Low flow systems	nasal cannula	Low flow- 24-44 % ? 1 L\min=24% ? 2 L\min=28% ? 3 L\min=32% ? 4 L\min=36% ? 5 L\min=40% ? 6 L\min=44%	Client able to talk and eat with oxygen in place Easily used in home setting Safe and simple Easily tolerated Delivers low concentrations	Unable to use with nasal obstruction Drying to mucous membranes, so flow greater than 4 L/min needs to be humidified Can dislodge from nares easily Causes skin irritation or breakdown over ears or at nares Not good for mouth breathers Patient's breathing pattern affects exact FIO2	- It is a disposable. - plastic devise with two protruding prongs for insertion into the nostrils, connected to an oxygen source.
	simple mask	It delivers 35% to 60% oxygen . A flow rate of 6 to 10 liters per minute.	**Can provide increased delivery of oxygen for short period of time (i.e., less than 12 hours).**	Tight seal required to deliver higher concentration Difficult to keep mask in position over nose and mouth Potential for skin breakdown (pressure, moisture) Uncomfortable for pt while eating or talking Expensive with nasal tube	- Simple mask is made of clear, flexible , plastic or rubber that can be molded to fit the face. - Nursing interventions: - • Monitor client frequently to check placement of the mask. - • Secure physician's order to replace mask with nasal cannula during meal time
	Partial rebreather mask	deliver oxygen concentrations up to 80%. oxygen flow rate must be maintained at a minimum of 10 L/min to ensure that the patient does not rebreathe large amounts of exhaled air.	Client can inhale room air through openings in mask if oxygens supply is briefly interrupted	Requires tight seal (eating and talking difficult, uncomfortable)	- The mask has a reservoir bag that must remain inflated during both inspiration & expiration - It collection of the first parts of the patients' exhaled air. - The remaining exhaled air exits through vents.
	non-re breather mask, This mask provides the highest concentration of oxygen	(95-100%) at a flow rate 10 -15 L/min.	Delivers the highest possible oxygen concentration Suitable for pt breathing spontaneous with sever hypoxemia	Impractical for long term Therapy Malfunction can cause CO2 buildup suffocation Expensive Uncomfortable	- It is similar to the partial rebreather mask except two one-way valves prevent conservation of exhaled air. - The bag is an oxygen reservoir. - When the patient exhales air the one-way valve closes and all of the expired air is deposited into the atmosphere, not the reservoir bag. - In this way, the patient is not re-breathing any of the expired gas.
High flow systems	Venturi mask	Oxygen from 40-50% At liters flow of 4 to 15 L/min. Color / FiO2 / O2 Flow Blue / 24% / 2 L/min White / 28% / 4 L/min Orange / 31% / 6 L/min Yellow / 35% / 8 L/min Red / 40% / 10 L/min Green / 60% / 15 L/min	Delivers most precise oxygen Concentration Doesn't dry mucous membranes	uncomfortable Risk for skin irritation Produce respiratory depression in COPD patient with high oxygen concentration 50%	**The mask is constructed so that there is a constant flow of room air blended with a fixed concentration of oxygen.** - Designed with wide- bore tubing and various color coded jet adapters. - Each color code corresponds to a precise oxygen concentration and a specific liter flow. **used primarily for patients with chronic obstructive pulmonary disease.**
	trach collar				
	T-piece