

# PATIENT SAFETY: OPERATING THEATRES

**MODULE: TRAUMA AND ORTHOPAEDICS / GENERAL SURGERY / VASCULAR**

**TARGET: SURGERY CT1 – ST4**

## **BACKGROUND:**

Surgery is one area of health care in which preventable medical errors and near misses can occur. However, until the 1999 Institute of Medicine report, *To Err Is Human*, clinicians were unaware of the number of surgery-associated injuries, deaths, and near misses because there was no process for recognizing, reporting, and tracking these events. Of great concern is wrong-site surgery (WSS), which encompasses surgery performed on the wrong side or site of the body, wrong surgical procedure performed, and surgery performed on the wrong patient.<sup>3</sup>

WSS can be a devastating experience for the patient and have a negative impact on the surgical team. 79% of wrong-site eye surgery and 84% of wrong-site orthopedic claims resulted in malpractice awards.

WSSs are rare events, 1 out of 27,686 cases, or 1 out of every 112,994 surgeries, or 1 in 5 hand surgeons during their career, or 1 out of 4 orthopedic surgeons with 25 years' experience. Regardless of the exact number of WSSs, they are seen as a preventable medical error if certain steps are taken and standardized procedures are implemented in the perioperative setting.

Education of junior surgeons in simulation may prove to be an early intervention that promotes patient safety in the operating theatre and prevents 'never events' such as wrong site surgery as well as decreasing the incidence of more common injuries – such as pressure injuries.

## **RELEVANT AREAS OF THE CURRICULUM**

### **Module 5: Peri-operative care of the surgical patient**

To assess and manage preoperative risk  
To manage patient care in the peri-operative period  
To conduct safe surgery in the operating theatre environment

#### **Pre operative preparation**

Checks in theatre that consent has been obtained  
Gives effective briefing to theatre team  
Ensures proper and safe positioning of the patient on the operating table  
Demonstrates careful skin preparation  
Demonstrates careful draping of the patient's operative field  
Ensures general equipment and materials are deployed safely (e.g. catheter, diathermy)  
Ensures appropriate drugs administered  
Arranges for and deploys specialist supporting equipment (e.g. image intensifiers) effectively

**Intra-operative care:**

Safety in theatre including patient positioning and avoidance of nerve injury

Diathermy

Infection risks

Tourniquet use including indications, effects and complications

Principles of local, regional and general anaesthesia

Prevention of venous thrombosis

## INFORMATION FOR FACULTY

### LEARNING OBJECTIVES

- Increase trainee awareness of patient safety issues in the operating theatre specifically:
- Wrong site surgery
- Use of catheters in the context of regional anaesthesia
- Patient stability on the table – supports, beanbags etc.
- Pressure relief – gel pads, cushioning
- Thrombo-prophylaxis
- Patient warming
- Use of images
- Sterility with regard to prep and drape techniques

### SCENE SETTING

Location: Operating theatre  
May be set up in scenario room or portable 'DS igloo' if no simulation suite is available.

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

### EQUIPMENT AND CONSUMABLES

DS 'igloo'  
DS 'theatre equipment trolley'  
DS 'scrub sink'  
DS 'anaesthetic machine' plus iPADS  
Operating table (trolley or massage couch)  
Sheet  
Metal equipment table  
Betadine prep  
Rampleys sponge holding forceps  
Gallipot  
Crepe bandage  
Mepore  
Black marker pen  
Angiogram image depicting small vessel disease or  
Xray image  
Disposable Bair hugger blanket  
TEDS  
Patient ID bracelet plus allergy band  
Flo-tron boots (optional)  
Small swabs x5 per participant  
Large swabs x5 per participant  
Abdo drape x2  
U drape x1 per participant  
Small sterile drape x 1 per participant  
Large opsite drape x1 per participant  
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### PERSONNEL-IN-SCENARIO

Surgical Trainee  
Anaesthetist  
Scrub nurse  
Patient (actor or volunteer - not much speaking)  
Circulating nurse / ODP

Stockingette  
Gel pressure pads  
Surgical gowns (1 per participant)  
Surgical sterile gloves (range of sizes 6 - 8)  
Theatre hats  
Theatre masks  
Scrubs – participants instructed to bring own  
WHO check list (1 per participant)  
Patient notes  
Patient wrist band  
Red Allergy wrist band

## PARTICIPANT BRIEFING

The consultant vascular surgeon has asked you to go to theatres, to make the appropriate checks, then to prep and drape the patient for a LEFT Below Knee Amputation. The consultant has asked you to get the circulating nurse to call when you are ready to start. The patient is awake under a spinal anaesthetic.

