OBS CRM

OBSTETRIC ANAESTHETIC CRISIS RESOURCE MANAGEMENT

Simulation Handbook

East Kent Hospitals University NHS Foundation Trust

Introduction

Background to the Day

Development of the CT3+ Obstetric Anaesthetic CRM course

There has been mandatory simulation for every year of anaesthetic training since 2012. At CT3 level, anaesthetists are expected to cover the obstetric anaesthetic rota and will therefore be providing care to obstetric patients both in theatres and on the labour & antenatal wards.

Obstetrics poses some unique challenges to anaesthetists. You will always find yourself working within a diverse multidisciplinary team consisting of obstetricians, midwives, theatre practitioners & support workers, but in addition to this, you have two patients to consider. The clinical priority will always be to stabilise the mother, but it must be remembered we also have a duty of care to the unborn child which may well influence decision making.

In many hospitals, the Registrar may be the most senior anaesthetist in the hospital out-of-hours, with the Consultant on-call from home. To help prepare the CT3+ trainees to care for obstetric patients safely and effectively, the simulations are designed to reflect this. The delegates on this course are expected to participate as the Registrar in managing infrequently occurring life-threatening obstetric emergencies. This enables the delegates to rehearse taking charge of simulated clinical scenarios and improve their knowledge and confidence in managing these situations. A variety of clinical scenarios will be simulated to allow both technical & non-technical skills to be practised.

Feedback from the course has been extremely positive, and we hope you enjoy the 'Obs CRM' course as much as the attendees that have preceded you:

'Excellent. Really enjoyed the day and got a lot out of it. Highly relevant'

'Friendly & approachable facilitators. Insightful & valuable debriefs'

'I feel more confident dealing with obs emergencies'

Course Information

Important Details about the Course

You have been booked to attend the OBS CRM: Obstetric Anaesthetic Crisis Resource Management course.

Please make sure you read the information below and make note of the start time and dress code. Punctuality is expected. We reserve the right to exclude delegates from joining the course if they arrive late as this is disruptive to the training event. Additionally, late arrival means delegates may have

Registration is between **08:15-08:30**
Introductory briefing commences at **08:30**
Anticipated finish time of approximately **17:00,** although this may be subject to change. You will be notified on the day if the timetable has been amended significantly.
Attendance for the full course is expected

The course will commence in the William Harvey Hospital Simulation Centre, which is located on the first floor of the Arundel Unit (Maroon Zone). A detailed map of the hospital can be found here:

https://www.ekhuft.nhs.uk/patients-and-visitors/william-harvey-hospital/finding-your-way-around-whh/

William Harvey Hospital is situated on Junction 10 of the M20. It is signposted from the motorway. The address of the hospital is as follows:
William Harvey Hospital, Kennington Road, Willesborough, Ashford, Kent, TN24 0LZ

Details regarding public transport can be found on the Patient & Visitors webpages:
https://www.ekhuft.nhs.uk/patients-and-visitors/find-us/getting-to-william-harvey-hospital/

For those with staff parking permits, please ensure you park in a designated staff carpark (first left turn on entering the main access road and follow the signs). Those without permits wishing to park on site will need to use visitor parking and purchase the appropriate ticket. Parking & Tariff information can be found via the link below:

https://www.ekhuft.nhs.uk/patients-and-visitors/find-us/parking-at-our-hospitals/

Course Information

Important Details about the Course

We advise you to wear scrubs or clean work attire to the event. This will make you more comfortable during the scenarios and help contribute to our attempt at recreating a 'realistic' environment. Changing facilities are available at the venue (however please note that scrubs are not supplied).

In simulation, we sometimes utilize moulage to enhance the fidelity of the scenarios (e.g. fake blood, make-up, prosthetic wounds). Personal protective equipment such as gloves, aprons & masks are available for your use. The organisers will not be held responsible for damage or staining of personal effects or clothes.

You are welcome to **bring** handbooks, manuals and equipment that you would carry with you in your work environment for use during the course. This includes mobile telephones, although we do request that these are switched to silent for the duration of the event to avoid unnecessary interruptions.

