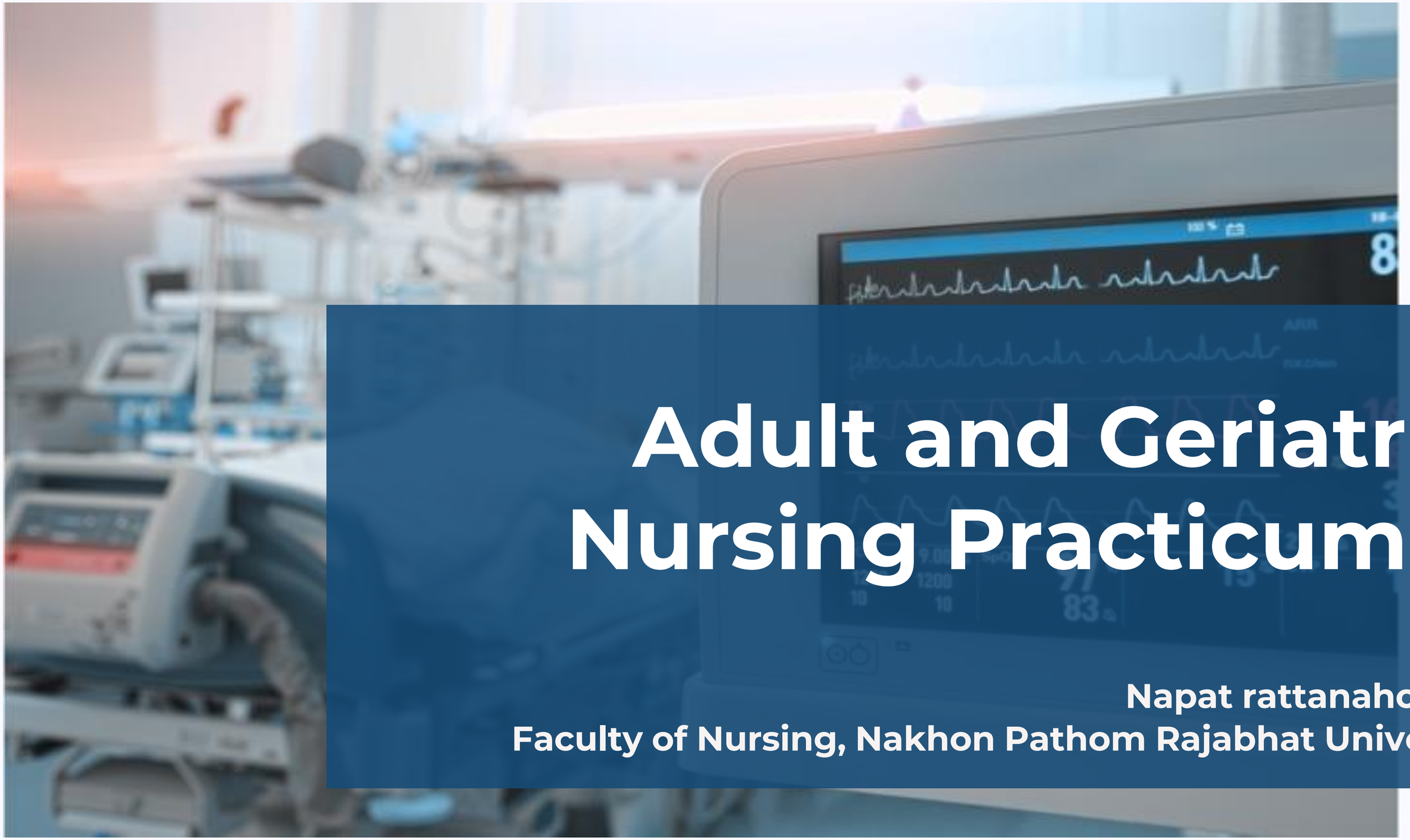

# มหาวิทยาลัยราชภัฏนครปฐม



# Adult and Geriatric Nursing Practicum 2

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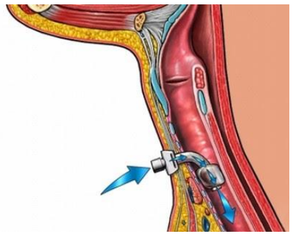
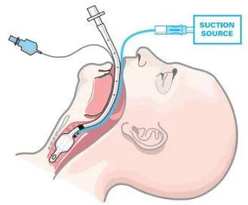
# Ventilatory support



