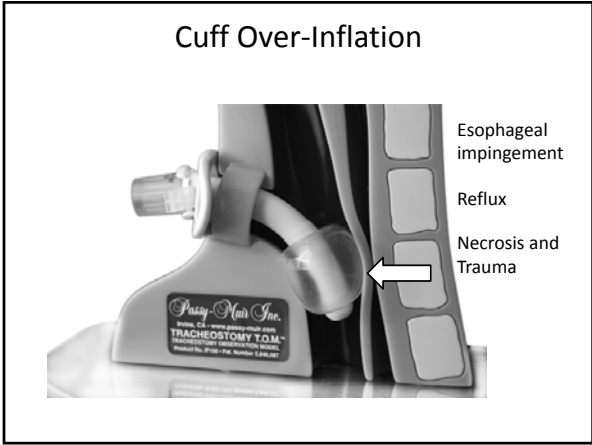
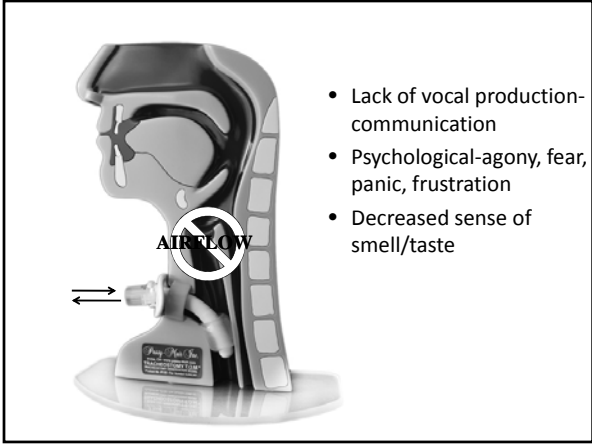


1. Clinical Complications of Tracheostomy
2. PMV Design
3. Benefits of PMV
4. Types of PMV
5. Patient Assessment
6. Application







Tracheostomy and Aspiration

- Does a cuff prevent aspiration?
- Definition
- Incidence of aspiration
 - 50% - 87% rate for trach and vent patients (Elpern et al., 1987, 1994, 2000; Tolep et al., 1996)
 - 75% silent aspiration

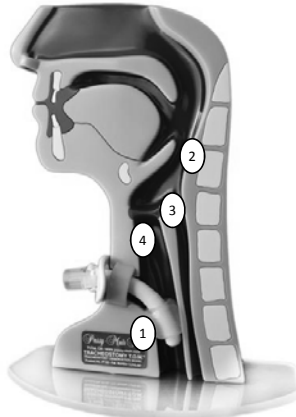




Title:
Personal:
Double-click to edit

REVIEW OF NORMAL SWALLOW PHYSIOLOGY

- Laryngeal Tethering
- Decreased Sensation in the Oropharynx
- Reduced Airway Closure
- Reduced Subglottic Air Pressure

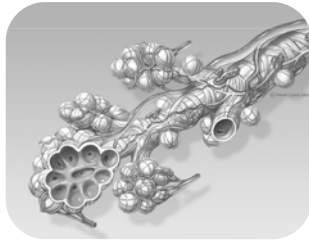


Decreased Secretion Control

- Removal of natural filtration and humidification system
- Decreases effectiveness of cough
- Cycle of irritation and secretion production

Decreased Physiologic PEEP

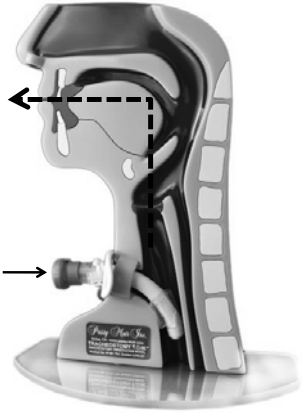
- Decreased gas exchange due to reduced surface area of alveoli
- Poor oxygenation
- Possible atelectasis



