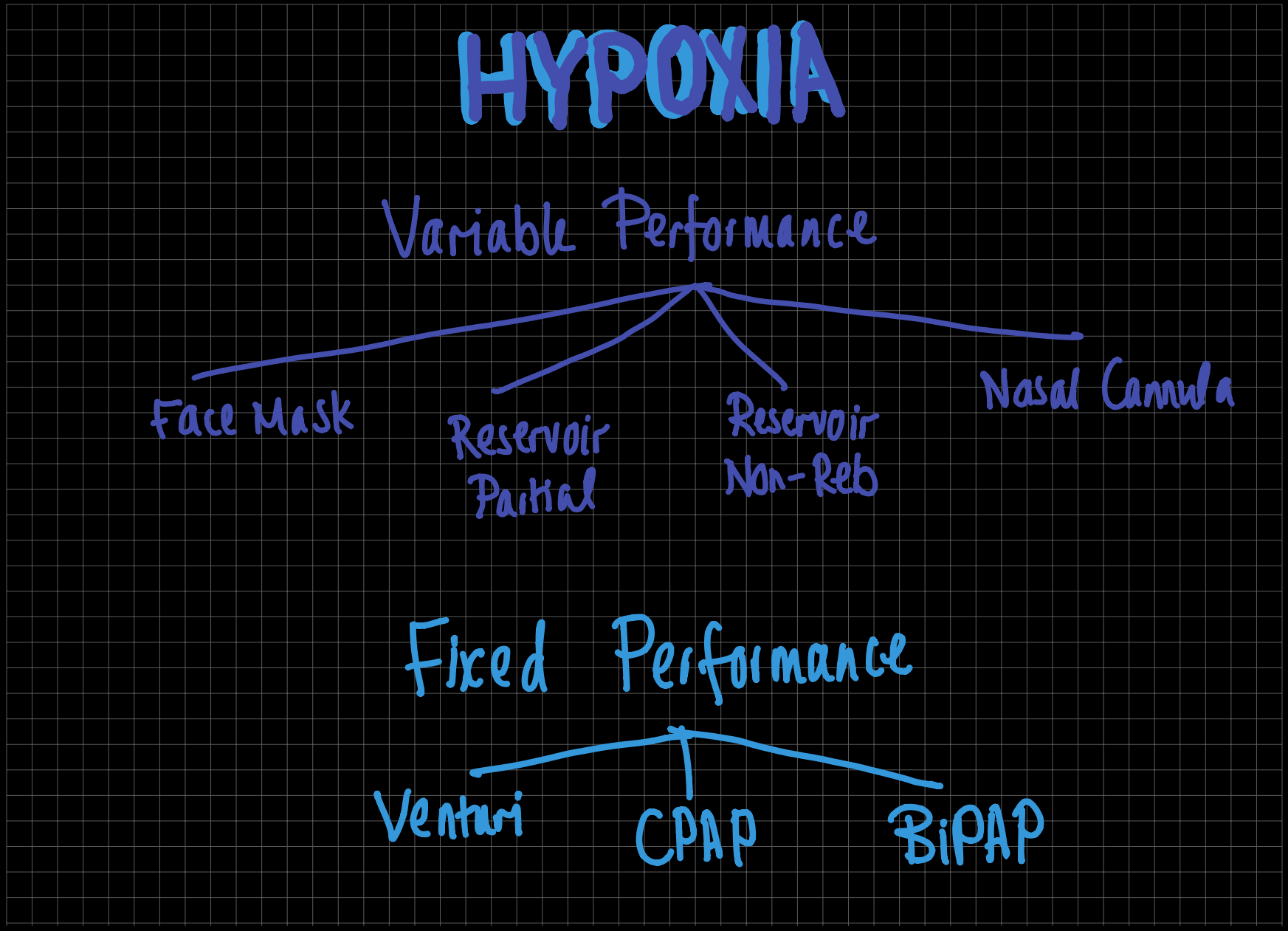
HYPOXIA
Variable Performance
Face Mask
Reservoir Partial
Reservoir Non-Reb
Nasal Cannula
Fixed Performance
Venturi
CPAP
BiPAP

Variable Performance:

	Face Mask	Reservoir Partial (no one way valve)	Reservoir Non-Breath. (One way valve)	Nasal Can.
FiO_2	35-40%. max 60%.	70%.	theoratically: 100%. reality: 80%.	24-40%. ↳ 1-6 L/min
flow	5 L/min	6-10 L/min	10-15 L/min	but we use 2-4 L/min
indications	fixed O_2 not required	pt. suspected for hypoxemia despite face mask app and normal respiratory pattern		long term O_2 therapy
contraind	pt who depends on hypoxic drive	dryness, of eyes	not suitable for claustrophobic	pt. req. high flow of O_2
⊕	comfort, ↓cost, simple, aero. bronchodil manip. FiO_2 w/o changing app	trans. plastic bags under chins		↑pt. compliance pt: ↘eat, drink, talk
⊖	no oral feeding rebreath when no Exp pause tight fit → ↑rebreath	same as facemask lack of good seal no aero. BD		nasal mucosa trauma, irritation x blocked nasal passages

Fixed Performance:

req: 1. Concious pt. 2. Cooperative 3. protected airway reflexes 4. vital signs monitoring 5. Resp patterns monitoring

	Venturi Bernoulli Principle	BiPAP	CPAP
FiO_2	max 60%. (24% — 60%.) many types	vision BiPAP ↳ 100%.	
flow	(2 —— 15) L/min		
indications	pt. depending on hypoxic drive (COPD)	Resp failure Gas exch abn (pH<7.35) $PaCO_2$ > 45 mmHg $PaO_2 : FiO_2$ < 200 COPD acute excb.	OSA + Bipap ind
contraind		resp+ cardio arrest discomfort, ↑aspiration risk active vomit, ↑secretions recent GI, UAirway Surgery	
⊕	no rebreath no ↑dead space		hemodynamic support in ARF - cardio pulm edema
⊖	bulky noisy	nose abrasion Claustrophobia	doesn't augment tidal volume ↳ ARF limitation

Paediatrics (variable performance):

	Incubator	Oxygen Hood	Oxygen Tent
FiO_2	40-50 %.	80-90 %.	40-50 %.
flow	8-15 L/min	10-15 L/min	12-15 L/min
indications	neonates infants	neonates infants	kids
contraind			
⊕	transparent neutral thermal humid Oxygen deliv	transparent control of humidity oxygen temp	pt. can mone maint. humidity
⊖			