

# TRAUMA

**MODULE: GENERAL SURGERY, TRAUMA AND ORTHOPAEDICS**

**TARGET: CT1 – ST8**

## **BACKGROUND:**

Injury to the abdominal viscera is a frequent source of morbidity and mortality after trauma. Accurate assessment, rapid resuscitation and appropriate investigations must be instituted in the resuscitation room as time to definitive treatment affects patient outcomes. Management of a trauma call involves not only clinical decision making, but management of a multi-professional trauma team and resources. Multiply injured trauma patients are sometimes managed by junior medical staff, without substantial prior experience of trauma care.

## **RELEVANT AREAS OF THE CURRICULUM**

### **Module 6: Assessment and early treatment of the patient with trauma**

To safely assess the multiply injured patient  
To safely assess and initiate management of patients with:  
    traumatic skin and soft tissue injury  
    abdominal and urogenital trauma

### **Professional behaviour and leadership skills**

To be a good communicator  
To teach and to train  
To understand and manage people and resources within the health environment

## INFORMATION FOR FACULTY

### LEARNING OBJECTIVES

- To be able to assess and treat haemorrhagic shock
- To recognise need for O negative blood
- To prioritise investigations and treatment, including DPL, CT and FAST.
- To manage personnel on a trauma team including use of personal protective clothing
- To facilitate an effective handover from an ambulance crew
- To communicate with patient need for emergency laparotomy
- To communicate with trauma anaesthetist need for emergency laparotomy

### SCENE SETTING

Location: Accident and Emergency Resus Bay  
Can use a dedicated SimSuite or Imperial College Distributed Simulation system

Expected duration of scenario: 25 mins      Expected duration of debriefing: 20 mins

### EQUIPMENT AND CONSUMABLES

### PERSONNEL-IN-SCENARIO

DS 'igloo'  
DS 'A&E Resus backdrop screens x2'  
DS 'Simulated Anaesthetic machine'  
Ambulance trolley  
Scoop  
Hard neck collar  
Head blocks and tape  
Oxygen mask with reservoir bag  
Saturation probe  
BP cuff  
Tourniquet  
Venous cannulae plus cannula dressing  
Blood bottles  
Blood forms  
Stethoscope  
Jeans – for each run of scenario  
Tshirt – for each run of scenario  
Boxer shorts – for each run of scenario  
Patient blanket - red  
2 x 1L bags Hartmanns  
2 x 1L bags 0.9% NaCl  
2 units 'O' neg blood  
Giving sets  
Syringes

Anaesthetist – Senior trainee or consultant  
A&E Nurse  
Paramedic  
A&E FY2  
Patient (actor)

ABG syringe plus print out

Pressure bag

Either SimMan obs or IPAD with Cardiac parameter app plus IPOD controller eg. SimMonitor

Pelvic binder

Pen torch

Urometer plus 'urine'

Fake blood

Clock

Trauma scissors

Prosthetic wound and make-up artist - HealthCuts Ltd will do both for around £300

(NB. Casualties Union are a volunteer organisation that just charge for consumables - usually around £100 - the make up artist is required for the entire day as the make-up will need touch-ups after every run of the scenario).

## PARTICIPANT BRIEFING

To stop the scenario at any time use "Code 120" this will immediately end the scenario. This code can be used by any member of the team to halt the scenario.

Its 10.30pm. You are on-call and the most senior member of the surgical team in the hospital (registrars off-site after 10pm). Your bleep has just gone off as a voice-over summoning you to A&E Resus for a Trauma call. The voiceover says that they will arrive in 3 minutes:

## FACULTY BRIEFING

### 'VOICE OF THE MANIKIN' BRIEFING - ACTOR

You have been in the 'White Hart' all afternoon watching the Arsenal game with your girlfriend. You are an Arsenal supporter – they lost 2-1 in the closing minutes. You have been drinking beer all afternoon and eating chips.

