NHS
Royal Berkshire
NHS Foundation Trust

# Basic Priniciples of Intensive Care Nursing

Reading, 2020
Critical Care Outreach Team

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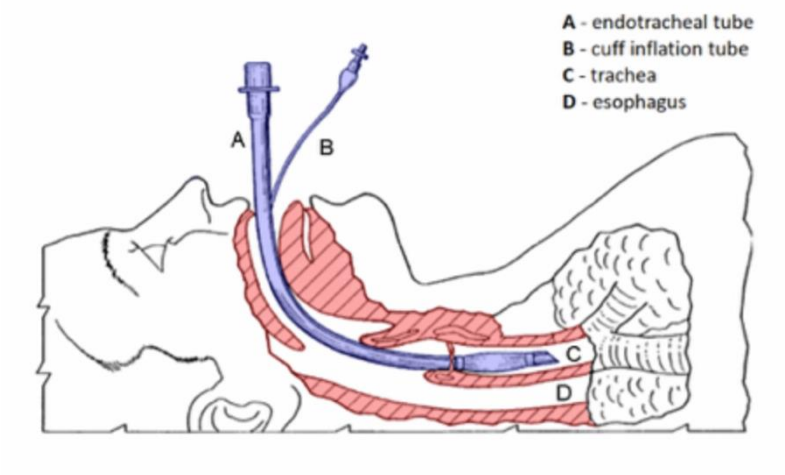
# Basic A-E assessment of the Intensive Care Patient

There are two different types of invasive airways your patient may have in place. An Endotracheal tube or a Tracheostomy. Endotracheal tube (ETT) and a Trachesotomy (Trache) are closed system airways used to deliver ventilation to the patient:

- Patients who require an ETT are usually in respiratory failure and unable to adequately breath for themselves or are unable to protect their airway due to other physiological disturbances.
- A Tracheostomy may be formed when patients are likely to have a prolonged period of mechanical ventilation. This will be a planned procedure.

Both airways sit in the trachea delivering air/02 directly to the lungs. Both tubes will have an inflatable cuff near the end of the tube providing the airway with both a seal, thus not allowing air to escape around it and some protection from aspiration of gastric contents into the lungs.

## Endotracheal tube




### Securing the tube:

The most important aspect of caring for an intubated patient is ensuring the ETT tube is secure. An unplanned extubation or misplaced tube can jeopardise patient safety. When checking the ETT tube first check that it is secure and tied appropriately with tapes or a device used in your Trust. Regularly check the tapes have not become loose. You should only be able to get two fingers between the tube ties and the patient. If there is excessive space between the two then you should re tie the tapes. Tying the tapes is a two person technique to prevent an accidental extubation, with one person holding the tube and one person tying the tapes. Avoid tying the tapes around the connector at the end of tube as this can become disconnected. Tube ties for both airways may vary between different Trusts, ensure you familiarise yourself with these.

**CALL FOR HELP,** If the tube becomes displaced at any time or you are worried.

### Size/length:

The size of the tube must be checked to ensure the correct size suction catheters are used for both ETT tubes. The size will be easily identified on the cuff balloon which each tube will have.

(These may differ between Trusts). You must also check the point at which the ETT is tied. ETT tubes are tied at the lips. The length of which will be clearly marked on the tube under the ties. The length of the tube is clearly marked in 1 cm increments. A standard ETT is approximate 26mm ling and for an average man it is usually tied at approx. 22cm at the teeth.

**CALL FOR HELP,** If the tube ties become loose at any point and you are worried or not sure how to tie them.

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## Cuff pressure

The cuff pressure of both the ETT must be checked every 4hrs. This can be done either via the ventilator or with a manual device. The cuff pressure must sit between 20-30cmH20. If the cuff is overinflated it will cause Tracheal pressure damage. If the cuff is under inflated air will escape and cause the ventilator to alarm and inadequate ventilation will occur. Usually you will hear a cuff leak. This sound may be described as a ‘gargling’ sound as air escapes over the vocal chords.

There are several causes for a cuff leak:

- inadequate air in the cuff;
- damage to the cuff;
- high ventilator pressures which exceed the pressure in the cuff;
- tube does not fit the anatomy;
- positional and leak appears on movement of patient.

