TRACHEOSTOMY REVIEW AND MANAGEMENT SEVICE

CLINICAL PROCEDURE

PASSY MUIR VALVE (PMV) USE IN SPONTANEOUSLY BREATHING PATIENTS

Staff this document applies to

Medical Staff, Nurses, Speech Pathologists, Physiotherapists on all campuses, including ICU and in the community.

State any related Austin Health policies, procedures, or guidelines

Clinical Instruction Sheet – Schedule of Passy Muir Valve (PMV) Use in Spontaneously Breathing Patients

Clinical Instruction Sheet - Use of Portex Suctionaid & Blue Line Ultra Tracheostomy Tubes

Planned Tracheostomy Decannulation

Stridor in Adults

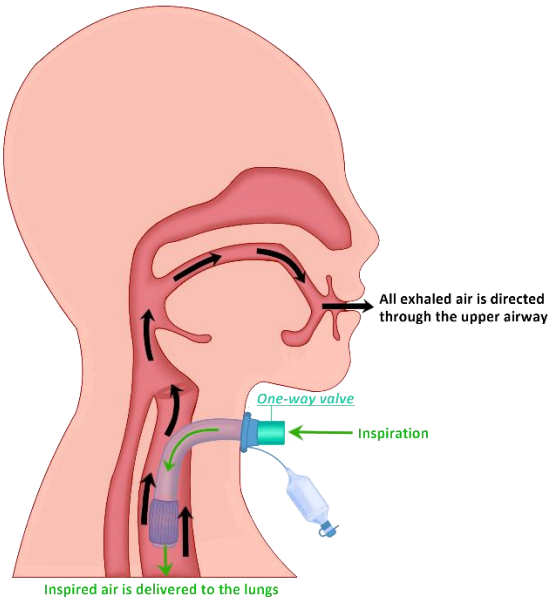
Tracheostomy Cuff Management

Definition

The Passy Muir Valve (PMV) is a one-way valve that opens upon inspiration and closes completely upon expiration. It fits the 15mm hub of any standard tracheostomy tube. A Passy Muir Valve must always be used with the tracheostomy cuff fully deflated. # 007 Aqua is the valve model most frequently used at Austin Health.

Rationale

- A one-way valve restores airflow through the upper airway which facilitates sensory and motor functions of voicing, coughing, swallowing and smell.



- Using a one-way valve is an important step in the decannulation process.

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Clinical Alert

The tracheostomy cuff must always be deflated when a Passy Muir Valve (PMV) is placed. Failure to deflate the cuff can result in immediate respiratory compromise/distress and/or death.

- The PMV should be removed when:
  - The patient is sleeping.
  - The patient exhibits respiratory distress +/- stridor including increased work of breathing.
  - Patient appears distressed or is in discomfort specifically when the PMV is on
  - The patient becomes unable to produce voice or there is a sudden change in their voice.

- Do not place the PMV under the following circumstances:
  - Increased or copious secretions
  - Sub-optimal humidification
  - Upper airway obstruction
  - Difficulty passing a suction catheter.
  - Severe coughing
  - Unstable cardiorespiratory status: The specific cardiorespiratory parameters that are acceptable may vary depending on the patient population. Liaise with the treating medical team regarding the acceptable cardiorespiratory parameters.
  - With a Bivona Fome-Cuf tracheostomy tube

- If a patient arrives with a one-way valve from another manufacturer, remove the valve and contact the treating Speech Pathologist to assess the patient with a PMV.
- Only staff trained in placement of PMV may use PMV. Completing the PMV e-learning package on ATLAS is highly recommended.

Who is authorised to perform this procedure?

- Following consultation with the treating medical staff, the Speech Pathologist will conduct the assessment for initial PMV placement. Assistance from treating Physiotherapist and/or Specialist Nurse may be called upon if indicated.
- If outside business hours, senior medical staff in ICU with training in valve placement can place the PMV for patient assessment. During business hours the Speech Pathologist will conduct formal assessment and establish the schedule for routine use if indicated.

Expected Outcome

- The patient will safely and comfortably wear the PMV.
- The patient will be able to voice, cough, clear secretions, and swallow saliva with increased ease.
- The patient will routinely use the PMV according to the schedule established by the Speech Pathologist

Equipment

- Routine tracheostomy personal protective equipment (PPE)
    - Clean gloves
    - Surgical mask
    - Safety shield, goggles, or glasses
    - Disposable apron (optional)
- Functioning suctioning equipment, suction catheters and Yankuer
- 10 ml syringe
- PMV (# 007 Aqua is the valve model most frequently used at Austin Health)

- Pulse oximetry during initial sessions or if patient status changes

Procedure

- Explain procedure to patient.
- Note baseline measures: HR, breathing patterns, RR and SpO2 if using oximeter.
- If a Suctionaid tracheostomy tube is in situ, use a syringe to aspirate the Suctionaid line and mouth to clear above-cuff secretions.
- Suction via tracheostomy
- Completely deflate cuff and suction via tracheostomy
- Check pilot balloon to ensure cuff is completely deflated.
- Secure the tracheostomy and place PMV on the tracheostomy with quarter clockwise turn.
- If patient's voice sounds wet or gurgly there may be secretions in the upper airway. Encourage the patient to bring those to the mouth.
- Clear mouth with Yankauer (if required)
- If patient cannot voice or demonstrates changes to heart rate, breathing patterns, respiratory patterns or SpO2, or is visibly distressed, do not use the PMV. Notify the Speech Pathologist, and if further deterioration occurs, call the appropriate medical response (e.g. UCR, MET call, Respond Blue)

Post Procedure

- Ensure patient is comfortable and able to voice as expected.
- Monitor patient closely for intolerance of the valve including increased work of breathing, anxiety, increased coughing.
- Remove the valve as per documented schedule or at any time if the patient does not tolerate the valve.
- Check the schedule for cuff deflation as per Speech Pathology recommendations and reinflate the cuff if required
- Document duration and tolerance of PMV use in the medical record.

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Legislation/References/Supporting Documents

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