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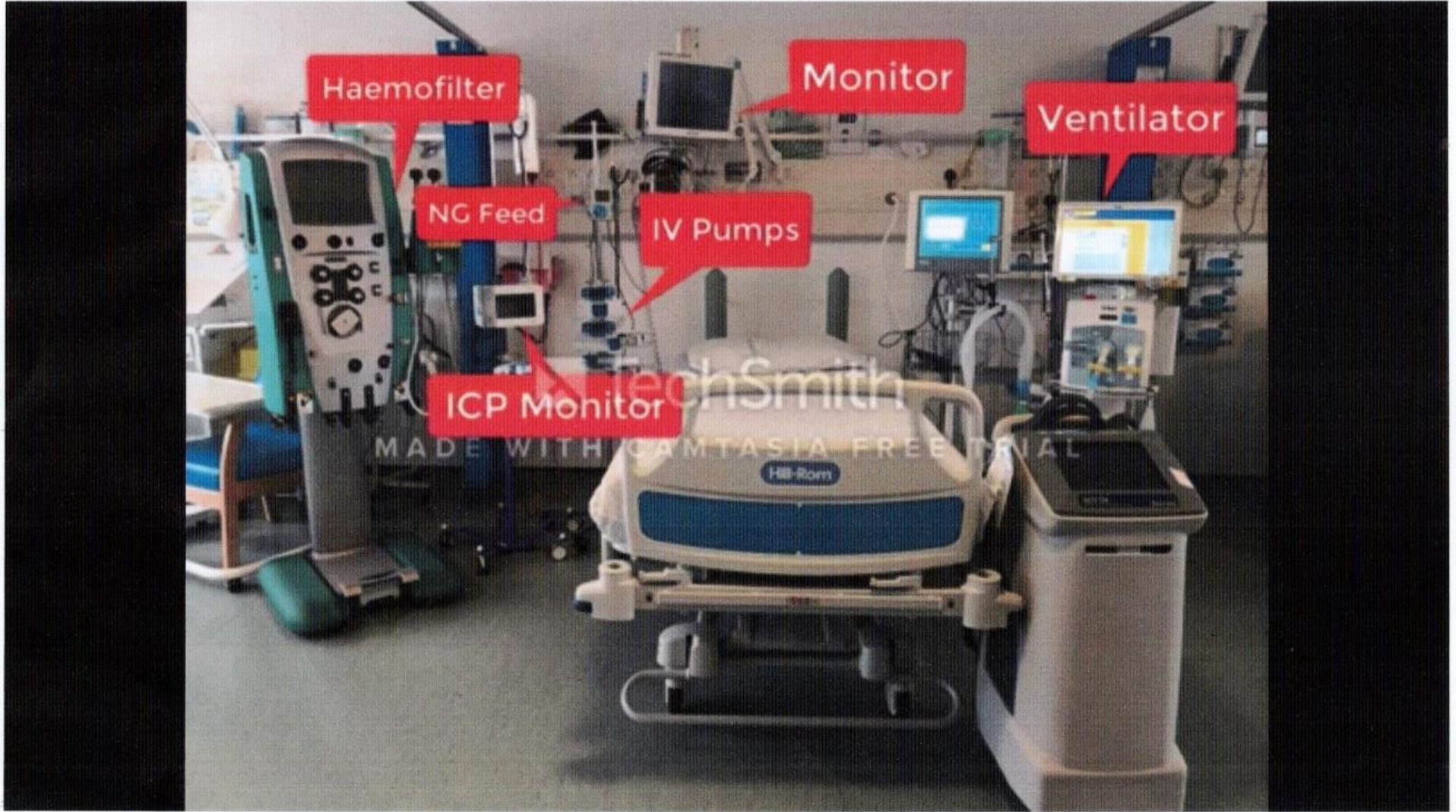
**UNIVERSITY**