**CALL FOR HELP,** If you are unable to resolve the issue by inflating or deflating the cuff if appropriate.

Ventilation refers to the movement of air in and out of the alveoli for gas exchange to occur.

Normal Physiology is Negative pressure ventilation:

- Physiology of spontaneous respiration requires energy to contract the muscles of respiration; the contraction on respiratory muscles enlarges the thoracic cavity, creases a negative intra thoracic pressure resulting in airflow from atmospheric pressure into the lungs;
- In effect the air is being sucked into the lungs;
- Mechanical ventilation is unable to mimic this;
- Positive pressure ventilation uses a pneumatic system for the delivery of gas into the lungs during inspiration. Expiration occurs passively during PPV, the patient exhales to the level of PEEP set on the ventilator (not to atmospheric pressure. Here air is being blown into the lungs instead of being sucked.

You are going to hear the term PEEP a lot. PEEP stands for positive end expiratory pressure; it is a set pressure on the ventilator that will improve oxygenation by recruiting collapsed alveoli. It is set above atmospheric pressure.

## Indications for Mechanical Ventilation

To make appropriate therapeutic decisions we need to differentiate what type of respiratory failure the patient has.

It is classed in:

- Type 1 or acute respiratory failure and;
- Type 2 respiratory failure or hypercapnic respiratory failure;
- Some patients will have a mixture of both.

## Type 1 Respiratory Failure:

Occurs when the level of arterial oxygen is <8 kPa, the oxygen saturations will reflect this and will drop significantly as the arterial oxygen decreases. This is called hypoxemia.

Your patient will be very short of breath, with rapid shallow breathing and is likely to anxious and/ or confused as your patients becomes more hypoxic that is tissues are deprived of insufficient oxygen. Type 1 RF occurs from conditions that affect gas exchange in the alveoli.

Some causes of this include:

- COVID-19 resulting in severe pneumonia, which is often bilateral, (in both lungs);
- This may result in a serve respiratory condition called Acute Respiratory Distress Syndrome (ARDS), put very simply the lungs become waterlogged like sponges;
- Pulmonary Embolism.

## Type 2 Respiratory Failure:

Occurs when there is a failure to meet respiratory demand, this can result in hypoventilation. The patient is unable to breathe in enough volume or they cannot breathe quickly enough.

As a result:

- Carbon dioxide will rise, and oxygen levels will fall;
- Type 2 RF is a $PaCO_2$ > 6.6 kPa (50mmHg) with pH of < 7.25;
- The pH falls as carbon dioxide makes the blood more acidic.

Causes of this are:

- Upper airway obstruction, epiglottis obstructive sleep apnoea, asthma, bronchospasm;
- Narcotics overdose Chest trauma, flail chest, pleural effusion, pneumothorax, haemothorax;
- CVA, Cranial bleed/trauma Guillain-Barre Syndrome, spinal cord injury.

## Respiratory Assessment and Physical Examination

**Put simply it is Look, Listen and Feel.**

Inspection: Look, what do you see?

Any obvious deformities?

Is there equal chest expansion?

Is there use of accessory muscles?

Assess your patients' rate rhythm and quality of respirations.

**Red Flags: paradoxical movement of the chest wall, not synchronizing with the ventilator that is the patient breaths might be stacked, the ventilator will alarm.**

Feel/Palpate

Can you feel both sides of the chest expand?

Can you feel vibrations? This may indicate respiratory secretions or fluid. You can confirm this by listening to the chest sounds…moving on to…breath sounds

Breath Sounds / Auscultation

Auscultation is the most important examination technique for assessing air flow throughout the lungs.

To auscultate for breath sounds, press the diaphragm side of the stethoscope firmly against the skin. If you listen through clothing the breath sounds will not be heard clearly.

A normal breath sound is said to be vesicular, that is it is soft and low pitched, inspiration last longer than expiration sound.