Refreshments and lunch are kindly provided by Medical Education for delegates on the 'Obs CRM' course. Please notify the simulation team no later than 7 days in advance of the event should you have specific dietary requirements. Email: ekhuft.simulation@nhs.net

Course Contacts

Dr Kimberley Hoyland (Course Director): kimberley.hoyland@nhs.net
Dr Aalia Sange (College Tutor): asange@nhs.net
Vicky Gray (Simulation Manager): vgray2@nhs.net
Vikki Kerslake (Simulation Technician): victoria.kerslake@nhs.net

Simulation Centre: 01233 616185 / ekhuft.simulation@nhs.net

Cancellation Policy

Please be aware that cancellations less than 72 hours before the course date and non-attendance on the day without reasonable explanation will incur a cancellation fee equivalent to the full price of the delegate place if the space cannot be filled from the reserve list.

Course Information

Important Details about the Course

Example timetable (may be subject to change)

08:15	Registration & Change into Scrubs	15 mins
08:30	Meet faculty Course Objectives Meet the manikin & Environment (Simulation Centre)	60 mins
09:30	Scenario 1 & Debrief 1	60 mins
10:30	Coffee Break	15 mins
10:45	Scenario 2 & Debrief 2	60 mins
11:45	Scenario 3 & Debrief 3	60 mins
12:45	Lunch break	30 mins
13:15	Scenario 4 & Debrief 4	60 mins
14:15	Scenario 5 & Debrief 5	60 mins
15:15	Coffee Break	15 mins
15:30	Scenario 6 & Debrief 6	60 mins
16:30	Post-course survey & Close	30 mins

Course Information

Objectives and What to Expect

Learning Objectives

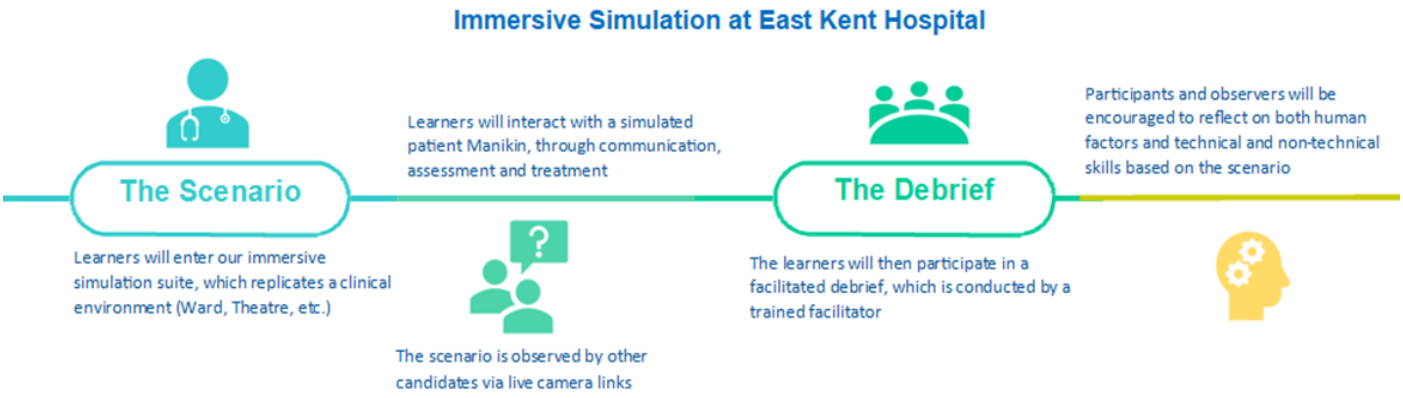
This day aims to provide a safe, supportive environment in which to review how you apply your knowledge, skills and experiences in the context of a variety of simulated environments:

- To experience an anaesthetic crisis in a controlled simulated environment.
- To rehearse emergency treatment algorithms for rare life-threatening events.
- To practice leadership skills in managing life-threatening anaesthetic emergencies in readiness for becoming the 'Anaesthetic Reg on-call'. In the coming months many of you will progress to CT3 posts and find yourself as the most senior anaesthetist in the building out-of-hours.
- Learn about your own behaviours and those of others during crisis situations.
- To reflect on your performance in crisis situations and help you feel more prepared for similar 'real life' clinical encounters.
- To have an enjoyable & productive learning experience.

What to expect on the day

It is important to remember the focus of the day is **not an assessment**; it is an educational opportunity to practice managing obstetric anaesthetic complications.

At registration you may be invited to complete a pre-course questionnaire. This will be followed by an introduction to the faculty and fellow delegates. Before the scenarios commence, a familiarisation session will be conducted, during which you will be orientated to the environment in which you will be learning including a 'meet the manikin' session, and be given the opportunity to clarify any queries about the course, the equipment and other resources available to you on the day. The rest of the day is divided into a series of scenarios followed by focused debriefs.



