

The student guide to simulation

The following guide will introduce you to what the simulators can do

But firstly a few words on communication

Please verbally and non-verbally communicate with the simulator as if it were a real patient

The patient may speak through the facilitator (not to be confused with a séance!)

Use the available clinical record sheets to document the patient's status and your interventions

You can use a phone to call for senior help

Airway and Respiratory System - Simulator



- Air can pass out of the models mouth with each exhalation
- There are audible breathing sounds from the mouth
- The tongue can swell up
- May get laryngospasm
- The left and right bronchi can become obstructed
- Endotracheal intubation is possible
- Chest excursion (independent left and right movement)
- The respiratory rate can change
- Left and right breath sounds can be auscultated with a stethoscope

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Airway and Respiratory System – What you can do



- Talk to the patient
- Use a jaw thrust or head tilt and chin lift
- Protect the airway with an oropharyngeal or nasopharyngeal airway
- Use a bag/valve/mask to ventilate
- Place a laryngeal mask airway or an endotracheal tube
- Listen to the breath sounds (blue dots)
- Counting respirations
- Look for symmetrical chest movements



- JVP reading
- Use of accessory muscles
- Presence of scars, engorged veins
- Presence of peripheral and central cyanosis

Cardiovascular System – Simulator



- The heart sounds are synchronized with the cardiac cycle and can be auscultated with a stethoscope
- The patient's ECG can be displayed on the monitor when the leads are applied
- The monitor can also display the following; central venous pressure, temperature, blood pressure and oxygen saturation
- The ECG rhythm will change depending on the patient's condition
- The physiology will respond appropriately to external pacing

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Cardiovascular System – Simulator



Pulses

The following pulses can be palpated; bilateral carotid, brachial, radial, femoral, popliteal and pedal

The pulses are synchronized to physiology of circulation and chest compressions

The pulse is dependant on BP and anatomical position on patient mannequin

Cardiovascular System – What you can do



Take blood pressure manually
Korotkoff sounds can be auscultated with a stethoscope

Take blood pressure electronically
The blood pressure can be displayed on the monitor once the blood pressure cuff is placed on the patient arm

- Ask for non-invasive blood pressure to be taken on the 5-10 or 15 minutes cycles
- Ask for invasive monitoring if appropriate
- Defibrillate (we don't expect you to use real electricity)
- Monitor the patients heart rhythm
- Carry out chest compressions
- Use the right arm to administer drugs and fluids intravenously, you can also administer subcutaneous or intramuscular injections
- Take the patients pulse



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Cardiovascular System – Ask facilitator



Order a 12 lead ECG

Capillary refill time

Patient pallor

Other body Systems



Neurological

The eyes can blink

The pupil sizes are changeable (but they will not respond to your pen torch)



Genitourinary

Simulator

The model can be catheterized (male and female parts)

You can

You can observe the hourly output
(If already catheterized)

Check for PV bleeding or urinary incontinence

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Other body Systems



Gastrointestinal

Simulator

There are audible bowel sounds which, depending on the scenario may or may not be present

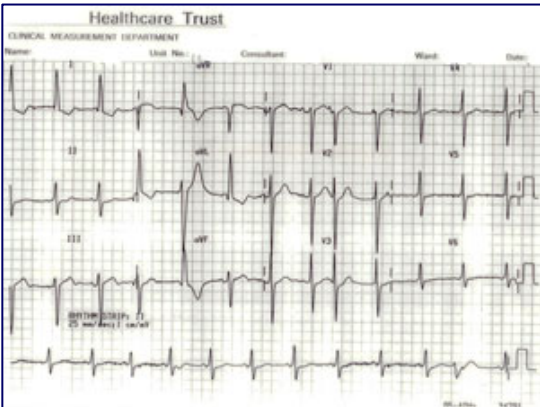
You can

Check for pr bleeding or fecal incontinence
Listen for bowel sounds

Ask the facilitator

If the abdomen is soft
If the patient is guarding
If the patient is distended

Investigations



You can Order

- blood tests
- x-rays
- ECGs

Documentation



All events, assessments and interventions can be documented in the blue folder provided

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Environment



You will be orientated to the environment on the day

Moving the simulator

You can roll the simulator onto his side

You will not be expected to sit him up but tell the facilitator if it is what you would like to do

Equipment:

Crash trolley

Variation of O2 masks

BNF and various drugs

Before you come / preparation



How systematic is your patient assessment?

How fluent are you at carrying out an ABCDE approach?

What makes good teamwork?

You may find it helpful to revise patient assessment before taking part in the simulation

During the session

Treat it as a real life scenario

Call for time out if you need equipment or discussion

It is ok to make mistakes

You will not be expected to act beyond your scope of practice

You can ask for senior help at any time

All simulations will be followed by a debrief

Relax and enjoy the experience

For questions or to arrange a visit to the manikins:

Contact Cherry: c.buckwell@qmul.ac.uk