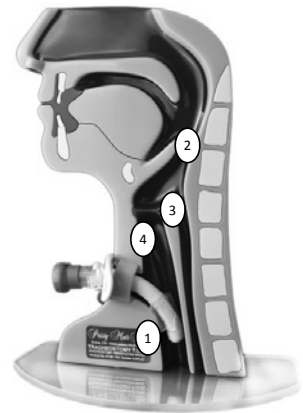
The Passy-Muir™ Family of Valves

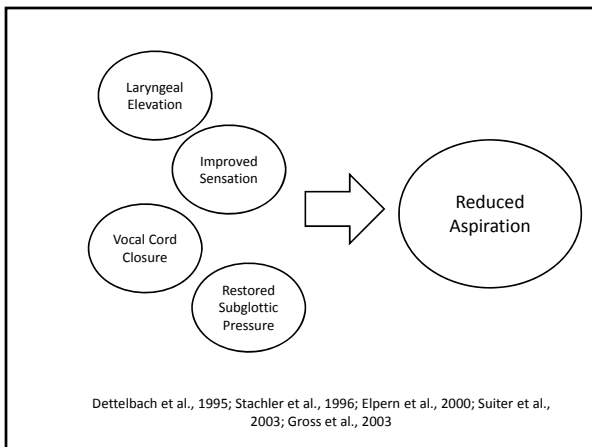


- Restoration of voice
- 100% airflow through vocal tract on exhalation
- Improved sense of smell and taste



- Decreased Laryngeal Tethering
- Increased Sensation in the Oropharynx
- Improved Airway Closure
- Restored Subglottic Air Pressure





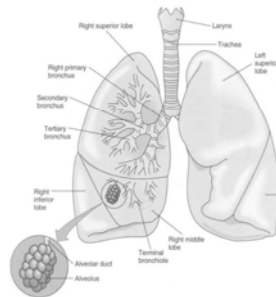
Improved Secretion Management

- Improved sensation and cough
- Decreased suctioning needs
- Decreased risk of tracheal damage

Lichtman et al., 1995

Restored physiological PEEP

- Improved gas exchange
- Improved oxygen saturation levels
- Decreased risk of atelectasis



Frey and Wood, 1995

Improves Decannulation

- Restoration of normal physiology
- Utilization of expiratory muscles
- Less WOB than capping, easier to tolerate

Light et al., 1989

Expedites Weaning

- Restoration of normal physiology
- Utilization of expiratory muscles
- Accustomed to more normal breathing pattern
- Able to communicate
- Develops confidence and motivation

Frey & Wood, 1991; Sierros, et. al. 2007

Cost Savings

Tube Feeding
Antibiotics/ICU Stay
Vent days/LOs
Suctioning Supplies
PMV (About \$3/day)

Quality of Life...

Priceless!

PMV™ 2000 (Clear) &
PMV 2001 (Purple Colored™)



PMV™ Secure It™



PMA™ 2000 Oxygen Adapter



PMV™ 007 (Aqua colored)

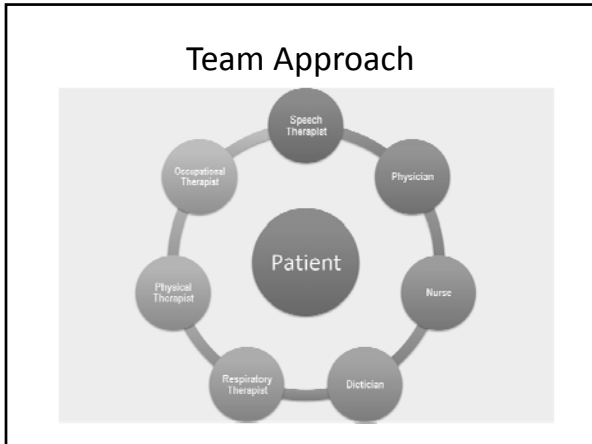


PMV™ 2020 and Adaptor



Patient Care Kit





- ### Patient Selection
- Awake, responsive, attempting to communicate
 - Medically stable
 - Able to tolerate cuff deflation
 - Vent status
 - Aspiration status
 - Able to manage secretions
 - Have a **patent** upper airway

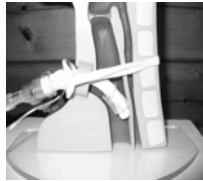
- ### Factors Affecting Upper Airway Patency
- Size of Tracheostomy Tube
 - Presence and Degree of Obstruction
 - Edema
 - Secretions
 - Foam-Filled Cuff
-
- The image shows a close-up of a tracheostomy tube. The cuff is visible, and the text on the device reads 'Pony Hair Inc. TRACHEOSTOMY TUBE'. The device is connected to a ventilator circuit.

To Assess for Upper Airway Patency

- Deflate cuff
- Ask patient to inhale
- Finger occlude and voice or cough on exhalation
- Use mirrors, cotton, feathers, whistles or bubbles to assist with the oral exhalation process.