For more information on how the courses are run at East Kent, you can also experience A Day in Simulation – A video tour of the William Harvey Simulation Department.

Course Information

Objectives and What to Expect

During the debriefs you will be asked to contribute to the discussions based on your experiences as the active participant, your observations of the scenario, or drawing from your involvement in similar situations at work. These discussions typically lead to the following outcomes:

- Identification of individual, team and organisational factors that can influence effective management of obstetric patients.
- Recognition of observed examples of good practice whilst also highlighting topics that are identified as requiring development.
- Discussion of your experiences of clinical practice where patient outcome and safe (or best) practice have been influenced by examples (good and bad) of team leadership, team working, effective communication and listening.

*As a department we are actively involved in simulation faculty training, forming part of the HEEKSS endorsed TeachSim Faculty collaborative (**https://www.medisimulation.org/teachsim-faculty**). We strive to adhere to simulation standards as set out by The Association of Simulated Practice in Healthcare (ASPiH) which states that all debriefers should be trained in the art of debriefing (**https://aspih.org.uk/standards-framework-for-sbe/**). As such, all debriefs will be facilitated by trained faculty, with 'novice' debriefers actively supported by more experienced individuals to ensure delegates have a valuable learning encounter.*

We use AV equipment (SMOTs cameras) in our department for the purposes of live-streaming simulation footage to the observation rooms. Scenario footage is captured, although the continuous loop recording means this footage eventually gets over-written. With your written consent only, these videos may be archived for faculty and course development purposes. The simulation team would approach you to gain your written consent in this instance.

You will be asked at the start and end of the session for course feedback. Please ensure you complete this honestly; This will help improve our course in order to meet the needs of our delegates.

Below are links to our high fidelity manikins that may be used for your simulation:

CAE Lucina
https://www.caehealthcare.com/solutions/brands/cae-lucina/

A Guide to Simulation

Overview

Simulation-based education (SBE) is a 'technique' now commonly integrated into both undergraduate and postgraduate healthcare curriculums. As a teaching strategy, simulation attempts to contextualise learning by recreating situations that learners would recognise as familiar in their clinical practice. It has been cited as an essential methodology in which to facilitate 'mastery' through deliberate practice, whilst providing guaranteed exposure to new or rare clinical events within a risk-free learning environment (Hellaby, 2013; Harden and Laidlaw, 2012). Reime *et al*. (2017) claim that simulation is a far superior teaching strategy in comparison to traditional apprentice-style approaches due to the ability to experience, reflect and discuss events in a safe and timely manner.

SBE is comprised of two essential elements; the simulated scenario and the facilitated debrief. In the debrief, experienced simulation facilitators will guide the learners to reflect on events. New ideas and behaviors subsequently generated through these discussions can be explored as a group.

Simulation is fundamentally an active learning technique, although clearly all delegates cannot actively participate in every simulated clinical scenario during a course. Conventionally, participation in scenarios was deemed important for learning, however a review by Issenberg *et al*. (2005) suggests engagement with the debrief process is actually the most crucial aspect of the simulation process.

Research is underway to determine whether people can learn vicariously in simulation. Mayes (2015) defines vicarious learning as "learning through observing others specifically in the act of learning", which concurs with Banduras social learning theory (1971) where he claims that learning attained through *direct experiences* could equally be learnt through *secondary experiences* or 'observation'. With this in mind, delegates in observer roles during a simulated scenario are requested to pay full attention to the events that unfold as they will be encouraged to contribute to the facilitated debriefs that take place afterwards. The virtual experience of *imagining* what you would do if in the same situation as the active participant can still evoke reflection and subsequent learning.

Although the observer role is sometimes misconstrued as a 'passive role', close observation of simulation scenarios can also allow delegates to focus on the situation from a broader perspective and appreciate 'non-technical skills' in action. Equally, the observer role can offer the opportunity for delegates to provide valuable peer-feedback and develop professional communication skills during debriefs.

Bandura, A. (1971) Social Learning Theory. New York: General Learning Press.

Harden, R and Laidlaw, J. (2012) Essential Skills for a Medical Teacher, London: Elsevier Churchill Livingstone.

Hellaby, M. (2013) Healthcare Simulation in Practice, Keswick: M&K Publishing.