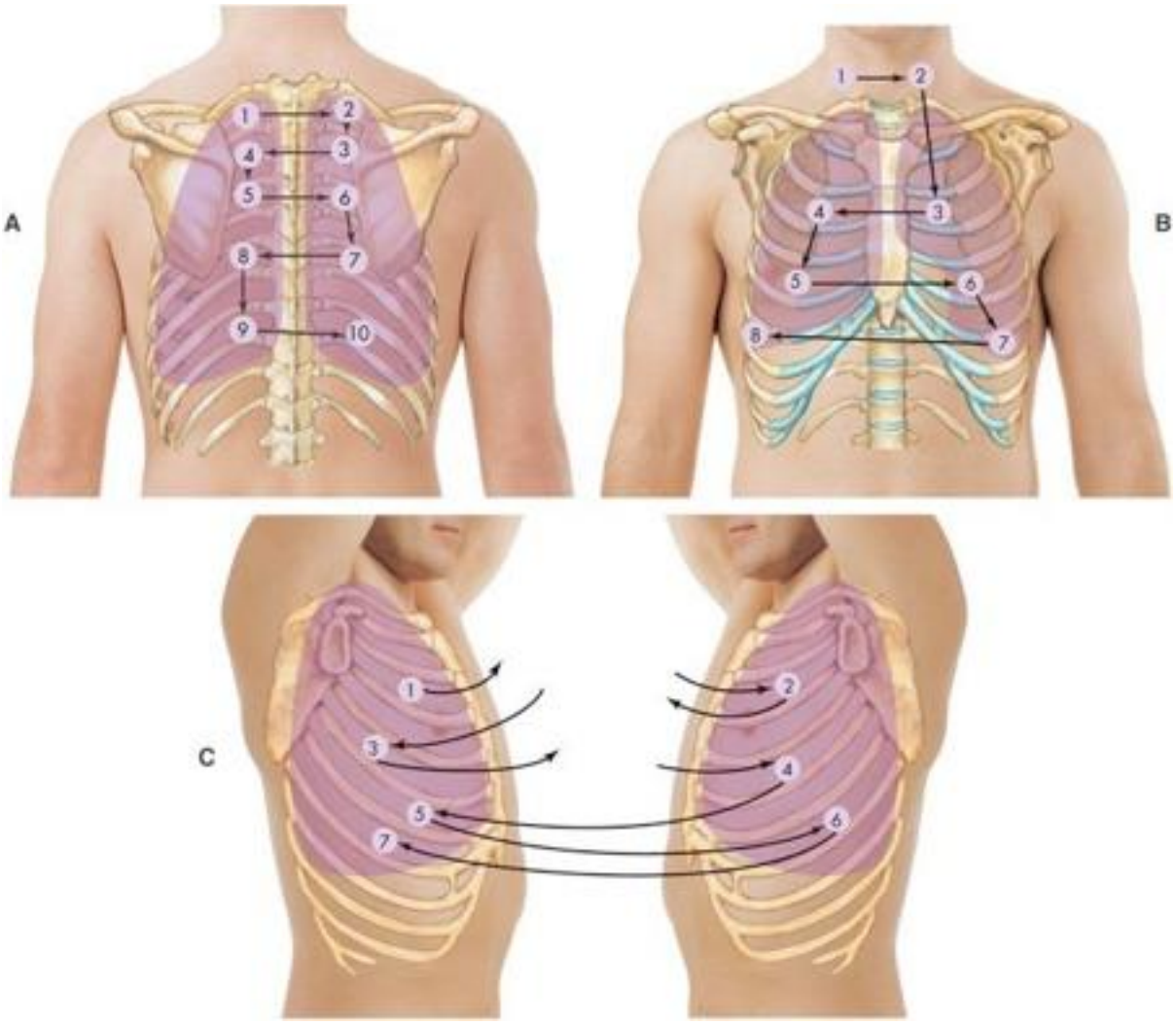
There is some common abnormal breath sounds, what is most important is if you are unable to hear air movement you inform an ICU nurse. You will hear these terms:

- Vesicular = normal;
- Crackles = are intermittent, non-musical crackling sounds caused by collapsed or fluid filled alveoli. They are usually heard on inhalation. They may not be cleared after coughing or suctioning;
- Wheezes =are a high-pitched musical sound caused by narrowed airways, common in COPD, infection, heart failure.

**Red Flags: no chest sound with limited or no chest expansion, call for help urgently**

It is important to know that a doctor and physiotherapist will also assess the patients breathing each morning. **There is support for you as this is a skill that required practice and skill.**

Sites for auscultation




**How do we measure the effects of mechanical ventilation on gas exchange?**

We look at oxygen saturations and carbon dioxide; these are shown on the monitor and ventilator and on an ABG.