tracheostomy tube




endotracheal tube, ET tube

ventilation

invasive ventilator

Non-invasive ventilator

BiPAP

CPAP

Control Mode

spontaneous Mode

pressure control

Volume control

pressure Support

(Mora, 2023)

# Ventilatory support

## Control Mode


pressure control ventilation

## Assist-control ventilation (A/C)

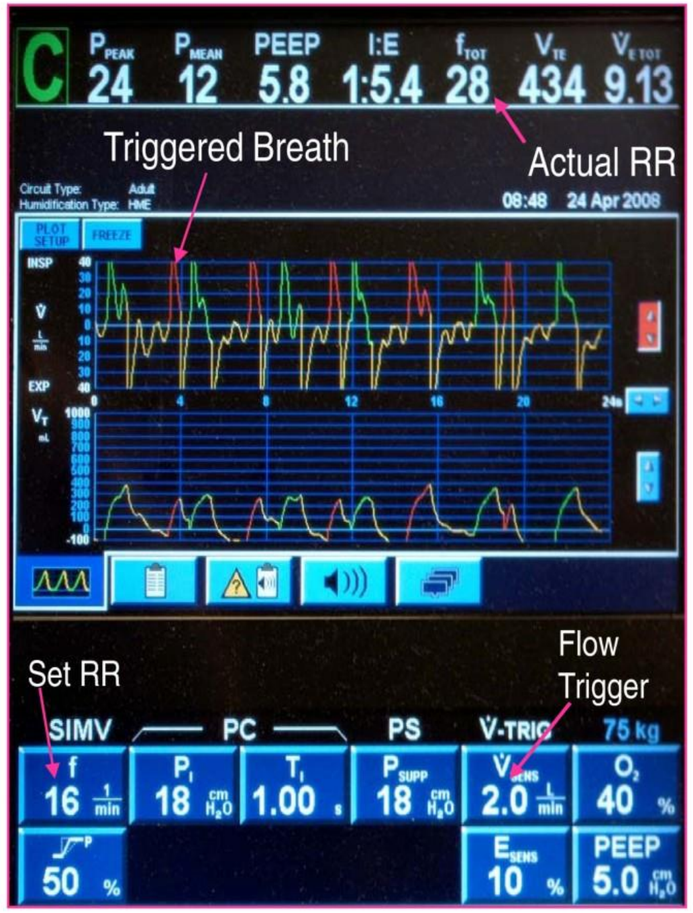

Volume control ventilation

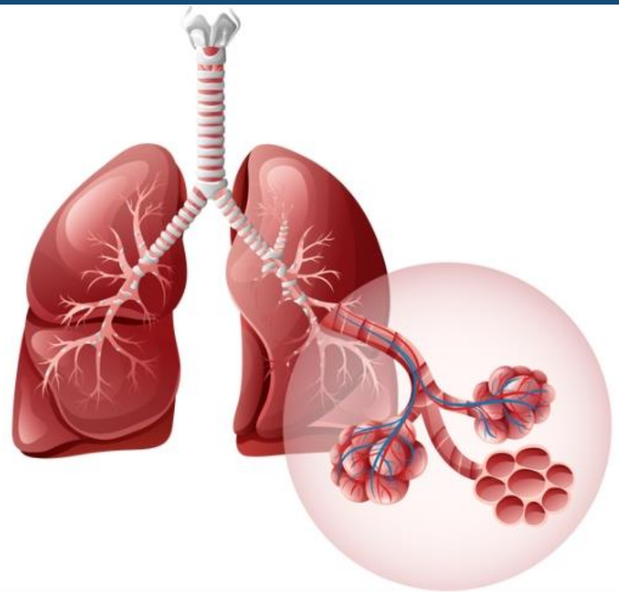
| | Tidal volume | RR | I/E ratio | PEEP | $FIO_2$ |
|---|---|---|---|---|---|
| Normal lungs | 8 mL/kg | 10-12 | 1:2 | 4 | 1.0 |
| Asthma/COPD | 6 mL/kg | 5-8 | 1:4 | 4 | 1.0 |
| ARDS | 6 mL/kg | 10-12 | 1:2 | 4-15 | 1.0 |
| Hypovolemia | 8 mL/kg | 10-12 | 1:2 | 0-4 | 1.0 |