Placement Guidelines

- Patient education
- Peer education
- Patient position
- Suctioning
- Achieve complete cuff deflation
- Use the warning label provided with packaging



Baseline Measurements

- Oxygenation
- Vital Signs
- Breath Sounds
- Color
- WOB
- Patient Responsiveness



Placement of PMV

- Gentle quarter turn twist while stabilizing the flange of tracheostomy tube



Transitioning and Troubleshooting

- Anxiety
- Airway patency
- Depression
- Breathing pattern changes

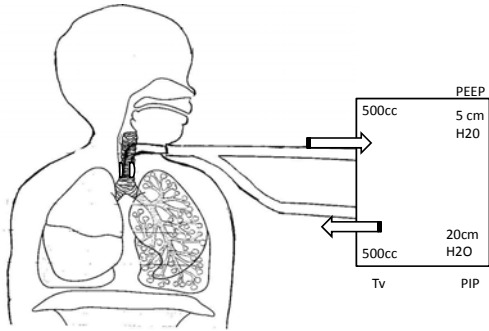
Ventilator Placement The Basics

- PMV invented for use with ventilator
- Team approach
- Any mode of ventilation
- Early use beneficial
- Cuff must be deflated

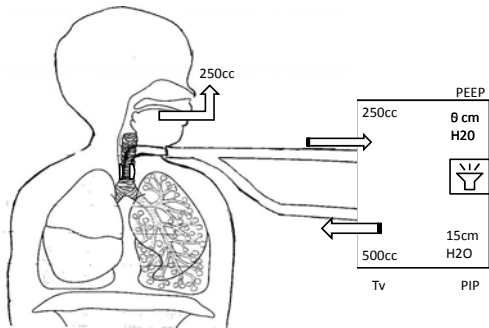
Ventilator Settings and Parameters

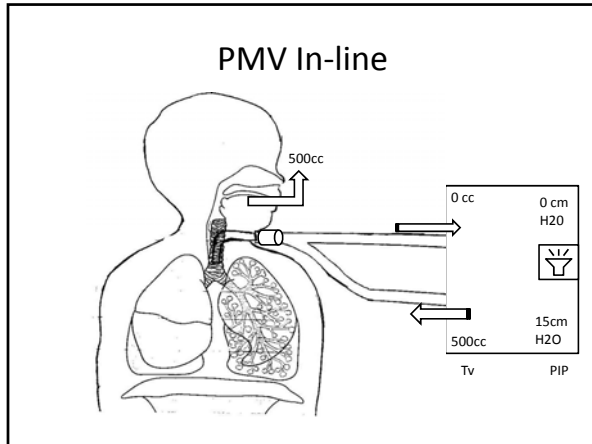
- Settings
 - Mode
 - Rate
 - Tidal Volume
 - FIO2
 - PEEP / CPAP
 - Pressure Support
 - Alarms
- Parameters
 - PIP
 - Exhaled Volume

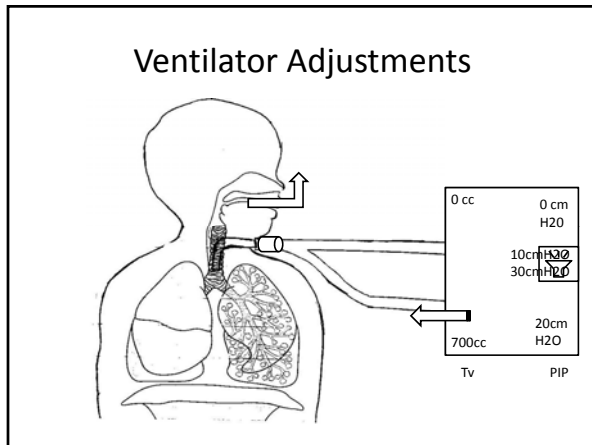
Cuff Inflated-Closed System



Cuff Deflated-Open System







Ventilator Assessment

- Slow cuff deflation
- Adjust PEEP
- Monitor pressure/volume loss
- Place PMV
- Compensate for volume/pressure loss
- Set alarms appropriately
- Assess humidification needs

0 cc 0 cm H₂O
10cm H₂O
30cm H₂O
700cc 20cm H₂O
Tv PIP

Transitioning & Troubleshooting

- Increased/excessive airflow thru the upper airway
- Excessive coughing
- Air trapping
- Breathing pattern
- Psychological issues

Care, Cleaning and Lifetime of the Passy-Muir Speaking Valves



- Average lifetime of 2 months

Educational Opportunities

WEBINARS

- Basic Application
- Ventilator Application-Advanced
- Pediatric Application
- Swallow and PMV
- Building a Trach Team
- Ventilator Basics for the Non-RT
- Pediatric Ventilator Application

• www.passy-muir.com
ASHA , AARC and California Board of Nursing Credit



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