

Ventilators on the Fly - TeachIM Learner Handout

4 Basic Questions:

- What is the mode?
- What is the level of O2 support?
- Is the ventilation appropriate?
- How are the respiratory mechanics?

Mode

Mode	Classic square wave	Mandatory RR?	What you target	What you monitor	When to use
Pressure Control					
Volume Control					
Pressure Regulated Volume Control					
Pressure Support					

O2 Support

The level of oxygen support is primarily determined by _____ and _____.

Ventilation

Minute ventilation (V_E) = _____ x _____

Determine if ventilation is appropriate by looking at the _____.

Look for _____ to determine if ventilation is driven by the ventilator or patient.

Respiratory Mechanics

ΔP = _____ - _____

An elevated ΔP suggests an issue with _____ or _____.

(Applies to volume-targeted modes.)

Performing an _____ can help differentiate the cause.

Ventilators on the Fly - TeachIM Learner Handout – Answer Key

4 Basic Questions:

- What is the mode?
- What is the level of O2 support?
- Is the ventilation appropriate?
- How are the respiratory mechanics?

Mode

Mode	Classic square wave	Mandatory RR?	What you target	What you monitor	When to use
Pressure Control	Pressure	Yes	Inspiratory Pressure ($P_{Control}$)	Tidal Volume (V_T) and Minute Ventilation (V_E)	Patient comfort, precise airway pressure adjustment
Volume Control	Flow	Yes	Tidal Volume (V_T)	Peak Pressure and Plateau Pressure	ARDS (lung-protective tidal volumes)
Pressure Regulated Volume Control	Pressure	Yes	Tidal Volume (V_T)	Peak Pressure, Plateau Pressure, Achieved Tidal Volume (V_T)	Lung protective tidal volumes with comfort of pressure support
Pressure Support	Pressure	No	Pressure support ($P_{Support}$)	Tidal Volume (V_T), Respiratory Rate (RR), and Minute Ventilation (V_E)	SBTs, patient providing adequate RR

O2 Support

The level of oxygen support is primarily determined by **PEEP** and **FiO2**.

Ventilation

Minute ventilation (V_E) = **Tidal Volume (V_T)** x **Respiratory Rate (RR)**

Determine if ventilation is appropriate by looking at the **pH**.

Look for **spontaneous breaths** to determine if ventilation is driven by the ventilator or patient.

Respiratory Mechanics

ΔP = **Peak Pressure - PEEP**

An elevated ΔP suggests an issue with **Resistance** or **Compliance**. (Applies to volume-targeted modes.)

Performing an **Inspiratory Hold** can help differentiate the cause.