

Procedure OSCEs

Procedure – Urinary Retention

History: 72 year old man with blocked indwelling catheter, now removed. Unable to pass urine for two days

Task: Catheter insertion (urinary)

Marking Criteria

Identifies correct patient

Explains procedure

Offers analgesia

Assembles equipment

Sterile technique

Uses double glove technique

Lies patient supine

Cleans meatus and foreskin

Everts foreskin

Removes outer glove

Prepares catheter (checks balloon capacity)

Holds penis in left hand

Injects lidocaine gel into meatus

Inserts catheter to hilt

Awaits urine outflow before inflating balloon

Retracts catheter

Attaches to catheter bag

Replaces foreskin

Global Scores

Procedure - Femoral nerve block

History: 35 year old male with closed mid-shaft femur fracture.

Tasks: talk with patient and perform nerve block on mannequin.

Marking Criteria

Approaches the patient and explains situation

Explains purpose of nerve block

Asks about allergies

Ensures verbal consent

Prepares sterile field

Assembles appropriate equipment

Cleans skin

Uses appropriate size needle 22G Takes 10ml 0.5% bupivacaine

Mentions ultrasounds guidance (not on exam sheet but should be)

Palpates femoral artery

Identifies landmark lateral to artery

May raise wheal of LA

Aspirates

Injects slowly

Asks patient to identify in paraesthesia or other symptoms

Checks patient comfortable throughout

Maintains sterile field

Disposes of sharp

Indicates will wait for 15 minutes

Global scores

Washed hands & alcohol gel & gloves
Introduced self
Obtains verbal consent
Checks identity of patient
Checks X-ray
Identifies correct side
Explains indication & reason
Explains Complications, not adequate block, iv injection of anaesthetic

Checks patients weight
Checks allergy status
Checks distal pulse and sensation prior to procedure
Betadine to skin
Locates landmarks (lateral to artery)
Bleb to skin
Injects in 10 mls in sheath
Further 10 ml in fan shape over femoral nerve
Sterile dressing
Rechecks comfort of patient
Any Questions
Thanks patient

Procedure - suturing

History: A 25 year old man presents with a 4cm wound to his thigh after slipping with a Stanley knife

Task: suture this mans wound

Marking criteria

Candidate explains procedure

Candidate gains verbal consent

Assemble and checks equipment

Selects suitable suture

Checks effect of local anaesthetic

Indicated need to wash hands

Maintains a sterile field and technique

Cleans wound appropriately

Loads needle holder correctly

Uses forceps appropriately

Insert suture in the correct place

Pulls threat through with instrument

Ties knot appropriately with instrument or hands

Cuts ends at appropriate length

Avoids actions that are dangerous or likely to lead to needle stick injury

Cleans wound and indicates need for dressing

Disposes of sharp

Achieves adequate suture

Manages more than one suture in the time allowed

Checks for tetanus status

Gives advice over keeping clean and dry/ signs of infection/removal of sutures

Global scores

Procedure - Paediatric resuscitation

History: You are asked to see a 4 year old boy with breathing difficulties.

Task: Assess and treat

Marking Criteria

Briefly checks history (while assessing)

Briefly checks competency of nurses present (while assessing)

Confirms child not responding

Asks for paediatric Crash Team

Asks for monitoring (ECG, Pulse OX, NIBP)

Assess breathing by look, listen and feel

Attempts rescue breaths (unable to ventilate)

Repositions airway

Inspects airway

Remove grape

Suction

Ventilates child – up to 5 breaths – good chest movement

Assesses pulse

Continues to ventilate at 20 per min

Asks for signs of improvement

Suggest admission for observation

Global scores

Procedure – paediatric resuscitation

History: A 4 year old female is brought in by ambulance fitting for fifteen minutes.