Issenberg, S., McGaghie, W., Petrusa, E., Gordon, D. and Scalese, R. (2005) 'Features and uses of high-fidelity medical simulations that lead to effective learning: a BEME systematic review', Medical Teacher, 27. pp 10–28. Taylor&Francis [Online].

Mayes, J (2015) 'Still to learn from vicarious learning', E-learning and Digital Media, 12, 3-4. pp. 361-371. Sage [Online].

Reime, M., Johnsgaard, T., Kvam, F., Aarflot, M., Engeberg, J., Breivik, M. and Brattebø, G. (2017) 'Learning by viewing versus learning by doing: A comparative study of observer and participant experiences during an interprofessional simulation training', Journal of Interprofessional Care, 31, 1. pp. 51-58. Taylor&Francis [Online].

Simulation Etiquette

For Faculty and candidates

Confidentiality within simulation is vitally important. As we have eluded to already, your simulation encounter is not an assessment. The 'patients' you meet on the day will be 'manikins', therefore no real patients will come to any harm if you make a mistake, do not correctly identify the diagnosis or do not know how to manage the situation with which you are faced. The most important aspect of each learning encounter is the facilitated debrief afterwards where we can explore issues or events as a group and decide on the appropriate actions should you go on to experience a similar situation in a real clinical encounter.

To ensure we create the correct learning environment as outlined above, we do not report back to educational supervisors or mentors and we will not provide written feedback. Delegates performance during simulated scenarios, the discussions that take place in the debriefs and any questions that are asked remain confidential between the faculty and the delegates attending the session. The main focus of the faculty is to support delegates learning and help them reflect on their experience rather than to pass judgement on performance.

We strive to create an immersive clinical environment to increase the realism of the scenarios. To gain the most from your simulation experience, we ask that you try to immerse yourself in the scenario, take the situation seriously and treat the manikin like you would any patient (e.g. introduce yourself, gain consent before procedures etc.).

We aim to run our scenarios in 'real time' as much as the situation will allow, therefore there may be a wait before you are presented with investigation results. Please try not to ad-lib; if you are unsure whether you should do something, please ask the faculty. You will always have a faculty member playing a confederate role in your scenario (e.g. nurse, AHP, doctor etc.) therefore you will not be left alone to figure things out on your own. There are limitations to what some manikins are able to provide with regards to clinical examination. Please examine your patient fully and the faculty will subsequently provide any additional information you may require (e.g. CRT, temperature, signs of pallor or rash, distention or guarding, percussion notes etc.).

Most importantly, be yourself! We would not expect you to pretend to be someone you are not. On the day of your simulation you will be informed how best to escalate concerns and call for senior help should it be necessary.

Please do not worry about the simulations. You will have the opportunity to actively participate in a *minimum* of one clinical scenario during the course, but you may be working alongside other delegates of different professions as well a faculty that may play a range of confederate roles. This will enable us to observe team dynamics, communication skills and task delegation.

As we utilize the same scenarios for each course, would appreciate if you **do not** divulge information about the content of the scenarios to colleagues.

Further Reading

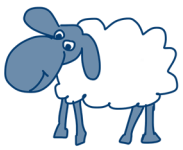
Human Factors & Non-Technical Skills

We all come to work keen to do our job to the best of our ability; no one intentionally means to make a mistake. However, up to one in ten patients will sustain harm owing to an error in their care (Great Britain. Department of Health, 2006) and reportedly there are 230 avoidable hospital deaths per week (CHFG, 2022).

Aviation has led in the scientific discipline of Ergonomics & Human Factors for many years through rigorous training and education due to it being recognized as a safety critical industry. Healthcare become acutely aware of its importance upon the creation of the *Clinical Human Factors Group* in 2007; a charity set-up by Martin Bromiley (OBE) after the death of his wife during a routine operation in 2005. 'Human Factors' are described as the non-technical or 'soft skills' that encircle clinical knowledge and expertise (Rosenorn-Lanng, 2014). These include teamworking, communication and situational awareness, all of which can be observed and enhanced through SBE. By better understanding personal behaviors, our interactions with other people and our working environment, we can attempt to mitigate errors by optimizing our performance in healthcare (National Quality Board, 2013). For those interested in the CHFG charity and the story of Elaine that precipitated its creation, more information can be found at https://chfg.org/

There are numerous systems or mnemonics for Human Factors to help remember the various subdivisions or categories within which we break down this complex subject. Some examples include:

Systems
Human interactions
Equipment
Environment
Personal
(Rosenorn-Lanng, 2014)



Software
Hardware
Environment
Liveware
(Hawkins & Orlady, 1993)

Gordon Dupont is attributed as first describing the *Dirty Dozen*; a collection of pre-conditions that can subsequently lead to accidents/incidents through human error (as cited by Dupont-Adam, 2021). Initially described for aviation, it can be transferred to healthcare.

