OXYGENATION

MODALITIES OF DELIVERING OXYGEN THERAPY

In hypoxic patients, the main aim is to increase oxygen levels. This is achieved by providing supplemental oxygen. Different devices can be used to deliver supplemental oxygen

These can be:

Low flow devices (nasal cannula, facemask)

High flow devices (Bag Valve Mask (BVM), CPAP/BiPAP, and Ventilation)

Examples of devices:

Nasal prongs – O_2 flow 2 - 6 L/min: provides FiO_2 of 25 – 40%

Face mask O_2 flow 10L/min: provides FiO_2 of 50 – 60%

Non-rebreather mask – O_2 flow of more than 10L/minute: provides FiO, of up to 90%

Bag valve mask (BVM)

Non-invasive positive pressure ventilation (CPAP/BiPAP)

Invasive mechanical ventilation (Endotracheal tube, supraglottic airway device)

BVM (Bag Valve Mask)

- Has three main components: a mask, a bag, and a one way valve
- A correctly sized mask is essential
- Bag – this is a self-inflating bag and is available in different sizes. Choose appropriate as not cause barotrauma. If only a large bag is available, do not squeeze the bag all the way when ventilating children.
- Oxygen Reservoir bag
- Oxygen source (opened up to 15L/min) attached to the bag. Without an oxygen source the bag along will deliver 21% FiO_2 (or room air concentrations of oxygen), with an oxygen sources, the self-inflating bag can deliver 40-60% FiO_2. With the addition of an oxygen reservoir to the bag, oxygen concentrations close to 100% FiO_2 can be delivered as long as the reservoir fills before each breath.
- Other components that may be added to BVM include a filter and PEEP valve.