Task: assess and treat

Marking Criteria

Briefly checks history (while assessing)

Briefly determines staff present (while assessing)

Confirms child fitting

Asks for paediatric crash team

Establishes airway patency (manoeuvres, oral/nasal airway or ET tube)

Gives high flow oxygen

Asks for monitoring (ECG, Pulse OX, NIBP)

Assesses breathing by look, listen, feel

Requests or provides assisted ventilation

Assess pulse and cap. refill

Gives buccal midazolam

Attempts IV access

Commences chest compressions once pulse <60bpm

Follows ALS algorithm

Follows Status epilepticus algorithm

Gives hand over in concise and sequential order

Global score

Procedure – Major trauma

History: You are asked to a 27 year old male who has sustained a gunshot wound to his left chest.

Task: Assess and treat

Marking Criteria

Makes sure the trauma team is notified

Introduces self and identifies members of present team

Asks nurse to apply full monitoring (HR, BP, sats, RR)

Asks for vital signs P 120, BP 90/70, RR 30

Performs an assessment of airway – patient speaking

Performs an assessment of breathing – identifies wound to left chest axilla

If asks told decreased breath sounds on left

If asks told hyperresonance on left

If asks told dull to percussion lower lungs

Checks trachea is midline

Asks for high flow oxygen via non-rebreather mask

Request erect chest x-ray (urgently)

Checks circulation BP 80/60, HR 120/min

Asks for 2 large bore cannula and bloods for cross match (6 units)

Gives warmed IV fluids, checks for response

CXR done – shows white out on left side

Chest drain insertion, correct site

Adequate procedure

Asks for volume of blood – gush of 1000ml

Maintain sterility/safety

Does above in logical way

Reassesses ABC after chest drain insertion

Recognizes need for urgent blood and theatre – calls for surgical registrar if not in resuscitation room

Indicates need for completion of primary survey including logroll

Global scores

Procedure – Femoral vein access

History: 36 year old male presents with burns to his upper torso and upper limbs. He has no airway compromise and a GCS of 15. The SHO is unable to get venous access.

Task: Calculate his fluid requirements and demonstrate femoral vein cannulation

Marking criteria:

Introduces self

Requests information about ABC

Offers analgesia

Calculates TBS burned and fluid requirements

Washes hands

Examines abdomen and pelvis

Explains procedure to patient

Obtains verbal consent

Checks and assembles equipment

Establishes and maintains sterile field

Identifies correct land marks

Uses local anaesthetic

Demonstrates competent insertion of femoral cannula

Identifies need to suture cannula

Takes appropriate bloods

Offers intravenous analgesia

Commences fluid resuscitation

Global score

Procedure – ALS

History:

Task:

Marking criteria

SAFE approach

Introduces self and identifies members of present team

Shake and shout

Opens airway

Assess breathing and circulation

Calls for crash team

Briefly checks history (while assessing)

Starts CPR 30:2

Attaches defibrillator

Confirms VF arrest

Applies gel pads

Asks for oxygen to be moved away

Delivers one shock at 360 J of biphasic equivalent

Safe defibrillation

CPR two minutes

IV access, bloods taken

Confirms VF delivers second shock at 360J safely

CPR two minutes

Adrenaline 1mg

Rhythm change, continues CPR to end of 2 minutes then checks for pulse

Confirms PEA CPR for 2 minutes

Pulse check at end of 2 minutes, pulse present

Asks for full monitoring (pulse, NIBP, pulse OX, RR)

Supports ventilations

Post arrest investigations

AVPU (U)

ITU admission

Considers therapeutic hypothermia

Global score

Procedure - unstable SVT

History: You are asked to see a 68 year old patient who is in the resuscitation room with a history of palpitations.