Lack of communication
Distraction
Lack of resources
Stress
Complacency
Lack of teamwork
Pressure
Lack of awareness
Lack of knowledge
Fatigue
Lack of assertiveness
Norms

Clinical Human Factors Group(2022) Available at: https://chfg.org/

Dupont-Adam, R. (2021) *Let'sTalk Human Factors – Origin of the Dirty Dozen*. Available at: https://aviationsafetyblog.asms-pro.com/blog/lets-talk-human-factors-origin-of-dirty-dozen

Great Britain. Department of Health (2006) *Good Doctors, Safer Patients*

Hawkins, F.H., & Orlady, H.W. (Ed.). (1993) *Human factors in flight* (2nd ed.). England: Avebury Technical

Rosenorn-Lanng, D. (2014) *Human Factors in Healthcare, Level 1.* Oxford: Oxford University Press

Further Reading

Links & Apps

For those of you that may like to do some further preparation prior to attending the course, scenarios may include (but are not limited to) the following:

- Massive blood loss
- Complications from drug administration
- Anaphylaxis
- Hypertensive disorders of pregnancy
- Maternal collapse
- Sepsis
- Difficult airway management
- Communication failure

We recommend you familiarize yourself with the up-to-date Obstetric Difficult Airway Society guidelines: https://das.uk.com/guidelines/obstetric_airway_guidelines_2015

You may also wish to refer to the Anaesthetic Quick Reference Handbook (QRH): https://anaesthetists.org/Home/Resources-publications/Safety-alerts/Anaesthesia-emergencies/Quick-Reference-Handbook

And the Obstetric specific Quick Reference Handbook: https://www.oaa-anaes.ac.uk/oaa-quick-reference-handbook/qrh

You may also find it useful to look at the RCOG Green Top Guidelines: https://www.rcog.org.uk/guidance/browse-all-guidance/green-top-guidelines/

And National Guidelines available on the Obstetric Anaesthetists Association (OAA) website: https://www.oaa-anaes.ac.uk/Clinical_Guideline

We hope you have found this pre-course handbook useful.

Should you have any questions prior to attending your simulation course please contact us at

ekhuft.simulation@nhs.net

We look forward to meeting you on the day of your course!