During COVID-19 it may not be possible to take the normal about of blood gases for ventilated patients. So, if you are unfamiliar with interpreting ABGs do not worry. What is important is the oxygen saturation and carbon dioxide level, which may be new to you.

Carbon dioxide monitoring is called capnography. The waveform or trace is important as it tells us the tube is in the right position and the patient is ventilating. If the waveform is flat or dampened seek urgent assistance from and ICU nurse.

In sick patients the doctor may allow for a high than normal Co2 this is called permissive hypercapania. You will be guided by this.

Normal is 4.6-6kPa

A normal CO2 waveform


## Ventilators and Terminology

In COVID-19 it is likely the patient will not be breathing themselves and will be said to be ‘fully ventilated’ which means it is unlikely there will be spontaneous breaths.

With all the modes there are key words that you will hear a lot these are:

- FiO2 which is the fraction of inspired oxygen which is a different way of measuring oxygen 0.3 = 30% Oxygen;
- Peak pressure This is the pressure due to the sum of airway pressure and alveolar pressure;
- PEEP: Positive End Expiratory Pressure;
- Tidal Volume: The volume of air expired during one breath;
- Minute Volume: The total volume expired over one minute.

Ventilation does not come without its risks, increased pressure in the thoracic cavity can cause lung trauma, an ICU nurse will guide you on what to monitor.

There is also increased risk of secondary lung infection, known as 'ventilator acquired pneumonia'. To prevent this, you must keep the patients' head elevated to 30 degrees.

It is important to know that ventilators alarm a lot, seek reassurance and support from your ICU nurse, as scary as it may feel you are not alone.

## Sputum management

Intubated and ventilated patients are unable to cough and clear their own secretions. There are also unable to warm /humidify air / oxygen. Humidification attached to the ventilator is vital; you will check the humidification regularly. An ICU nurse can show you this.

Endotracheal suctioning is the term used to suction down the ETT and clear the sputum. You will near the term 'closed-suctioning' this enables secretions to be suctioned without breaking the circuit to atmospheric pressure.

The technique of suctioning needs to be practiced with an experienced Intensive Care Nurse.

We'll start with checking the alarm limits and equipment as they are your safety net. There will be times when your attention is drawn away from the monitor and you need to know that your alarms will alert you to anything that needs immediate attention.

In order to set your alarm limits, you will need to know the patient's normal values. The nurse who was looking after the patient before you will have run through these in their handover. It's a good idea to jot them down as they go through it. Set alarm limits just above and just below their highest/lowest parameter of the preceding shift. You can always adjust them as the shift goes on and you become more familiar with your patient.

## The cardiovascular alarm limits we set are:

Heart Rate:

- Usually set between 60-100 bpm;
- Take a minute to look at the patient's ECG trace - this means you are more likely to spot a change.

Mean Arterial Blood Pressure (MAP):

- Usually set between 60 and 65 mmHg (but will be patient centred), you would normally set your alarm limits a bit above and a bit below the desired values to allow for moving, coughing and other transient events;
- MAP is used as it is the average pressure in the arteries, and most organs require a pressure of 60-65 mmHg to adequately function;
- Take a minute to look at your Arterial line (or A-line) trace - then you are more likely to notice a difference.

## The cardiovascular equipment that needs checking is:

A-Line and A-line site:

- The arterial line is marked with a red line all the way down the side for safety. This alerts people that it is NOT a regular giving set;

- The A-line is ALWAYS monitored and monitor alarms switched on, this is part of your safety checks;
- Check you're A-line for any air bubbles - which must be removed so that they do not enter the patient;
- The site/limb that the A-line sits in should be visible at all times;
- The site should be clean and dressed with an intact see-through dressing.

**NOTHING is injected into the A-line, and there must be special caps which prevent this.**

CVP line and infusions attached:

- The CVP line may have a blue line running all the way down the side, or may be clear;
- There are some infusions that have to go centrally as they destroy the smaller veins, these will be attached here, and you should take some time to familiarise yourself with which lines are attached and if they are in date;
- All lines attached to your patient must be labelled (with what's in them) and dated at the patient end.
- You may need to stop an infusion in a hurry and disconnect, or connect an infusion in a hurry, and you will want to identify a port for this prior to needing it.

