

# Identify the equipment found in a general bedside nursing ward

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13.3.1 Identify the equipment found in a general bedside nursing ward  
Unit B 13.3 Maintaining General Bedside Nursing Equipment  
Module 279 18 B Medical Instrumentation I

# Blood pressure machine

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Blood pressure machines are used for determining the patient's **resting blood pressure**, one of the **preliminary** tests that **health care workers** may perform. A **diagnosis** of high or low blood pressure can be **indicative** of other, **more serious diseases**.

Blood pressure is one of the most important **screenings** because high blood pressure usually has no symptoms so it can't be detected without being measured. High blood pressure greatly increases your risk of **heart disease** and **stroke**.

# Pulse oximeter

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Oximetry is a **non-invasive method** of measuring the **oxygen saturation** of the (**hemoglobin** in the) blood. This is a good indicator of the **oxygen carrying capacity** of the blood. A **blood-oxygen monitor** displays the percentage of blood that is loaded with oxygen. More specifically, it measures what percentage of hemoglobin, the protein in blood that carries oxygen, is loaded

All tissues in the body depend on oxygen for survival. A **shortage** of oxygen in the tissues is called **hypoxia**. When a patient is **hypoxic** their tissues lose the bright red appearance of being well oxygenated and become dark red or look blue. The **brain** is damaged very quickly if the **supply of oxygen** to the tissues is interrupted.

# Suction Machine

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Suction is the application of **negative pressure**, which is any pressure less than atmospheric pressure to provide for the movement of fluids or **solid substances**.

Suction may be used to clear the **airway** of **blood**, **saliva**, **vomit** etc. so that a patient may breathe and growth of **micro-organisms** / **infection** is prevented

# Oxygen concentrator



An oxygen concentrator is a device which **concentrates** the oxygen from a **gas supply** (typically ambient air) to supply an **oxygen enriched gas mixture** to a patient.

Oxygen concentrators are used very widely for oxygen provision in healthcare applications, especially where **liquid** or **pressurised** oxygen is too dangerous or inconvenient, such as in homes or in portable clinics.

The purpose of an oxygen machine is to provide patients with a reliable supply of oxygen.

# Scale

A scale is an *accurate* and *precise* instrument used to measure the *weight* of a material. The ability to measure material as large as 50kg and as small as 10 $\mu$ g makes them quite common.



# Infusion pump



An **infusion pump** infuses **fluids**, **medication** or **nutrients** into a patient's **circulatory system**. It is generally used **intravenously**, although **arterial** and **subcutaneous** infusions are occasionally used.

Infusion pumps can administer fluids in ways that would be impractically expensive or **unreliable** if performed manually by **nursing staff**. For example, they can administer as little as **0.1 mL per hour injections** (too small for a drip), **injections every minute** or fluids whose volumes vary by the time of day.

# Nebulizer

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a nebuliser is a **drug delivery device** used to **administer medication** in the form of a mist inhaled into the lungs. It converts **liquid medicine** into a **fine mist** that is easily inhaled.



# Stethoscope

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A stethoscope is an **acoustic** medical device for **auscultation**, or listening to the **internal sounds** of the human body. It is often used to listen to lung and heart sounds. It is also used to listen to **intestines** and blood flow in arteries and veins. In combination with a sphygmomanometer, it is commonly used for measurements of blood pressure.

# Otoscope, Ophthalmoscope

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An otoscope is a **optical medical device** that is used to look into the ears. Healthcare providers use otoscopes to **screen** for illness during **regular check-ups** and also to investigate ear **symptoms**, e.g. to identify **infection**

An ophthalmoscope is an **optical medical device** that allows a healthcare provider to see the **backside (fundus) of the eye**, as part of an eye examination.

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