BURNS

MODULE: PLASTICS, TRAUMA AND ORTHOPAEDICS

TARGET: CT1 – ST8

BACKGROUND:

In the UK, it is estimated that each year about 250,000 people with burn injuries present to primary care teams. The admission rate is 0.29 per 1,000 population with an average of 300 burns-related deaths each year.

A burn is an injury caused by thermal, chemical, electrical, or radiation energy. A scald is a burn caused by contact with a hot liquid or steam but the term 'burn' is often used to include scalds. Most burns heal without any problems but complete healing in terms of cosmetic outcome is often dependent on appropriate care, especially within the first few days after the burn. Most simple burns can be managed in primary care but complex burns and all major burns warrant a specialist and skilled multidisciplinary approach for a successful clinical outcome.

RELEVANT AREAS OF THE CURRICULUM

Module 4: The principles of assessment and management of the surgical patient

To assess the surgical patient
To elicit a history that is relevant, concise, accurate and appropriate to the patient's problem
To assess the patient adequately prior to operation and manage any pre-operative problems appropriately

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
Burns

Module 10: Professional behaviour and leadership skills

To provide good clinical care
To be a good communicator
To understand and manage people and resources within the health environment

INFORMATION FOR FACULTY

LEARNING OBJECTIVES

- To be able to assess thickness of burns
- To be able to assess total body surface area burnt
- To know specific requirements of managing electrical burns eg. cardiac monitoring, rhabdomyolysis
- To make an effective referral to a burns centre
- To communicate effectively with the patient regarding the next steps of the clinical management pathway

SCENE SETTING

Location: Accident and Emergency Resus Bay

Can use a dedicated SimSuite or an distributed simulation system

Expected duration of scenario: 15 mins Expected duration of debriefing: 20 mins

EQUIPMENT AND CONSUMABLES

DS 'igloo'
DS 'A&E Resus backdrop screens x2'
DS 'Simulated Anaesthetic machine'
Hard neck collar
Head blocks and tape
Oxygen mask with reservoir bag
Sats probe
BP cuff
Torniquet
Venous cannulae plus cannula dressing
Blood bottles
Blood forms
Stethescope
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
Giving sets
Syringes
ABG syringe plus print out
Pressure bag
Either SimMan obs or IPAD with Cardiac parameter app plus IPOD controller eg. SimMonitor
Urometer plus 'urine'

PERSONNEL-IN-SCENARIO

A and E Nurse
Paramedic
A and E F2
Patient (actor) The Harry Partnership £300

Clock
Trauma scissors
Prosthetics and make-up - HealthCuts Ltd will do both for around £300
Casualties Union are a volunteer organisation that charge for consumables - usually around £100 - the make up artist is required for the entire session 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 10.30am. You are oncall and have been fast-bleeped to A&E. A patient has been brought in by ambulance to Resus, please assess the patient and manage all aspects of the patient's care.

FACULTY BRIEFING

ACTOR

You are a 43 year old builder. Work is pretty quiet at the moment so you were using the time to dig the foundations for a greenhouse in your own garden. You always rise early and were up at 7am and ate breakfast at 7.30am. You have asthma and use blue and brown inhalers most days otherwise you are in good health. You are right handed, you are a normal active man, you like going to the pub and sometimes play the piano in the pub for your mates for a sing-along. You dont smoke. If you are asked - you are allergic to an antibiotic called gentamycin (you dont need to pronounce the name correctly but you know its not penicillin). If you are asked directly you had a tetanus booster injection about 3 yeas ago after a nasty cut that needed stitches in A & E.

The injury happened at 10.30am. You were in a deep dug trench in the garden and made contact with the mains electricity cable with a spade (>1000V) You were thrown backwards by the force, to the ground onto concrete slabs. You didn't loose consciousness.

Your wife heard a bang and shout and found you on the ground, she poured cold water over you and called the ambulance. She's stayed at home as one of your kids (16 years old) will be home for lunch - he's at the local College.

You have terrible pain in your back, chest and in your arms, the right side more than the left.
The paramedic crew have eased off your gardening boots as your right foot was very painful. They have wrapped you in cling-film.

Your right arm is VERY swollen and is excruciatingly painful if anyone touches it, the lightest touch causes you awful pain. The right hand - you dont have much feeling in it.

IN-SCENARIO PERSONNEL BRIEFING

A and E nurse – upon arrival of the learner

> "The ambulance crew are just booking him in but we brought him into resus as I think he's gonna need some morphine for the pain, he's got a cannula - Im just drawing it up now for him - how much do you want? He may have had an electric shock, the crew said he was digging in a trench and may have hit a cable."

CONDUCT OF SCENARIO

The A&E nurse is competent but inexperienced with burns. She will start initiating treatment such as putting on oxygen, getting morphine etc.

The paramedic will give a brief handover.

The learner will be expected to take some history from the patient but also to start treatments. They will likely want to place some cardiac monitoring and want to inspect most of the actor's body. They may wish to logroll the actor to look at the back.

DEBRIEFING

Two faculty to manage debriefing.

Two aspects to debriefing - content and process.

POINTS FOR FURTHER DISCUSSION

Factor	Yes/No	Comments
Introduces self to the patient		
History Mechanism of injury Notes time of injury Establishes high voltage (>1000v) Asks about first aid Asks about LOC / chest pain Checks tetanus status		
Examination Checks airway & C-spine Check breathing Checks circulation (IV access) Covers AMPLE		
Burns specific Recognises entry / exit point Assess TBSA (using nines / palm) Assess depth of burn (PTB & FTB) Burns resuscitation calculated Recognises circumferential burn Checks NV status of limb Checks pain on passive movement		
Burns related Asks for cardiac monitoring / ECG		

Asks for urinary catheter / U&Es / CK Keeps patient warm – blanket Dresses the wounds Analgesia for patient		

DEBRIEFING RESOURCES

- Wt x size x 4ml = 75 x 21 x 4 = 6,300mls = 3150 in first 8 hours 787ml/hr, then 3,150 over 16 hours 196ml/hr

SURGERY > IMMERSIVE SCENARIO 11 > BURNS

INFORMATION FOR PARTICIPANTS

KEY POINTS

ABCDE approach

Start important treatments immediately even when diagnosis is not yet clear

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.

WORKPLACE-BASED ASSESSMENTS

FURTHER RESOURCES

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	
Doctor performing primary survey	
Other health care professional (e.g. nurse/ODP)	
Other role (please specify):	
Observer	

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I found this scenario useful					
I understand more about the scenario subject					
I have more confidence to deal with this scenario					
The material covered was relevant to me					

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?