Some Chelsea fans got into an argument with you about the referee and a foul by one of their defenders. This ended up with you in a fight outside the pub. You have been hit about the head and chest, knocked to the ground and then kicked multiple times in the abdomen. You felt a sharp thrust into your abdomen and think you might have been stabbed as you are covered in blood and have been lying in a pool of blood. You have some bruising over your ribs but are not short of breath. You are orientated in time place and person.

Your abdomen is tender to touch, particularly in the Left lower quadrant where there is a stab wound. You also have a stab wound on your back in the midline, however, you are unaware of this. You are able to move your arms and legs without problem. You don't think you were knocked unconscious but you do not remember all of the details of what happened.

You are uncompliant with treatment and want to get out of the A and E department as soon as possible (to retaliate and to report to the police).

**IN-SCENARIO PERSONNEL BRIEFING**

A&E nurse –

upon arrival of the trauma team

“Blue-light ambulance coming in, male involved in a fight, GCS 15, HR 100/min BP 120 / 80”

There is then a pause of around a minute to allow the participants to organise their trauma team, then the paramedics arrive with patient and give the following handover:

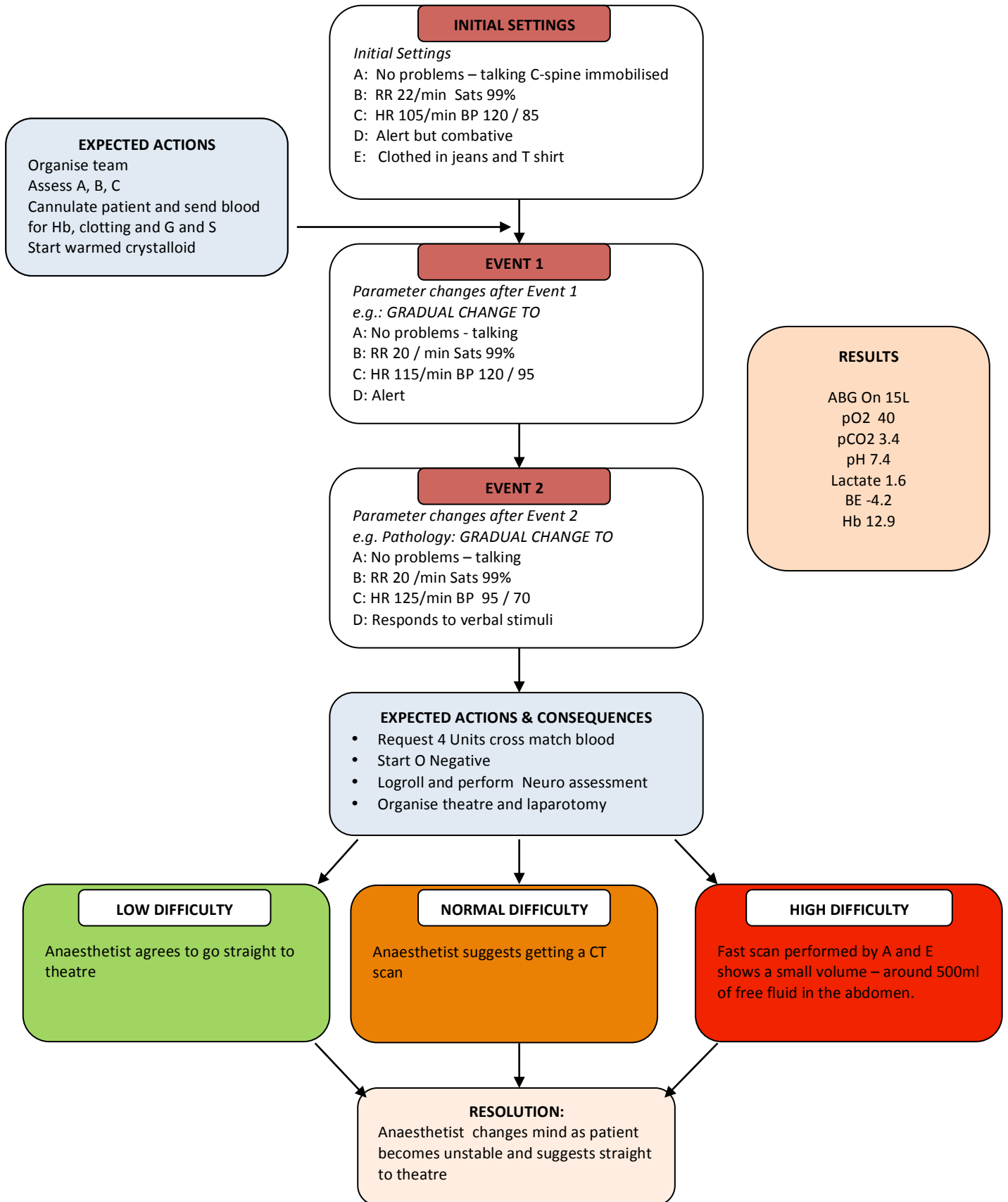
“This is Tom. 48 years old. Involved in a bit of a fight, beaten up and stabbed, found on the floor in a pool of blood. Conscious on scene but combative. Collar and boarded as a precaution. He’s been stable throughout. HR 100/min , BP120 / 80.”