Image – Scenario in Distributed Simulation ‘igloo’ with equipment poster banner and DS anaesthetic machine



## FACULTY BRIEFING

This scenario is about patient safety, communication and leadership of a theatre team.

### 'VOICE OF THE MANIKIN' BRIEFING

The patient is type 1 diabetic. Penicillin allergic.

Infected and gangrenous left foot due to small vessel disease. Both the right and left feet are bandaged there is an arrow on the RIGHT leg. The patient has little sensation in their feet.

### IN-SCENARIO PERSONNEL BRIEFING

Anaesthetist –

Generally helpful but DO NOT initiate WHO checklist. Spinal anaesthetic because of poor cardiac function EF 25% on Echo and some aortic stenosis.

Scrub nurse –

Allow participant to lead draping.

Circulating nurse / ODP –

DO NOT initiate WHO checklist

## ADDITIONAL INFORMATION

Patient's Hb is 8.7 - There is a group and save from 8 days ago in the lab  
Patient also has an anaphylactic Penicillin allergy.

## CONDUCT OF SCENARIO

**INITIAL SETTINGS***Initial Settings*

- A: No problems – talking
- B: RR 22/min Sats 100% on 4L O2
- C: HR 76/min BP 110 / 65
- D: Alert

**EXPECTED ACTIONS & CONSEQUENCES**

Identifies Patient Safety concerns:

- Wrong leg is marked, check with awake patient, imaging and consent
- No cross-matched blood - Consider postponing surgery and expected blood loss
- Penicillin allergy – Give alternative antibiotic
- Type 1 Diabetic – Will he require an Insulin sliding scale?
- In context of small vessel disease do not use TEDS, consider Flotrons
- Bair hugger on upper body, not on limbs due to ischaemia and poor skin perfusion can result in burns.
- Gel pads under heels
- Urinary catheter will be needed as spinal plus Below Knee Amputation
- Check equipment with nurse
- Exclude infected area from sterile field
- Exposure and prep of entire lower leg to allow for muscle flaps

Relays to senior.

## DEBRIEFING

The debriefing should be lead by an external surgeon 'faculty' member who observed throughout

You may wish to involve in-scenario personnel (confederates) in the debriefing - anaesthetist / scrub nurse / ODP

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### POINTS FOR FURTHER DISCUSSION

There are a number of patient safety considerations:

- Wrong leg is marked, check with awake patient, imaging and consent
- Consider post-pone surgery as no blood cross-matched - expected blood loss
- Pencillin allergy – give alternative antibiotic
- Diabetic - ?sliding scale
- In context of small vessel disease do not use TEDS, consider Flotrons
- Bair hugger on upper body, not on limbs due to ischaemia and poor skin perfusion can result in burns
- Gel pads under heels
- Urinary catheter will be needed as spinal plus BKA
- Check equipment with nurse
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Further focus in the debriefing should be upon:

- Leadership and communication skills with allied health personnel, in particular the manner in which the learner directs the scrub nurse.
- Able to initiate and lead WHO checklist
- How to lead WHO checklist
- Techniques to improve assertiveness and get others to listen and contribute actively to the WHO

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### DEBRIEFING RESOURCES

World Health Organization Surgical Safety Checklist and Implementation Resources

[http://who.int/patientsafety/safesurgery/ss\\_checklist/en/](http://who.int/patientsafety/safesurgery/ss_checklist/en/)

Peri-op care Patient Safety First Campaign

## SURGERY > IMMERSIVE SCENARIO 2 > PATIENT SAFETY

### INFORMATION FOR PARTICIPANTS

Ensuring that the patient is safe during the surgery and positioned adequately is the surgeons responsibility although it is often undertaken by other team members. Understanding what equipment will be required and assisting with this set-up may increase efficiency in the operating theatre as well as the co-operation of allied theatre personnel.

#### KEY POINTS

- The WHO checklist provides valuable prompts however, think carefully about each point – whether further measures should be instituted or care improved.
- When prepping and draping the patient think about where the incision will be made and whether other areas will be required for access during the procedure.
- Will extreme positioning be used during the procedure – does the patient need to be strapped onto the table or other supports used?
- It can be difficult to access imaging or results once you are gowned and gloved – ensure everything is available before you start.

#### RELEVANCE TO THE CURRICULUM

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## 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:.....

Learner grade:.....

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
I found this simulation useful					
I understand more about the simulation subject					
I have more confidence to deal with this type of 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?