Pressure bag and Saline bag:

- Both A-line and cvp line are connected to a bag of 500mls NaCl 0.9%;
- The bags sit in a pressure bag which needs to be increased to a pressure of 300mmHg - indicated by a green section on the pressure bag gauge;
- You need to check the bags of saline have sufficient fluid in them and that they are up to pressure before you 'zero' the set.

Transducer level:

- Both the A-line and the CVP line are continuously monitored and in order to know that your readings are accurate, you will need to ‘zero’ the transducers. This is part of your checks at the beginning of each shift and if you disconnect the patient for any reason;
- Transducers should sit in line (roughly) with the R atrium;
- Both lines should be switched off to the patient and open to air, at the correct height, with the pressure bag blown up, and then you press 'zero all’ on the monitor. You then switch them both back on to the patient, put the caps back on and they should be reading correctly.

## Checking your patient is next:

Check your patient’s heart rate corresponds on the ECG/A-line trace, and feel their radial pulse - check they are the same:

- check your ECG tabs have good contact and are correctly placed. We use 5 lead ECG monitoring on ICU and they are attached as follows;
- Check all line insertion sites for any signs of infection or migration.

Any significant change in HR should be confirmed with a manual pulse, BP/output checked and a 12 lead ECG taken - ask for HELP early:

- Check the patient’s four limbs and check for capillary refill time (CRT)/peripheral pulses.

Make sure that the blood pressure or MAP is adequate and note whether they are requiring any fluids/drugs to maintain it.

Check the patients’ temperature - anything > 39C needs to be acted upon - ask for help. The theatres/ICUs can get chilly - a cold patient is as much of a worry as a hot one. Bair huggers are available to warm your patient up.

Note skin pallor (pink/dusky etc.) and warmth; whether sweating is present/dry skin/check any wounds for new bleeding.

## Urine output

Decrease of urine production is a late sign of inadequate BP and should be > 0.5mls/kg/hour. It's part of your hourly observations along with input - we measure **EVERYTHING!**

All sedated/ventilated patients will have a urinary catheter.

If your patient has a low BP/poor urine output, they may be commenced on inotropes

Please follow accurate fluid balance. ICU team will set up the target for fluid balance during the 24hour period. Normally patient with ARDS tend to have a negative fluid balance

## Some common inotropes are:

- Noradrenaline;
- Adrenaline;
- Metaraminol.

Which inotrope is used will depend on your local policies:

- They should be given through a central line;
- They require an A-line to be sited and monitored;
- They are continuous infusions and should not be allowed to run out as they are short acting;
- when you check the lines and infusions, check how much is left in your infusion and ensure you ready the next one at least an hour before it is due to run out. **These is a matter of safety as your patient's blood pressure could become dangerously low, and even cause cardiac arrest, if the infusion is stopped or delayed;**
- Inotropes are measured in mcg/kg/min, but titrated to maintain an adequate MAP, there are usually not limits set on the rate of an inotrope, merely parameters to titrate to;
- IV fluid boluses may also be given, but less often than on the wards.

## Electrolytes are closely monitored in ICU

- Potassium - >4 but no more than 5.5mmols/L**;**
- Magnesium > 1.0 molls/L;
- Phosphate > 0.7 molls/L;

These are the main electrolytes that affect the heart - conduction/contraction/rhythm - tightly controlled/monitored

## Non sedated patients

If your patient is awake and not sedated use GCS or AVPU to assess level of consciousness and mental state. Ensure pupillary size and reaction is included in your assessment. Identify any new changes in neurological state. New confusion or difficult to wake patients may indicate respiratory issues or deterioration in medical condition. Ensure at handover it is clear how you have reached you assessment. I.e. eye opening to pain but only to a firm trapezium muscle squeeze.

## Sedated patients

You should still assess GCS even if your patient is sedated. However, there will not be a verbal response as your patient will be unable to talk. The GCS in ICU is modified to allow for this. Include pupillary size and reaction in your assessment.

If your patient is sedated it is important to assess the level at which your patient is sedated. We mainly use the Richmond Agitation Assessment Scale (RASS), other assessments scales can be used, please check local guidelines. This must be done at the beginning of your shift as part of your assessment. On-going assessment of sedation through the shift is also necessary as requirements and aims of sedation level may change. These are often set out by the ICU medical team. Once an assessment of sedation level is made any clinical change or deterioration in neurology can more easily be identified. Sedation may be altered to target the level of sedation required if needed.

