

Table 1: Some important factors affecting the understanding and successful clinical application of invasive mechanical ventilation

Clinical setting

- Post-operative or other “routine” mechanical ventilation in individuals with normal lungs
- Obstructive lung disease (COPD; asthma)
- Acute lung injury; acute respiratory distress syndrome
- Unilateral or localized pulmonary disease
- Neuromuscular disease
- Acute brain injury

Patient’s underlying pulmonary status

- No known pulmonary disease
- Obstructive lung disease (COPD, asthma)
- Restrictive pulmonary disease (interstitial fibrosis, etc)
- Chronic ventilatory failure (underlying CO₂ retention)

Volume vs pressure targeted ventilation

- Volume-targeted: delivered tidal volume fixed, peak airway pressure variable
- Pressure-targeted: peak airway pressure fixed, delivered tidal volume variable

Full vs partial ventilatory support

- Full ventilatory support: Ventilator does all the required work of breathing
- Partial ventilatory support: Patient must provide at least a portion of required work of breathing