Common Equipment in the ICU

Respiratory Therapies

- **High Flow Nasal Cannula**

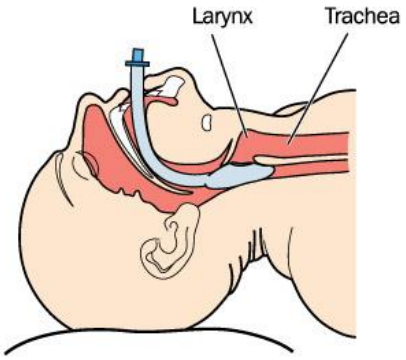
High flow nasal prongs allow for high concentration of oxygen to be delivered to patients comfortably. Somethings this is used as a therapy of it's own, or may be used when the patient has a break from a tighter mask. The oxygen is routed through a humidifier to ensure it is moist and does not dry the airways.

- **Non Invasive Ventilation (NIV):**

Non Invasive Ventilation means the patient would be helped to breath, without any tubes going into their mouth. "Non invasive" meaning nothing going in. A tight mask usually covers the nose and mouth, and it is connected to a small machine which will give extra oxygen or support with every breath. The mask is secured tightly in order to function, there cannot be any air leaks. It usually helps increase blood oxygen levels and reduced carbon dioxide levels. The NIV would only be used on a conscious patient, as you have to make every breath yourself. Sometimes it is used to try and prevent needing a ventilator, and sometimes it might be needed with the patient comes off the ventilator.

- **Endotracheal tube (ET):**

An ET tube is a tube that is inserted through the patients' mouth into their wind pipe. It is used in the ICU for patients who are having difficulty breathing because of a lung problem, or for patients who are not awake enough to breathe for themselves. The ET Tube is connected to tubing which is connected to a ventilator.



- **The Ventilator**

The ventilator has different settings and it is adjusted according to the needs of a patient. Sometimes the patient is taking their own breaths and we support these, or sometimes we need to set the ventilator to give them each breath. The nurse at the bedside will be able to explain the level of support that your relative needs, and why.

- **Tracheostomy**

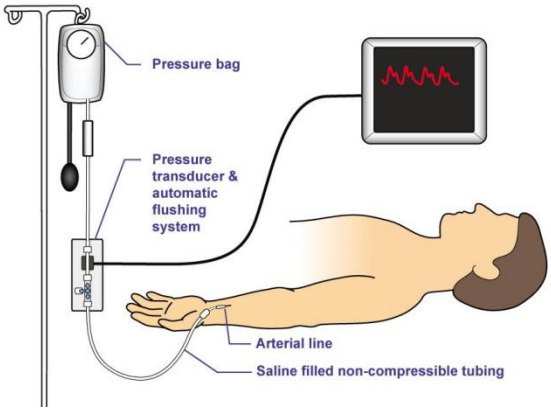
It's is a surgical procedure where a hole is made in a patient's neck and a small tube is inserted into their windpipe. The tracheostomy tube is then attached to the ventilator, or oxygen support. A tracheostomy is sometimes and option to patients who require long term ventilation, difficult weaning from the ventilator, and patients with copious secretions

(phlegm). When a patient no longer requires ventilator support and only needs oxygen therapy, oxygen tube can be connected to the tracheostomy.

A tracheostomy is not an option for everyone and the consultant will discuss this with you before the procedure would be done and if you have any questions.

- **Arterial line**

This is a line that goes into the patients' artery. It allows the nurse to see the blood pressure continuously and also allows the nurse to take bloods when required. It is a red line that usually goes into a patients arm and is connected up to the cardiac monitor (the box that looks like a tv) and shows a the blood pressure constantly.



- **Cardiac Monitor**

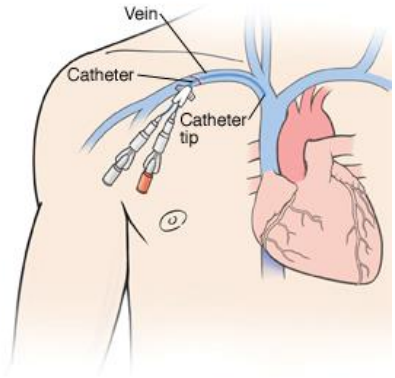
This machine is at the head of the bed and looks like a TV with all different colours and it is connected to the patient using wires and stickers. This shows the nurses and doctors constant information about many things such as heart rate, blood pressure and breathing. Sometimes this may alarm for simple reasons like a lead becoming detached, so please do not panic.

