

# O<sub>2</sub> THERAPY

## OXYGEN DELIVERY SYSTEMS



### NASAL CANNULA "PRONGS"

#### O<sub>2</sub> information

- Delivered 22-44% "[low-medium ]
- Amount Delivered
- Fio<sub>2</sub> (Fraction Inspired Oxygen)" +4"
- L\min=24%      L\min=28%
- L\min=32%      L\min=36%
- L\min=40%      L\min=44%

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- Client able to talk and eat with oxygen in place
- Easily used in home setting
- Safe and simple
- Easily tolerated
- Delivers low concentrations

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- 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 FIO<sub>2</sub>



### SIMPLE O<sub>2</sub> MASK

- Delivered 35-60% O<sub>2</sub>
- O<sub>2</sub> flow rate 6-10L/min
- Used when an uncorrected O<sub>2</sub> in **SHORT** time "less than 12h"

- Can provide increased delivery of oxygen for short period of time

- 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



### PARTIAL RBM

- Delivered Up to 80% O<sub>2</sub>
- O<sub>2</sub> flow rate 10L/min"pt doesn't re-breathe large amounts of exhaled air
- Have bag "remain inflated during ins&exp
- the remaining exhaled air exits through vents

- Client can inhale room air through openings in mask if oxygen supply is briefly interrupted

- Requires tight seal (eating and talking difficult, uncomfortable)



### NON RBM

- 95-100% at Liters flow of 10-15L/m
- Have 2 one way valves"to prevent conservation of ex air
- Have O<sub>2</sub> reservoir bag

- Delivers the highest possible [oxygen ]
- Suitable for pt breathing spontaneous with sever hypoxemia

- Impractical for long term Therapy
- Malfunction can cause CO<sub>2</sub> buildup
- suffocation
- Expensive
- Uncomfortable



### VENTURI MASK

- High flow
- 40-50% at Liters flow of 4-15L/m
- In COPD pts
- Have multiple colors

- 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%