**ADDITIONAL INFORMATION**

Suggested patient & scene set-up:



**CONDUCT OF SCENARIO**



## DEBRIEFING

Debriefing by surgeon observer

Debriefing by 2 in-scenario personnel - anaesthetist / paramedic / nurse

May wish to use the patient for debriefing, however if it is desired to run the scenario multiple times in quick succession then the actor may need to be 're-set' ie. new clothing and make-up.

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## POINTS FOR FURTHER DISCUSSION

- Indications for CT scan, Fast scan, DPL –
  - Sensitivity and specificity
- Ways of managing the team to ensure clear handover –
  - E.g. Silencing trauma team, Empowering paramedic.
- Normal Hb on blood gas
- Shock –
  - Early changes in cardiovascular parameters
- Methods of negotiating with anaesthetist

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## DEBRIEFING RESOURCES

ATLS manual

Major Trauma care in England – Department of Health document compiled by National Audit Office

<http://www.nao.org.uk/report/major-trauma-care-in-england/>

## SURGERY > IMMERSIVE SCENARIO 1 > TRAUMA

### INFORMATION FOR PARTICIPANTS

#### KEY POINTS

ABCDE approach to the trauma patient

Start important treatments immediately even when diagnosis is not yet clear

Timely liaison with blood bank

Identification of patient with haemorrhagic shock

Stages of haemorrhagic shock

Beware the normal Hb

Clear leadership of trauma team including close loop communication

Use of personal protection equipment eg. Aprons and gloves when contact with blood is anticipated

#### RELEVANCE TO THE CURRICULUM

Trauma care is part of the core curriculum, this scenario addresses both clinical skills including contextualised knowledge as well as leadership and management competencies.

## PARTICIPANT REFLECTION

What have you learned from this experience? (Please try and list 3 things)

How will your practice now change?

What other actions will you now take to meet any identified learning needs?



**PARTICIPANT FEEDBACK**

Date of training session:.....

Profession and grade:.....

What role(s) did you play in the scenario? (Please tick)

Trauma team leader	<input type="checkbox"/>
Doctor performing primary survey	<input type="checkbox"/>
Other health care professional (e.g. nurse/ODP)	<input type="checkbox"/>
Other role (please specify): .....	<input type="checkbox"/>
Observer	<input type="checkbox"/>

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I found this scenario useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I understand more about the scenario subject	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have more confidence to deal with this scenario	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The material covered was relevant to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How could this scenario be improved for future participants? This is especially important if you have ticked anything in the disagree/strongly disagree box.

**FACULTY DEBRIEF – TO BE COMPLETED BY FACULTY TEAM**

What went particularly well during this scenario?

What did not go well, or as well as planned?

Why didn't it go well?

How could the scenario be improved for future participants?