

VERBAL COMMUNICATION USING PASSY MUIR VALVE WITHIN A VENTILATOR CIRCUIT

The early promotion of communication for patients classified as requiring prolonged ventilation can be beneficial both physically and psychologically (Happ, 2001; Hemsley *et al*, 2001). The insertion of a Passy Muir Valve (aqua) into the ventilator circuit will facilitate communication, improving the patients sense of well-being and may reduce weaning times (Batty, 2009). Passy Muir Valves are automatically closed at end of inspiration and therefore do not require a force of exhalation to close them. A normal breathing pattern, through the upper airway on exhalation is restored which will allow speech and independent secretion clearance. An increase in subglottic pressure and intrinsic PEEP is suggested, this will potentially reduce the risk of aspiration. Insertion of this valve into the ventilator circuit should be conducted by a skilled professional with sound knowledge of the ventilator, the patient and be preceded by a cuff deflation trial to ascertain suitability. A comprehensive explanation of the procedure needs to be undertaken before insertion so that the patient is fully aware of what to expect prior to the cuff being deflated (often the patient has had the cuff inflated for several days - this new sensation can be distressing). Ventilator settings can be adjusted / reduced for Passy Muir Valve insertion if patient is deemed appropriate. Preferably a fenestrated inner tube (with twin lumen tubes) would be used with the Passy Muir Valve but this is not essential. If there is adequate airflow around the outside of the traché tube then Passy Muir Valves can be used with single lumen tubes.

The Passy Muir Valve must only be inserted once the cuff of the traché tube is deflated.

To ensure the ventilator alarms do not continue activating when the expiratory limb of the ventilator is made redundant - due to expiratory air flow now being directed to the mouth, various ventilator adjustments will be required.

For **Draeger (Evita 4)** Ventilators:-

- In 'Alarm limits' go to 'monitoring' - turn off the 'flow' and 'O₂' monitoring.
- Also in 'Alarm limits' go to 'limits' - increase VT_i to the max of 4 litres.

For **Draeger (Evita XL)** Ventilators:-

- In 'Sensor parameters' go to the 'flow' tab and turn monitoring off. Repeat this procedure to turn the O₂ monitoring off.
- In 'Alarm limits' – increase VT_i to the max of 4 litres.

These steps will prevent the alarms from continuously activating, they will however, still activate if the patient does not attempt to vocalise.

One Suggestion for Passy Muir Valve inclusion in ventilator circuit