Task: Brief history, examine and treat

Marking criteria

Introduction and identifies nurse

Washes hands

Approaches patient using verbal and physical contact (shake/shout)

Asks nurse to apply full monitoring (HR, NIBP, oxygen sats, RR)

Takes brief history while assessing (chest pain, sweaty, dizzy, SOB)

Assess airway and breathing applies high flow oxygen

Assesses circulation (fast weak thready pulse, prolonged cap refill, cold extremities)

Asks for vital signs HR 205, BPs 78, Sats 84%, RR 34

Assesses disability AVPU (V)

Identifies rhythm Narrow complex tachycardia

Identifies adverse signs (HR >200, chest pain, CCF, hypotension)

Identifies need for immediate synchronised DC shock

Gives analgesia/sedation

Applies gel pads

Removes oxygen

Safely delivers synchronised shock

Selects correct energy

Identifies need for further investigations 12 lead ECG, CXR

Identifies need for CCU admission

Global score

Procedure - Aspiration of Knee

Instruction: Rugby player twisted in a tackle and developed immediate swelling to the right knee, now very painful to weight bear or move.

	Adequate	Inadequate/ Not Observed
Initial approach, introduces themselves and explains what he/she will be doing.		
Establish key aspects of the history. (Should not use too much time up).		
Requests the presence of a chaperone (If appropriate)		
Patient undressed to expose both legs to underwear		
Examines knee briefly and confirms haemarthrosis		
Performs X-ray of knee to rule out fracture		
Explains findings to patients and gains consent (written). Complications are continued haemorrhage, pain, infection.		
Prepares equipment		
Washes hands and dons a gown		
Prepares and gowns patients knee		
Introduces local to supra-lateral border of patella		
Introduces green needle attached to a 20 ml syringe to supra-lateral border of patella		
Aspirates fluid, disconnects syringe and places sample in a culture bottle. Reattaches syringe		
Milks the sulci to achieve full aspiration		
Removes needle and syringe and applies pressure to aspiration site for 5 minutes. Dressing applied thereafter		
Reassessment of knee movements		
Provides summation of findings		
Management plan including investigation and treatment		
Global Score		
Global Score from Role Player		

Procedure - Needle Cricothyroidotomy

Instruction: Young male presents very swollen face and tongue and cannot breath. Unable to open mouth and becoming very distressed and cyanosed

	Adequate	Inadequate/ Not Observed
Initial approach, introduces themselves and explains what he/she will be doing.		
Assemble and prepare oxygen tubing by cutting a hole toward one end of the tubing. Connect the other end of the oxygen tubing to an oxygen source and assure free flow of oxygen through the tubing		
Place the patient in a supine position		
Assemble a 12- or 14-gauge cannula to a 10 ml syringe		
Surgically prepare the neck, using swabs		
Palpate the cricothyroid membrane between the thyroid cartilage and the cricoid cartilage. Stabilize the trachea with thumb and forefinger of one hand to prevent lateral movement of the trachea		
Puncture the skin in the midline with prepared cannula and syringe(c), directly over the cricothyroid membrane		
Direct the needle at 45° angle caudally, while applying negative pressure to the syringe		
Carefully insert the needle through the lower half of the cricothyroid membrane, aspirating as the needle is advanced		
Remove the syringe and withdraw the stylet while gently advancing the cannula downward into position, being careful not to perforate the posterior wall of the trachea		
Attach the oxygen tubing to the cannula and secure in place and provide intermittent ventilation can be achieved by occluding the open hole cut into the oxygen tubing with your thumb for 1 second and releasing for 4 seconds		
Able to state complications of Needle Cricothyroidotomy: <ol style="list-style-type: none"> 1. Inadequate ventilations leading to hypoxia and death 2. Aspiration (blood) 3. Oesophageal laceration 4. Haematoma 5. Posterior tracheal wall perforation 6. Subcutaneous and/or mediastinal emphysema 7. Thyroid perforation 		
Management plan including investigation and treatment		
Global Score		
Global Score from Role Player		

Procedure - Removal of a retained condom

Instruction: 21 year female presents concerned she may have a retained condom in her vagina