- **Infusion pumps**

Majority of these patients will need these pumps. These are pumps that you will see beside the patient and they control the amount of medication or fluid that a patient receives and how fast or slow it can be given. You will see fluids and bags of medication hanging over these on a pole. The fluid or medication flows through plastic lines and passes through the pump and into the patient.

- **Central line**

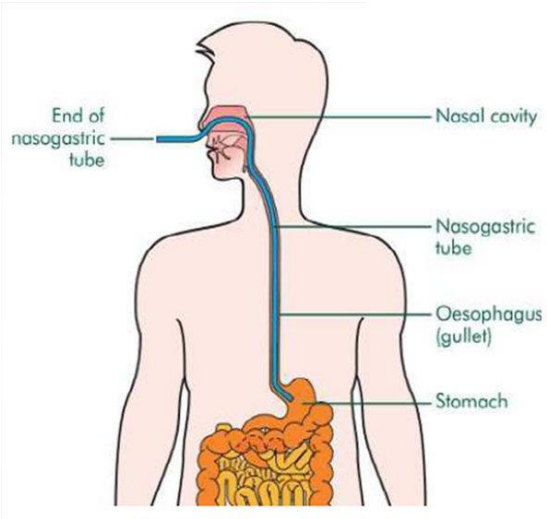
Most patients in the ICU will need to have a central line placed. This is a line that goes in through one of the large blood vessels in the neck or the groin. This line allows us to give multiple medications at the same time, and also to give strong medications that can only go through a large vessel. The medications flow through the pumps and connect to these lines into the body. The ICU team usually place this line in the ICU, or sometimes it is done in theatre before an operation.



Other Therapies

- **Nasogastric Tube (NG)**

This tube goes through a patients nose and down into their stomach. It allows us to feed them when they are too unwell to eat and drink as they normally would or when their appetite is reduced due to illness. We can also give them medication through this tube.



- **Nasogastric (NG) Feed Pump**

This purple machine will deliver feed to a patient at a set amount per hour. Most of our patients will be continuously fed this way throughout their ICU admission. There will be a bag of beige coloured liquid (feed) hanging above the pump with a thin purple tube attached to it. This tube will go from the bag, through the pump and to the patient where it is attached to a tube in the patients nose (NG).

- **Total Parenteral Nutrition (TPN)**

You may notice a green bag hanging near the patient. This bag contains white liquid which is made up of all the nutrients a patient needs for their recovery. A pump will continuously deliver a small amount to the patient.

There a several reasons we may need to use TPN. If a patient has had a big surgery they may find that their stomach will temporarily not work or we need to avoid to heal wounds on the inside. “Total Parenteral Nutrition” all of your nutrition is going into your system outside of the digestive tract. Usually our aim will be to switch to NG feeding or normal eating as soon as we can. As a result you may notice the patient is being given both TPN and NG feeding as we slowly allow their stomach to start working again.

There is a nurse specialist who reviews every patient on TPN and links in with the dietician and the team.

- **Thrombo-Embolic Deterrent Stockings** (TEDS)

You may notice the patient is wearing long green socks. These tight fitting socks help prevent the development of blood clots in the legs. These clots can form due to the pooling of blood in veins during long periods of inactivity. Some people wear similar socks when taking a long flight.

- **Intermittent Pneumatic Compression Machine** ('flowtrons')

Although the name may be confusing, this machine is not as complicated as you might think. There will be a grey machine with a small screen on it hanging from the end of the patients bed with clear plastic tubes leading to each of the patients legs. These tubes are attached to a soft light blue wrap around each of the patients lower legs. You may be able to hear the machine working as it repeatedly squeezes and then releases the patients lower legs keeping the blood moving and preventing blood from pooling and forming clots.

- **Pressure Relieving Mattress** ('Air mattress')

The majority of our patients will be lying on an air mattress. This mattress is used to prevent pressure injuries or 'bed sores'. Normally as we begin to feel too much pressure against our skin we will move but patients in the ICU cannot do this because they may unconscious or too unwell to move. As a result some areas of their skin will begin to break down and they may end up with a pressure injury. The air mattress is constantly distributing air and alternating the pressure under the body. The mattress is therefore moving which can be a strange and confusing feeling for the patient. In addition to the use of an air mattress we also turn our patients in the bed frequently which may be one of the reasons we have to ask you to step outside for a few minutes.

- **Urinary Catheter**

In the ICU, a patient may have a urinary catheter put in place to monitor an hourly output. This allows us to calculate how much fluid is going in, versus how much is coming out. We can get ensure that we prevent patients becoming fluid overloaded, or dehydrated. The Renal team may need to become involved and some patients may need dialysis. If this occurs, we will explain further in detail specific to your relative.

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