



4. Massive haemorrhage

Acute massive bleeding or sudden loss of more than 300ml in drains associated with severe hypotension (MAP < 50 mmHg) and low CVP

- 1 Press the red emergency button
- 2 Who will be the hands-off leader? Assign roles/tasks
- 3 Open IV fluids and ensure adequate IV access.
- 4 Deliver 100% oxygen or high flow oxygen if extubated
 - Consider intubation
- 5 Get all of patient's cross matched blood from the CVICU blood fridge
- 6 Obtain urgent ABG +/- TEG
- 7 Call blood bank (24015) ensure a valid x match exists and order 4 units of red cells
 - Consider activating the **Massive Transfusion Protocol (MTP)**
 - Ask for MTP box 1 and 2
 - Consider O NEG if no group specific or x matched blood available
- 8 Call named surgeon (not the registrar)
- 9 Consider adult emergency chest re-opening call (777)
- 10 Correct hypothermia, acidosis and hypocalcaemia

TRANSFUSION Goals	
• MAP >50 but do not normalise until surgical control	
• Fibrinogen	>2.0g/L
• Red blood Cells	>70g/L
• Platelets	>100 x 10 ⁹ /L

DRUG DOSES and treatments Give drugs via central line if available	
Calcium chloride	10mls IV and repeat as required
Protamine (heparin reversal)	50-100mg iv
rF7a	50-100mcg/kg iv (platelets >100, fibrinogen >1g/L)
Tranexamic acid	1g IV over 10min then 1g over 8 hrs
Prothrombinex (warfarin reversal)	50iu/kg at 3ml/min

Investigations
ABG/venous blood gas
ACT and heparinase ACT
kaolin and heparinase TEG
FBC, APTT PT and fibrinogen
Consider repeating every 60 minutes