	Adequate	Inadequate/ Not Observed
Initial approach, introduces themselves and explains what he/she will be doing.		
Establish key aspects of the history. (Should not use too much time up).		
Requests the presence of a chaperone		
Patient undressed by nurse with removal of underwear		
Ensure examination takes place in a private cubicle. Ideally behind a closed door and not curtains.		
Patient placed supine with heels together and legs abducted		
Introduce a warmed and lubricated speculum		
Ensure adequate light source to visualise condom and remove with a pair of forceps		
Remove speculum carefully		
Allow patient to return legs to a comfortable position and cover with a sheet/blanket		
Enquire about the need for post coital contraception		
Discuss the need for referral to GUM ? STD		
Global Score		
Global Score from Role Player		

OSCE Station- Surgical Cricothyroidotomy

Instruction: Young male presents very swollen face and tongue and cannot breath. Unable to open mouth and becoming very distressed and cyanosed

	Adequate	Inadequate/ Not Observed
Initial approach, introduces themselves and explains what he/she will be doing.		
Place the patient in a supine position with the neck in the neutral position. Palpate the thyroid notch, cricothyroid interval for location of the cricothyroid membrane		
Surgically prepare and anaesthetise the area if the patient is conscious		
Stabilise the thyroid cartilage with the left and make a transverse skin incision over the cricothyroid membrane and carefully incise through the membrane		
Insert the scalpel handle into the incision and rotate it 90o to open the airway		
Insert a cuffed endotracheal tube or tracheostomy tube in to the cricothyroid membrane incision, directing the tube distally into the trachea		
Inflate the cuff and ventilate the patient		
Observe lung inflations and auscultate the chest for adequate ventilation		
Secure the endotracheal or tracheostomy tube to the patient to prevent dislodging		
Able to state complications of Surgical Cricothyroidotomy: 1. Aspiration (blood) 2. Creation of a false passage into the tissues 3. Subglottic stenosis or oedema 4. Laryngeal stenosis 5. Haemorrhage or haematoma formation 6. Laceration of the oesophagus 7. Laceration of the trachea 8. Mediastinal emphysema 9. Vocal cord paralysis, hoarseness		
Management plan including investigation and treatment		
Global Score		
Global Score from Role Player		

Procedure - Traction splints

Procedure – Choking

An 18 year old starts choking in the waiting room.

	Not done	Partially done	Completed
Washed hands, alcohol gel & gloves			
Introduced self			
Obtains verbal consent			
Encourages coughing			
Head down			
5 back slaps			
Checks mouth between slaps			
5 abdominal thrusts			
Correct landmarks & technique			
Checks mouth again			
Removes foreign body			
Give supplemental oxygen			
Listens to chest			
Arranges admission			

Procedure - Plaster application

A 70 year old lady has fallen and has sustained a distal radius fracture. The fracture does not need reduction. She has a haematoma block in situ. Apply a suitable back slab.

	Not done	Partially done	Completed
Washed hands, alcohol gel, gloves			
Suitable room			
Introduced self			
Check patient identity			
Obtains verbal consent & outline procedure			
Checks correct side			
Checks X-ray			
Ensures adequate analgesia before starts			
Applies Stockinette			
Applies Orthopaedic Wool			
Measures Plaster			
Suitable thickness & width			
Cuts to shape			
Uses water			
Applies plaster			
Bandages on cast			
Places in a sling			
Requests check X-ray			
Rechecks analgesia			
Any Questions?			
Thanks patient			

Procedure needle and surgical cricothyroidotomy

This patient has just arrived in Resus. He has taken an OD of unknown tablets with alcohol. He is unconscious and has noisy breathing. RR = 28.