The reasons patients are sedated include:

- Facilitate ventilation;
- Relief of anxiety;
- Management of acute confusional states;
- Implementation of treatment or diagnostic procedures;
- Obtundation of the physiological response to stress to reduce tachycardia, hypertension or raised intracranial pressure

The level of sedation which you should aim will be guided by the ICU Consultant.

**Richmond Agitation-Sedation Scale (RASS)**

| Score | Term | Description | |
|---|---|---|---|
| +4 | Combative | Overtly combative, violent, immediate danger to staff | |
| +3 | Very agitated | Pulls or removes tube(s) or catheter(s), aggressive | |
| +2 | Agitated | Frequent nonpurposeful movement, fights ventilator | |
| +1 | Restless | Anxious but movements not aggressively vigorous | |
| 0 | Alert and calm | | |
| -1 | Drowsy | Not fully alert but has sustained awakening (eye opening/eye contact) to *voice* (≥10 seconds) | Verbal Stimulation |
| -2 | Light sedation | Briefly awakens to *voice* with eye contact (<10 seconds) | |
| -3 | Moderate sedation | Movement or eye opening to *voice* (but no eye contact) | |
| -4 | Deep sedation | No response to voice but movement or eye opening to *physical* stimulation | Physical Stimulation |
| -5 | Unarousable | No response to *voice* or *physical* stimulation | |

It is important that your ventilated patients with ETT are adequately sedated as patients can quickly wake up and attempt to remove the tube. This can be especially true of younger patients who often require higher levels of sedation.

***Ensure all syringe drivers with sedation are checked thoroughly, check rate and dose. Ensure replacement syringes are ready to replace***

If sedation abruptly stops some drugs will have very short half live which means the mode of action will stop almost immediately. These patients will therefore wake up and be frightened /disorientated which will lead to unplanned extubation or high levels of patient distress.

## Commonly used drugs

Commonly used drugs for sedating patients include:

- Propofol - anaesthetic agent (-ve inotrope)
- Morphine – opiate
- Midazolam – benzodiazepine
- Fentanyl - synthetic opiate
- Remifentanyl - short half life
- Atracurium - muscle relaxant

Each Trust may use a slight variation of sedation check your local guidelines.

## Blood sugar levels

ICU patients often require an Insulin infusion to keep blood glucose levels between 4 - 10mmols.

There has been lots of research over the years to support preventing hyperglycaemia in critically unwell patients. Therefore you may find your patient is on an insulin infusion but may not be diabetic. It is important to check blood sugar levels frequently as outlined in local guidelines. It will be more difficult to spot hypoglycaemia in sedated patients.

## Pain

Assessment of pain in critically unwell patients is vital. Pain can indicate new or evolving clinical conditions i.e... MI, acute abdomen or new infection. Pain is more difficult to identify in sedated patients so consider pain when there are physiological stress responses seen i.e. increase in heart rate, blood pressure and or agitation.

A critical care pain observation tool may be used to assess (Critical Care Pain Observations Tool = CPOT). This is based on four domains:

- Facial expression
- Body movements
- Ventilator compliance

- Muscle tension

If pain is suspected appropriate analgesia should be used. All ventilated patients will already be receiving a sedative and analgesic agent. These can possibly increased or a bolus dose administrated if appropriate. A reassessment of pain must always be made.

ICU can be daunting and the focus may initially appear to be purely on the technology and equipment. The ICU environment, however, provides some of the most basic nursing care in an acute hospital and it is everybody's responsibility to assist the patients to remain nutritionally optimised, and as clean and comfortable as possible. Muscle strength and intact skin, aid effective rehabilitation and safer ward transfer.

## Nutrition

In ICU our philosophy is to feed early. If a patient is awake and can be assisted to eat and drink - fantastic! If the patient is extubated and able to eat or drink - assess the need for assistance and provide any help required.

Invasive lines and even air mattresses restrict mobility: a helping hand may be all that is needed. ICU has access to a small kitchen facility with beakers etc. to promote independence and can liaise with the canteen for meals.

