SIMulatED

Royal Darwin Hospital Emergency Department

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# Scenario Run Sheet: It’s a blast!

## Scenario Overview

**Estimate SIMulation Time: 30mins**

**Estimated Guided Reflection Time: 20-30mins**

**Target Group: ED Reg/ED Nurse/ICU Reg/Anaesthetic Reg/Surg Reg**

**Brief Summary: 16 year old male “accidentally” shot in the chest/leg with shot gun by an acquaintance at 2am on a rural property. Initially GCS15, screaming in pain. Given ketamine 100mg en route. Reduced GCS to 7. Airway not maintained so LMA inserted en route. Initial BP 110/90. Progressive decline in BP. Tachycardia/pnoea. Sats 90% on LMA. During prep for intubation the patient has a cardiac arrest. Use of ERC traumatic cardiac arrest protocol – de-emphasis on CPR, with early intubation, aggressive blood products/MTP, bilateral thoracostomy, haemorrhage control (femoral artery bleeding). Consideration of ED thoracotomy.**

## Learning Objectives

**General:** Working in a trauma team, communication skills, closed loop communication, the quiet and controlled resus room

**Scenario Specific**

- Trauma Call Preparation

 - MIST documentation

 - Role allocation of team, team leader control

 - Equipment readiness

 - Drugs/Fluids/MTP

 - Pre-notification of relevant people

- Receiving of patient from St Johns, appropriate handover/concomitant primary survey

- Primary survey, adjuncts and treatment of immediate life threats

- The use of tranexamic acid in haemodynamically unstable trauma

- The utility of ultrasound in trauma assessment

- Appropriate use of resus room imaging

- Traumatic Cardiac Arrest Algorithm (ERC Guideline)

 - De-emphasis of CPR

 - Oxygenation/ETT

 - Bilateral finger thoracostomy

 - MTP/Volume replacement

 -External haemorrhage control (right fem artery)

- Consideration of the need for emergency ED thoracotomy

## Equipment Checklist

**Equipment**

- Intubation equipment

- RICC/canulation

- Rapid Infuser

**Medications and Fluids**

- MTP products/bag

- Tranexamic acid

- Ketamine/Sux/Roc

- NaCl 0.9%

**Documents and Forms**

- Triage form

**-** Nursing documentation

- Trauma assessment sheet

- Path/Xray/

**Diagnostics Available**

- CXR- right HTX/Pelvis & CSpine - NAD

- FAST images (neg)

- VBG (metabolic and resp acidosis)

- BSL

## Scenario Preparation/Baseline Parameters

**Initial Parameters**

**-** P130 – rises to 160

- BP 110/90 – drop slowly to 60/30 to unrec

- Sats 90% - drop to 80% slowly

- RR 30 – drop to 10 – to 0 on arrest

- Temp 35.3

## Participants

**Staff**

**-**ED Reg x2

- Surg Reg -?

- ICU Reg – Mitch Cameron

- Anaesth Reg - ?

- Nurses x3

- ED consultant

**Instructor Roles**

**-** In room to provide exam information and results

- Ambo – handover of pt

- Nurse – when BP drops to state, “no pulse and stopped breathing”

## Additional Information/Medical History

**Demographics** – 16M, No other Hx

**HPC –** Shot by an acquaintance ??circumstances. No collateral Hx

**PMH –** Unclear, no presentations to RDH previously

## Proposed Scenario Progression

- Call from ambos at 2 am – TRAUMA CALL CALLED, consultant from ED calls – advise to come in

- Surgical reg/ICU/Anaesthetics to call respective bosses

- 5 minutes prep time with trauma team (roles, PPE, equipment, drugs, doses, ABC prep, MTP alert, call in consultants)

- Arrival of patient – evidence of early shock with raised diastolic, tachycardia, low sats, tachypnoea, LMA in situ and ventilating well by hand

- Primary survey by team, handover to team leader and scribe

- ABCD report to team leader

- Recognition of chest injury with potential right sided HTX and right groin femoral artery bleed

- Prep for definitive airway

- CSpine immobilisation if doesn’t interfere with more pressing tasks

- Application of O2 inc prongs for apnoeic oxygenation

- Multiple IV acess, RICC and rapid infuser, MTP, tranexamic acid, FAST neg

- Bloods sent inc CM/VBG/Coags/FBC/EUC/LFT/Lipase/

- Right sided chest tube and groin pressure to treat bleeding

- Resus radiology when appropriate – CXR and Pelvis

- Arrest of patient when begin to prep for airway management

- Trauma algorithm (ERC)

 - ETT/oxygenate and ventilate

 - Blood/MTP

 - Haemorrhage control

 - Bilat finger thoracostomy

 - CPR if doesn’t interfere with other priorities (not essential and potentially harmful)

- Consider ED thoracotomy when initial measures are unsuccessful

## Debriefing/Guided Reflection Overview

**General Opening Questions**

* How was the scenario? (each team member reflects)
* What happened in the scenario – i.e. relay the story to a workmate who wasn’t there

**Scenario Specific Questions**

* What was wrong with the patient?
* What medications/investigations may be required?
* Where does the patient need to go?

**General Wrap-Up Questions**

* What did you find most beneficial about this scenario
* What was the most challenging point in this scenario?
* What would you do differently next time?

## Case Considerations

- How is a traumatic arrest different from a medical cause of arrest?

- Should we do CPR in a traumatic arrest?

- What are the indications for ED Thoracotomy?

- What can we do to improve the functioning of our Trauma Team?