

Appendix 1. This appendix was part of the submitted manuscript and has been peer reviewed. It is posted as supplied by the authors.

St Vincent’s Hospital Department of Critical Care ventilation Guidelines

Mechanical Ventilation – General

- Tidal volume ≤ 6 mL/kg PBW
Men: $50 + 0.91$ (Height in cm – 152.4 cm)
Women: $45.5 + 0.91$ (Height in cm – 152.4)
- Respiratory frequency for pH
- PEEP as required for $FiO_2 \leq 0.50$

Mechanical Ventilation – Acute Respiratory Distress Syndrome

Definition ARDS (‘Berlin’ definition, JAMA June 20 2012 Vol 307;23):

- Timing: within 1 week of a known clinical insult
- Bilateral infiltrates on CXR
- Origin of oedema and respiratory failure not fully explained by cardiac/fluid overload
- PaO_2/FiO_2 ratio:
Mild 200-300 with PEEP >5 cmH₂O
Moderate 100-200 with PEEP >5 cmH₂O
Severe <100 with PEEP >5 cmH₂O

Components:

- Pressure control mode (BiPAP, BiPAP/SIMV, PCV, PRCV, Bivent)
- Tidal volume ≤ 6 mL/kg PBW
- Reduce further to minimum 4 mL/kg if plateau pressure >30 cmH₂O
- Increase to 7-8 mL/kg if dyspnoea and plateau pressure <30 cmH₂O
- Frequency for pH > 7.15
- Plateau pressure > 30 cm H₂O only if:
 - Tidal volume <4 mL/kg
 - pH <7.15
- Standard PEEP combinations:

FiO ₂	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0
PEEP	5	5	8	8	10	10	10	12	14	14	14	16	18	18-24

- Aim for PaO₂ 55-80, SpO₂ 88-95.
- PEEP adjustments on order of consultant, the above table is a guide only.