Patients just intubated following prolonged intubation or following tracheostomy will require a swallow assessment: either nurse-led or by the ICU SALT team, per local availability/policy.

Usually however, the enteral route is first line - by either nasogastric (NGT) or jejuno feeding tube (NJT). NGT insertion can be one of the most difficult procedures to achieve in the critically ill, ventilated patient. For this reason, it is vitally important to assess the patient's NG tube position and placement - check per local policy; usually at the start of every shift or following transfer off unit, for example.

Please before you start feed, check:

- The tube position should be noted, compared with the insertion position length and documented in cm at the start of your shift. If in doubt, stop the feed to reduce the risk of aspiration, and seek help;
- Ensure the NG tube is well secured to prevent migration. If in doubt, change the adhesive holder;
- The pH may be misleading in ICU patients as feed is often continuous. Aspirate gastric contents every 4 hours, and replace/discard in line with local policy;
- Motility agents may be prescribed to assist absorption;
- Check the rate and type of feed. NG feed prescriptions are used based on body weight and calorie/electrolyte needs. NG feed is often increased over a few days due to the risk of refeeding syndrome - electrolytes plus magnesium and phosphate replacement will often be prescribed in tandem, with clear parameters for you;
- Check when the cartridge is due to be changed - usually every 24hours. Label new lines with the date and time when changed.

Total Parenteral Nutrition (TPN) will be instigated if enteral feeding cannot be established. TPN bags will be provided from pharmacy and do not usually have to be requested by nursing staff.

TPN is given via ‘long line’ e.g. PICC or centrally and has a dedicated lumen (white port): the circuit is not broken to give other medications. TPN is lipid based and requires strict asepsis when changing lines and bags. Label new lines with the date and time when changed.

## Nausea / vomiting

Abdominal assessment - Inspect the abdomen. Look for the presence of any distension, masses, ascites, prominent veins, bruising, scars, drains or stomas. Look at the shape - flat, rounded, shiny.

Listen for bowel sounds - Place your stethoscope over the Right lower quadrant and listen are they active, hypoactive, absent?

Feel - is any pain localised or does it radiate? Any masses? Soft distended tender?

## Bowels

Check for last documented bowel action. ICU patients often have reduced bowel motility, and are at increased risk of constipation (defined as no bowel action within 72hours of admission to ICU) which could impact adversely on length of stay.

Give prescribed aperients. These are commenced early in ICU to promote regular bowel actions, ideally within 2-5 on Bristol Stool chart. There should be a local policy/bowel protocol to follow. Follow it.

Promote dignity with incontinence and be mindful of positioning - consider using a hoist to assist with a more natural defecation position in those patients who are more awake.

Record frequency and consistency. Uncontrollable diarrhoea is a pressure and positioning risk - rectal tubes may be used to protect skin and measure fluid loss.

## VTE assessment

As per local policy. Often use intermittent compression boots such as flowtron, to stimulate the flow of blood to the deep veins and help prevent thrombosis. These need to be removed once per shift to inspect the underlying skin

## Mouth care

Regular mouth care is provided for patient comfort and to assist in the prevention of Ventilator Associated Pneumonia -

Toothpaste and baby toothbrushes are used twice a day Water every four hours preferred with Vaseline applied to lips each time

For some patients - this will be performed only at the direction of the ICU nurse. Check local policy with regards to mouth care in COVID19 patients.

## Eye care

It's very important to understand that sedated patients are unable to blink. This puts them at risk of corneal sores. One cannot underestimate the importance of moistening. Use eye drops in line with local policy.

Check for Scleroderma, redness, pus and dryness. Water with eye drops and lacrilube.

Proned patients will have eyes cleaned and protected with taped gauze.

## Skincare

Look for any skin breakdown redness, blistering surgical sites, and existing pressure sores, wounds, dressings and or any rashes. What type of mattress are they on? Waterlow score?

Encourage patients to change position and move regularly. Sedated patients are unable to move. Circulatory collapse and vasoactive medication increases the risk of pressure sores. Completely dependent on the bedside team to promote cleanliness and prevent complications such as pressure sores.

