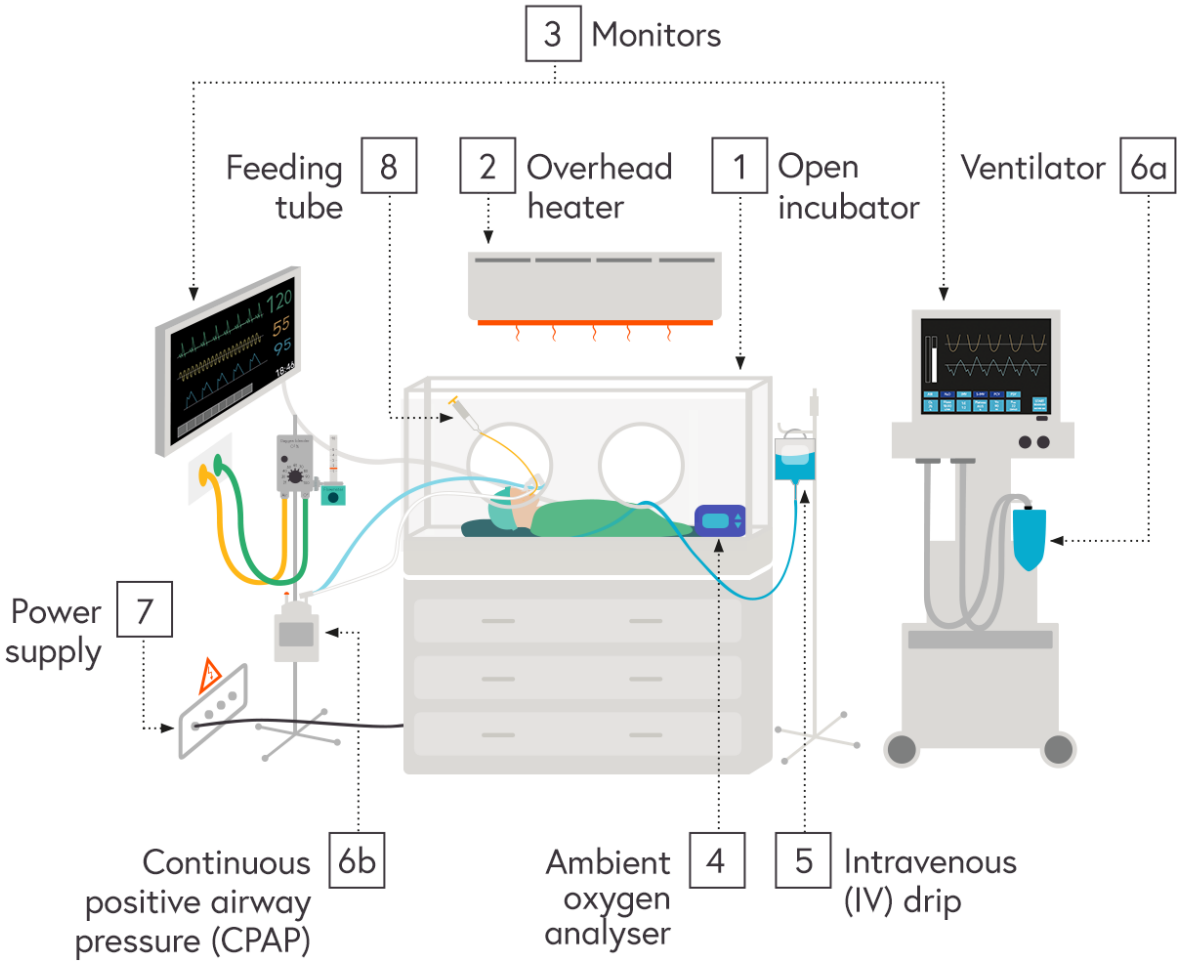
Equipment in the neonatal intensive care unit (NICU)



An **incubator** [1] is a special cot used for the care of small and sick newborns. It may be open (as shown here) with an overhead heater or heated mattress or closed with a lid to keep the air around the baby warm and humid.

The **overhead heater** [2] on an open incubator provides heat that helps to maintain the baby's body temperature.

Monitors [3] display the baby's breathing rate, heart rate, blood pressure, and the amount of oxygen in the blood. It is important that upper and lower alarm limits for

these vital signs are set on the monitors and that the alarms are not switched off. If the baby's vital signs stray outside of the range of the alarm limits, staff will be alerted by the alarm and appropriate action can be taken.

The **ambient oxygen analyser** [4] sits inside the incubator and measures the ambient concentration of supplemental oxygen. This is only required if there is no other way of measuring the concentration of oxygen that the baby is breathing.

The **intravenous (IV) drip** [5] is a narrow tube and needle which provides the baby with fluids, nutrients and medication. If the baby needs a drip for a long time, the team might insert a catheter (also called a PICC line or long line) which doesn't need to be changed so often. The long line is used to administer substances, for example, parenteral nutrition and some drugs, that cannot be safely given through a peripheral IV line.

Feeding tubes [8] are flexible plastic tubes through which milk is provided for babies who are unable to feed orally.

A **power supply** [7] is provided for the equipment. All hospitals must have back-up power in case of a power cut.

Some babies will be put on a **ventilator** [6a] - a machine that allows artificial ventilation of the lungs through an endotracheal tube using a mixture of air and oxygen that has been heated and humidified. Conventional ventilation delivers the gas mixture in 'breaths' while an oscillatory or high-frequency ventilator delivers it through tiny, rapid vibrations of the gas mixture in the respiratory circuit. The ventilator monitor displays the ventilator settings. Respiratory support can also be provided using a **continuous positive airway pressure CPAP** [6b].