- Wash hands / alcohol gel / gloves
- SAFE approach
- Initial assessment – shake and shout

- Open mouth +/- suction
- Assess breathing (10 seconds)
- Oxygen
- Airway opening techniques – head tilt / chin lift, jaw thrust

- **Airway adjuncts:**
- OP – sizing, insertion, reassess patient
- NPA – contraindications, sizing, insertion, reassess patient

- **Intubation:**
- Preoxygenation
- Check equipment
- Technique
- Check tube position / identify oesophageal intubation

- **Needle cricithyroidotomy:**
- Equipment
- Technique
- Insufflation technique
- Limitations / temporary measure

- **Surgical cricothyroidotomy:**
- Equipment
- Technique (transverse incision – ATLS)
- Checks position / reassess patient

Procedure – external pacing

Your SHO asks you to review Mr. Jones in resus. He is an 84 year old man who presented following a collapse at home. He is alert. BP 80/50. ECG shows complete heart block, ventricular rate 30 bpm. He has already had 3mg atropine with no effect on his ventricular rate...

- Wash hands / alcohol gel / gloves
- Introduce yourself
- Confirm identity of patient
- Consent
- Appropriate rapid initial assessment
- Ensures oxygen, IV access, ECG monitoring

- Explains external pacing to patient
- Consent – discomfort, potential failure, temporary measure
- Analgesia / sedation if required

- **External pacing:**
- A-P position ideally
- Demand mode
- Select pacing rate (60-90)
- Set current at lowest level
- Turn on pacemaker
- Increase current while observing patient and ECG
- Increase until electrical capture (typically 50-100 mA)
- Check for pulse (mechanical capture)
- Reassess patient comfort

- Ask for expert help (transvenous pacing)

- Explains plan to patient
- Reassures / thanks patient

Procedure – Saphenous cutdown

Perform a saphenous venous cutdown using the equipment provided.

- Wash hands / alcohol gel / gloves
- Introduce yourself to patient
- Confirm identity of patient
- Consent
- Rapid ABC assessment

- Explain procedure to patient
- Consent – complications: cellulites, haematoma, phlebitis, venous thrombosis, misplacement
- Contraindications – DVT, severe trauma ipsilateral lower limb, CABG using saphenous graft
- Allergy – local anaesthetic

- **Saphenous vein cutdown:**
- Identify site – 2cm anterior and superior to MM
- Prepare skin
- Local anaesthetic
- Incision
- Identify and dissect vein
- Ligate distal vein
- Pass a tie around proximal portion
- Transverse venotomy
- Introduce cannula
- Secure with proximal tie
- Attach IV line, ensure patent
- Close incision
- Sterile dressing

- Thank patient
- Explain you would continue to assess / re-assess patient

Procedure – DPL

Perform DPL on the manikin using the equipment provided.

- Wash hands / alcohol gel / gloves
- Introduce yourself
- Confirm identity of patient
- Consent
- Rapid ABC assessment

- Explain procedure to patient
- Consent – complications: injury to intra-abdominal structures, wound infection
- Contra-indications – absolute: pre-existing indication for laparotomy, relative: previous lower abdominal surgery, advanced cirrhosis, morbid obesity, coagulopathy
- Allergies – local anaesthetic

- **DPL (open technique):**
- NG tube / urinary catheter
- Identify site for incision: infraumbilical usually, supraumbilical if pelvic # or advanced pregnancy
- Prepare skin
- Local anaesthetic
- Vertical incision to fascia
- Elevate fascial edges and incise
- Insert peritoneal dialysis catheter
- Aspirate: gross blood = +ve DPL
- If no blood, instill 1 litre warmed N saline and gently agitate abdomen
- After few minutes, allow peritoneal fluid to drain (adequate amount >30%)
- Send samples to lab
- Positive test: +ve gram stain, >100,000 RBCs/mm, >500 WBCs/mm

- Close wound and dressing
- Thank patient
- Ensure comfortable
- Inform patient of result if available

Procedure IO needle insertion

A 3 year old girl comes into the ED with meningococcal sepsis. Mum is in the room. Airway and Breathing are being taken care of, but the team are unable to obtain iv access. Insert an intraosseus needle.