Please consider on you regular assessments:

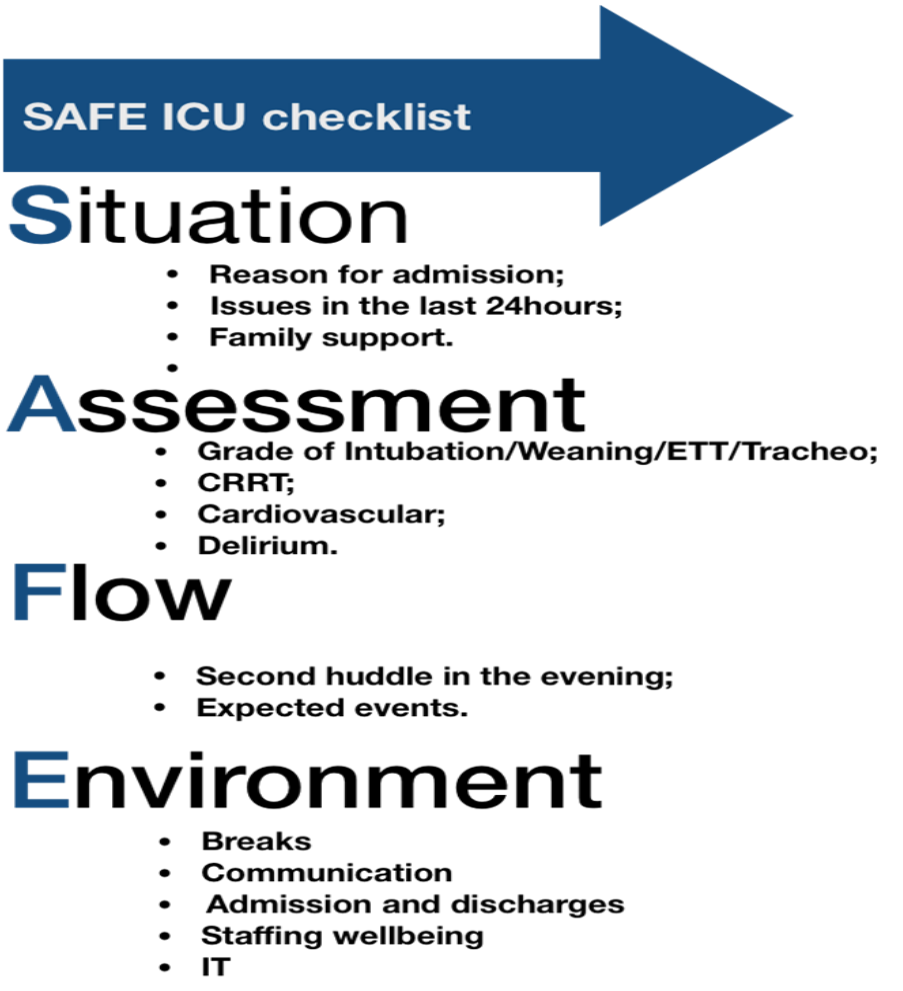
- Again: look and feel. Check under dressings - remove flotrons boots/TED stockings in line with local policy;
- Check NG Tube rubbing nostrils;
- Check ETT and holders by regular repositioning or pressure-alleviating devices. Check when the tapes were last changed. Any ulceration, gum bleeding or loose teeth;
- Change Saturation probe position 1-2hourly
- Ensure any lines and drains catheters are not lying underneath;
- Check under the patient - co-ordinate turns and washes with your colleagues;
- Minimise shear and friction damage with correct use of manual handling assists;
- Pay particular attention to bed sheets and pad creases as, if present, may cause pain and sores;
- Intravenous lines, feeding tubes should be changed in accordance with local policy.

### Use other MDT Members e.g.

- Tissue viability
- SALT
- Physiotherapy

**Safety Huddles in ICU**

Safety huddles in ICU are made once a shift (early, late and night). This consist on sharing crucial information with you colleagues regarding your patient condition. Also, this is a tool that promotes team work and prevents inadvertent events



We would like to acknowledge this is a brief overview of the care of an Intensive Care patient. We recognise that each patient's care is individual, each department and organisation work to their own policies and protocols. These resources have been rapidly developed within the mist of increasing pressure on Critical Care capacity. This not meant to replace any formal training / education but to be used as a refresher and or broad guide to the care of a intubated intensive care patient. It has not been made COVID-19 specific.

**Further resources can be found on the British Association of Critical Care Nurses webpage: www.baccn.org**

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