# Ventilatory support

## spontaneous Mode


pressure Support



Synchronized intermittent mandatory ventilation (SIMV)

# Ventilatory support

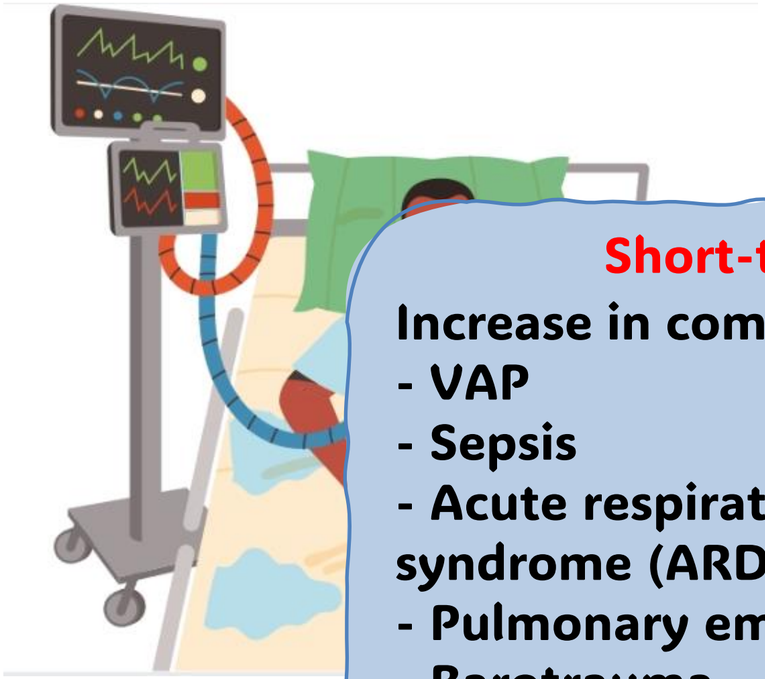
## Ventilator Alarms Setting

| Alarm | Setting |
|---|---|
| High minute ventilation | 10-15% > set or target minute volume |
| Low minute ventilation | 10-15% < set or target minute volume |
| High Vt | 10-15% > set or target Vt |
| Low Vt | 10-15% < set or target Vt |
| High-system pressure | 10 cmH20 > average peak airway pressure |
| Low-system pressure | 5-10 cmH20 < average peak airway pressure |

## alarm apnea

In Mode spontaneous Mode

# Ventilatory support



## Impact on Mechanically Ventilated Patients

Posing a significant burden to patients and caregivers

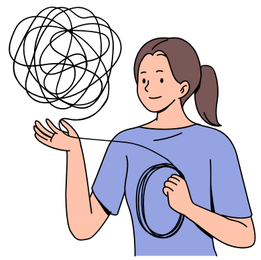
**Short-term**

**Increase in complications**
- **VAP**
- **Sepsis**
- **Acute respiratory distress syndrome (ARDS)**
- **Pulmonary embolism**
- **Barotrauma**
- **Pulmonary edema**

**Increase in health care costs**

**Increase in length of stay**

**Long-term**
- **Slower overall recovery time**
- **Debilitating physical disabilities**
- **Lingering cognitive dysfunction**
- **Psychiatric issues, including anxiety, depression, and post-traumatic stress disorder**



**(Martin, 2024)**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