOSE IN THE EMERGENCY DEPARTMENT

Ref No: 1946

**Lead Clinician** : Dr Adrian Marsh, Consultant Emergency Medicine  
**Care Group** : Unscheduled Care (Emergency)  
**Developed (date)** : December 2012  
**Last updated** : May 2013  
**Last reviewed** : November 2014  
**Planned review** : November 2015  
**Keywords** : Glucagon, IV, Drug Overdose  
**Comments** :

**Administer glucagon via a central venous cannula wherever possible. If it must be given peripherally, use a large vein, preferably in the arm**

### INDICATIONS

Symptomatic Beta-blocker or calcium channel blocker overdose not responding to atropine.

### DOSAGE

5-10mg as slow iv bolus over 1-2 minutes, then infuse at 50micrograms/kg/hour titrated according to response (see table below).

Make up each glucagon vial with 1.1ml water for injections to give a 1mg/ml solution then dilute 10mg glucagon solution (i.e. 10 vials of reconstituted glucagon) in 90ml glucose 5%. This solution can be used to give the bolus and the subsequent infusion if needed.

Solutions are unstable and should be used immediately. Check solution is clear and non-viscous. It is best administered by central line, or if this is not possible, a large peripheral vein as it has a low pH.

PATIENT WEIGHT	Infusion rate for Glucagon 10mg in 100ml glucose 5%
50kg	25 ml/ hour
60kg	30 ml/ hour
70kg	35 ml/ hour
80kg	40 ml/ hour
90kg	45 ml/ hour

### CAUTIONS

Beware of risk of vomiting and aspiration during administration

### PATIENT MONITORING

The patient must be attached to a cardiac monitor and have continuous heart rate, minimum of 3 lead monitoring, oxygen saturations. Blood pressure should be measured every 15 minutes for the first hour, every 30 minutes for the second hour and then hourly. If the blood pressure drops the infusion should be stopped and an urgent medical review requested. Blood sugar should be measured every hour.

---

### **SIDE EFFECTS**

---

Nausea, vomiting, abdominal pain, hypokalaemia, hypotension, hyperglycaemia, hypocalcaemia, rarely hypersensitivity reactions.

---

### **SUPPLIES**

---

Large quantities of glucagon may be needed and stocks in the E.D are to start the initial infusion only. Out of hours do not delay in calling the emergency duty pharmacist for more supplies.