**College of Health and  
Medical Technology**

**Aesthetic Equipments**

**BY**







IV Pumps

TechSmith

MADE WITH CAMTASIA FREE TRIAL

Ventilator



TechSmith

MADE WITH CAMTASIA FREE TRIAL



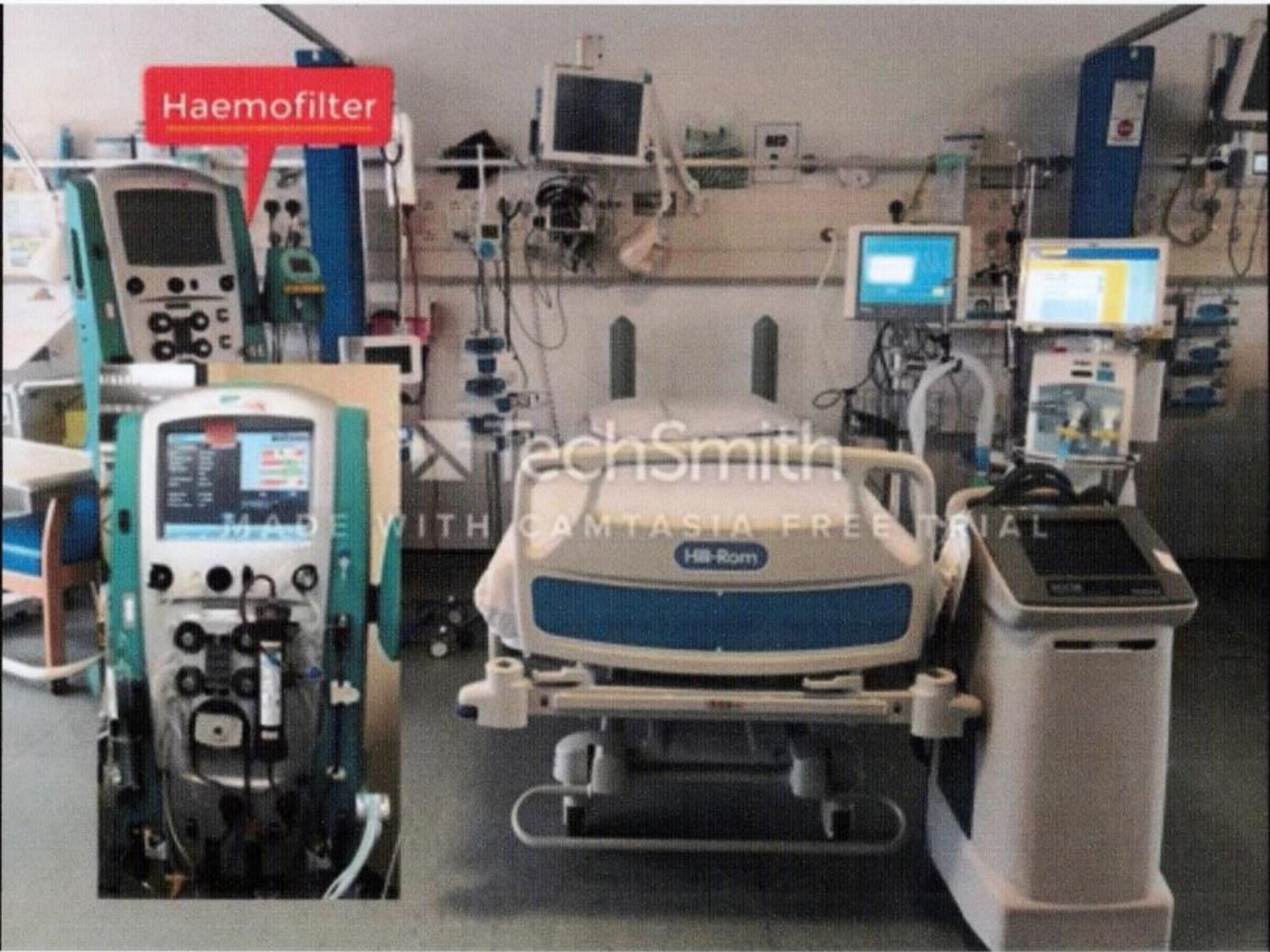
NG Feed

TechSmith

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Hill-Rom

Haemofilter





ICP Monitor

MADE WITH CAMTASIA FREE TRIAL

Hill-Rom

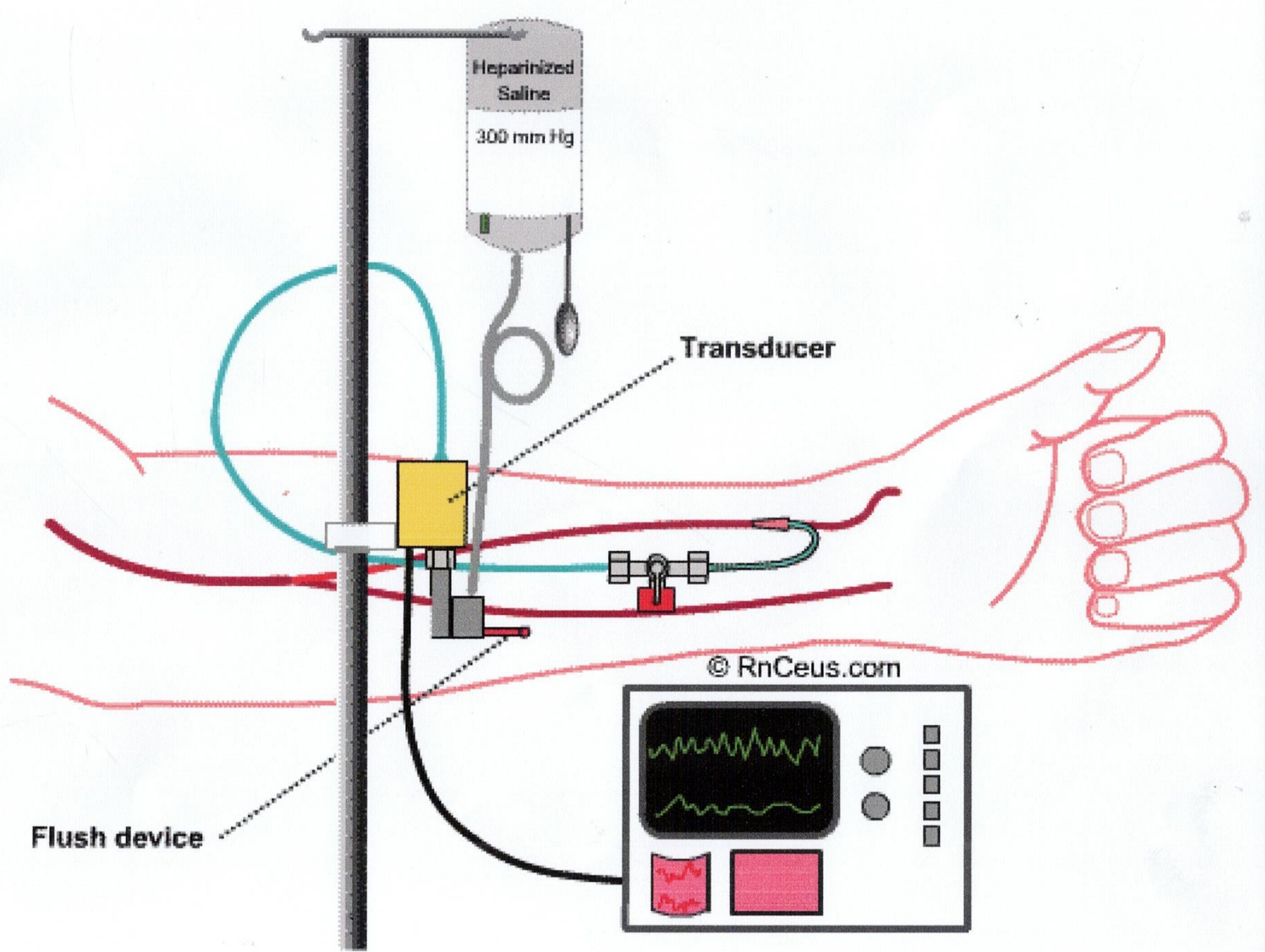
Camino

ICP

INTEGRA

TechSmith





Heparinized Saline  
300 mm Hg

Transducer

Flush device

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## *Arterial line*

- Patients may require an arterial line for: •
  1. Monitoring continuous blood pressure especially in patients with hemodynamic instability.
  2. When vasoactive medications are needed and the responses to such medications require continuous blood pressure monitoring.
  3. For patients who require frequent blood sampling.



## Potential Complications Associated With Arterial Lines

- 1) Hemorrhage
- 2) Air Emboli
- 3) Infection
- 4) Altered Skin Integrity
- 5) Impaired Circulation