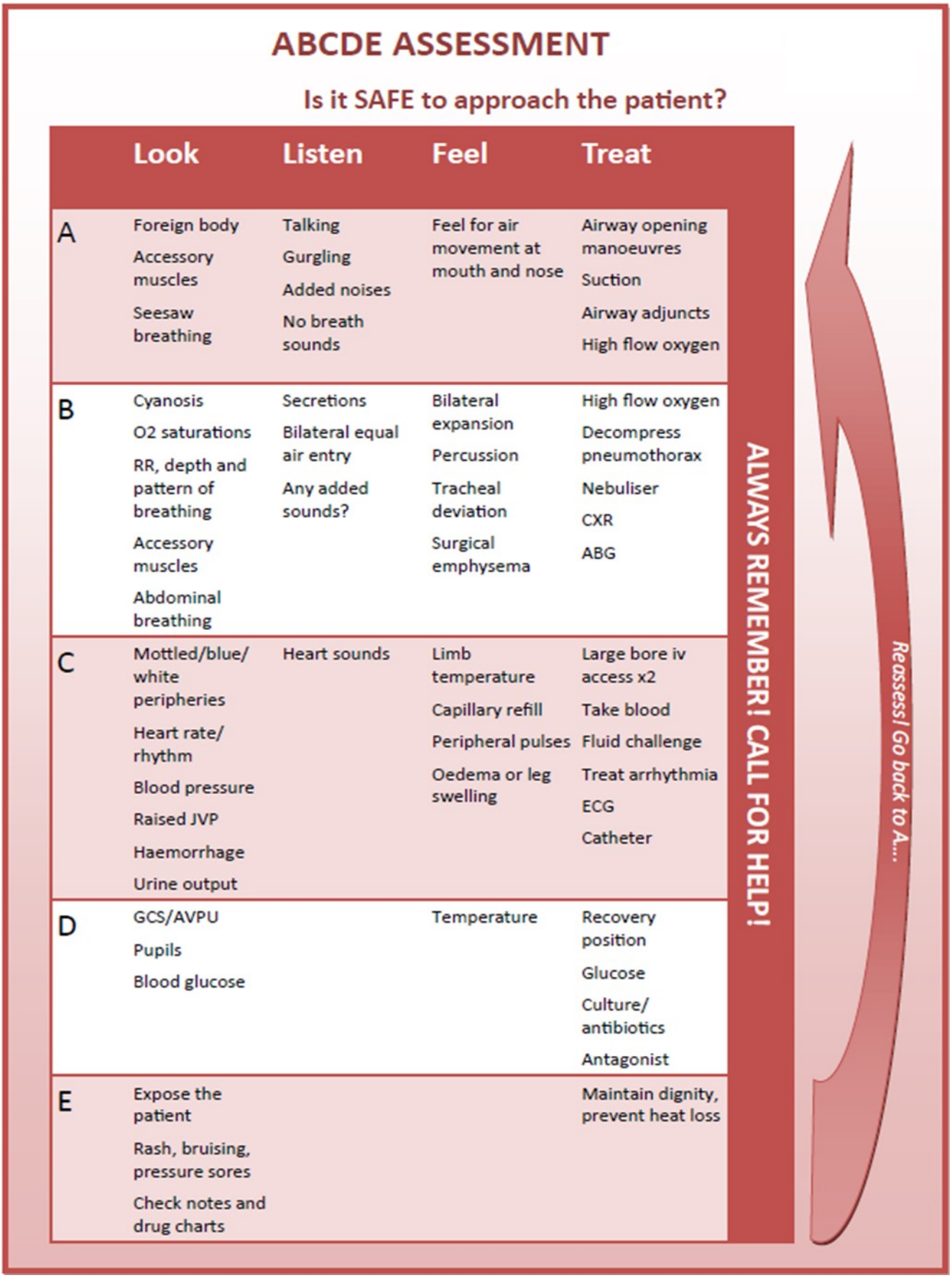
Kind regards

@eastkentsim

The EKHUFT Simulation Team

Appendices

A-E Approach



ABCDE ASSESSMENT

Is it SAFE to approach the patient?

	Look	Listen	Feel	Treat
A	Foreign body Accessory muscles Seesaw breathing	Talking Gurgling Added noises No breath sounds	Feel for air movement at mouth and nose	Airway opening manoeuvres Suction Airway adjuncts High flow oxygen
B	Cyanosis O2 saturations RR, depth and pattern of breathing Accessory muscles Abdominal breathing	Secretions Bilateral equal air entry Any added sounds?	Bilateral expansion Percussion Tracheal deviation Surgical emphysema	High flow oxygen Decompress pneumothorax Nebuliser CXR ABG
C	Mottled/blue/ white peripheries Heart rate/ rhythm Blood pressure Raised JVP Haemorrhage Urine output	Heart sounds	Limb temperature Capillary refill Peripheral pulses Oedema or leg swelling	Large bore iv access x2 Take blood Fluid challenge Treat arrhythmia ECG Catheter
D	GCS/AVPU Pupils Blood glucose		Temperature	Recovery position Glucose Culture/ antibiotics Antagonist
E	Expose the patient Rash, bruising, pressure sores Check notes and drug charts			Maintain dignity, prevent heat loss

ALWAYS REMEMBER! CALL FOR HELP!

Reassess! Go back to A....

We have also included a version of the A-E assessment approach produced by Dr Katie O'Rourke that you may wish to refer to before attending the course.

Appendices

Handover

I	Identify- Identify self name, position, location and who you are talking to Identify patient name, age, sex, location	
S	Situation- State purpose "The reason I am calling is ....."	
	If urgent–say so	eg "This is urgent because the patient is unstable with a BP of 90."
B	Background- Tell the story current problem	
	Relevant history Relevant examination Relevant test results Management	If urgent: Relevant vital signs Current management
A	Assessment- State what you think is going on	
	eg "So the patient is febrile and I can't find a source of infection"	Urgent eg "The patient seems to be deteriorating, I think they may be bleeding"
R	Request- State request	
	eg "I'd like your opinion on the most appropriate test"	eg "I need help urgently, are you able to come?"

The ISBAR communication tool originated in the US Navy for use on nuclear submarines. It has also been used in the airline industry. As it assists the transfer of important information in a limited time, ISBAR has been adopted by many healthcare organisations across the world.