	Not done	Partially done	Completed
Washed hands & alcohol gel			
Introduced self to mum			
Check identity of patient			
Explains procedure to mum			
Indications			
Complications			
Contraindications (under 6 / ipsilateral #)			
Assembles equipment			
Correct positioning			
Identifies landmarks			
Correct technique and angle			
Takes blood samples (limitations)			
Flushes			
Secures in place			
Boluses fluid & antibiotics			
Reassures mum			

Procedure – needle cric

A 12 year old girl has had severe anaphylaxis with stridor and has a precarious airway. The anaesthetist says he is just managing to maintain it but she'll need a surgical airway. Perform a needle cricothyroidotomy. Mum is in the room.

	Not done	Partially done	Completed
Washed hands, alcohol gel & gloves			
Introduced self to mum and patient (unconscious)			
Explains procedure			
Obtains verbal consent			
Contraindications other airway, under 12			
Complications inadequate ventilation, aspiration, Oesophageal rupture, posterior perforation, haemorrhage, infection (3 of these)			
Correct positioning			
Antiseptic to neck			
Locates anatomy			
12g cannula with syringe with saline attached			
Aspirates as advances			
Angles 45 degrees downwards			
Attach 3-way tap and oxygen tubing			
Connects to 10 litres of oxygen (age in years)			
1 on, 4 off			
Recognises need for further procedure			
Correct position			
Vertical skin incision			
Transverse incision through membrane			
Dilate with scalpel handle			
Insert correct Shiley (smaller than ET)			
Secures with sutures			

Procedure – pericardiocentesis

A 27 year man has been stabbed in the upper chest and demonstrates signs of cardiac tamponade. Demonstrate the procedure of pericardiocentesis.

	Not done	Partially done	Completed
Washed hands, alcohol gel & gloves			
Introduced self			
Check identity of patient			
Obtains verbal consent			
Swift ABC reassessment			
Indications			
Complications (miss, ventricular puncture, vessel injury)			
Attach cardiac monitor			
Exposes Chest			
Assembles equipment 3 way tap, needle, syringe			
Betadine to skin			
Correctly identifies landmarks			
Aspirates as advances			
Withdraws blood			
Tests for clotting			
Reassesses patients ABC inc BP			
Leave drain in situ			
Refer cardiothoracics			

Procedure – primary survey

A 6 year old boy is coming in by ambulance with meningococcal septicaemia. You have 5 minutes before he arrives.

	Not done	Partially done	Completed
Washed hands, alcohol gel & gloves			
Call Paeds early			
Get together equipment for iv access			
WETFAG			
Checks Airway			
Gives Oxygen			
Checks breathing RR, Trachea, Expansion, Auscultation			
Puts on Sats probe			
Checks pulse & CRT (also BP)			
Attaches cardiac monitor			
2x iv access & bloods			
Gives fluid bolus			
Checks GCS, BM & pupils			
Takes Temp			
Strips off and looks for rash			
Gives antibiotics			
Gives another fluid bolus			
Hands over to Paeds Competently			

Procedure – Thomas splint

This 30 year old man has injured has sustained a fracture of his right femur.
 Demonstrate the application of a Thomas Splint.

	Not done	Partially done	Completed
Washed hands, alcohol gel & gloves			
Introduced self			
Check Identity of patient			
Check analgesia			
Obtains verbal consent			
Check X-ray before starting procedure			
Applies Skin extension strap			
Bandages in place leaving knee free.			
Measures circumference of upper thigh (+5cm)			
Measures correct size Thomas splint			
Places tubigrip + padding on splint (pinned in place)			
Place extra padding behind knee			
A flannel bandage over proximal and distal leg (Leaving knee free)			
Tie strings to frame			
Add extra traction by twisting strings			
Needs re-X-ray to check position			
Rechecks analgesia			
Thanks patient			

Chest Drain (placement, securing) (Not done)

A-line (setting up and waveform) (not done)

LP (not done)

Setting Up for Resus/RSI

Relocating dislocated shoulder