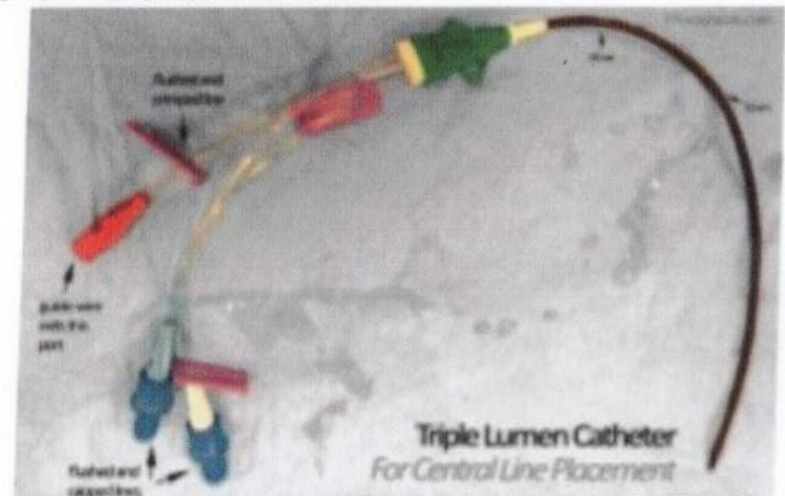
## Central I.V catheters

- A **central venous catheter** is a special IV line that is inserted into a large vein in the body. Several veins are used for central venous catheters including those located in the shoulder (subclavian vein), neck (jugular vein), and groin (femoral vein)



## Purposes of central vein I.V catheter

- when the patient either does not have adequate veins in the arms or needs special medications and/or nutrition that cannot be given through the smaller arm veins.
- Serve as a guide of fluid balance in critically ill patients.
- Determine the function of the right side of the heart.



## **Nurses role in patient with central I.V lines**

1. Monitor for the signs of complications.
2. Assess for patency of the CVP line.
3. Sterile dressing should be done to prevent infection( CVP care per the hospital protocol)
4. The length of the indwelling catheter should be recorded and regularly monitored.
5. Follow strict aseptic technique when handling CVC.

## Electrocardiographic (ECG)

- Electrocardiographic (ECG) monitoring is routinely used in hospitals for patients with a wide range of cardiac and non-cardiac diagnoses.
- Besides simple monitoring of heart rate and detection of life-threatening arrhythmias, the goals of ECG monitoring include detection of myocardial ischaemia, diagnosis of complex arrhythmias, and identification of a prolonged QT interval.







## Complication

- Potential complications associated with ICP monitoring include infection and brain hemorrhage, which are very infrequent.

## Pulse Oximetry

- Pulse oximetry is universally used for monitoring patients in the critical care setting.
- A pulse oximeter is the device that measures and displays the oxygen arterial saturation.





## **Mechanical ventilator**

- Mechanical ventilation may be required for a variety of reasons, including the need to control the patient's respirations during surgery or during treatment of severe head injury, to oxygenate the blood when the patient's ventilatory efforts are inadequate, and to rest the respiratory muscles.



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## INFUSION PUMPS

- An external **infusion pump** is a medical device used to deliver medications & fluids into a patient's body in a controlled manner.
- Infusion pumps may be capable of delivering **medications & fluids** in large or small amounts, and may be used to deliver nutrients or medications – such as insulin or other hormones, antibiotics, chemotherapy drugs, and pain relievers.



## **Nurses role in patient with I.V infusion pump**

- Using aseptic technique and universal precautions, iv infusion should be set.
- Monitor the pump and patient frequently to ensure correct operation.
- Keep the pump plugged in when possible to ensure that the battery is fully charged at all times.
  
- Set the flow rate as prescribed calculating the amount of fluid.
- Observe for the signs of infiltration or other complications such as thrombophlebitis.
- Fluid or electrolyte overload and embolism before administration.

## Resuscitation Cart (Crash Cart)



Resuscitation Cart

Drawer 1:  
Airway Equipment

Drawer 2:  
Breathing Equipment, O<sub>2</sub>  
Masks, Tubing, etc.

Drawer 3 & 4:  
Circulation Equipment, IV  
Access, Intravenous  
Needles, BP Cuffs

Drawer 5:  
Miscellaneous Supplies,  
Personal Protective  
Equipment (e.g. Gloves,  
Masks)

- ✓ Defibrillator
- ✓ Breathing equipment/  
air supplies
- ✓ Emergency drugs
- ✓ IV supplies  
and tubing





## **Resuscitation Cart (Crash Cart)**

- The **Resuscitation cart** contains all of the equipment and medications needed for advanced life support and CPR (cardiopulmonary resuscitation).



## **CONTENTS RESUSCITATION CART (CRASH CART)**

- Monitor/defibrillators , suction devices, and bag valve mask s (BVMs) of different sizes.
- Advanced cardiac life support (ACLS) drugs such as
  1. Epinephrine
  2. Atropine
  3. Amiodarone
  4. Lidocaine
  5. sodium bicarbonate
  6. Dopamine and vasopressin.