CS6.4 Tracheostomy and Ventilator Management

Purpose

1. The aim of this policy and procedures is to outline the principles of management for patients under SAVVY care with a tracheostomy for clinicians. A tracheostomy is a surgical opening into the trachea below the larynx through which an indwelling tube is placed to overcome upper airway obstruction, facilitate mechanical ventilator support and/or the removal of tracheo-bronchial secretions.

Alignment with Practice Standards

1. High Intensity Daily Needs Module

Legislative Alignment

1. National Disability Insurance Scheme Act 2013

Key Responsible Executive

Chief Executive Officer

For More Support

Your People Manager

Policy Statement

1. Only a worker who has been trained and deemed competent by a particiapant's clinical team can provide care to a particiapant requiring tracheostomy or ventilator management and support.

2. To ensure SAVVY has the required information AND capability to meet a particiapant's needs, SAVVY will only provide care to particiapants requiring tracheostomy and ventilator management if the particiapant's existing clinical team provide
   a. an up-to-date, comprehensive care plan developed for the particiapant, including the particiapants emergency procedures and contacts, and
   b. training for two key workers and an assessment of competency prior to the particiapant's discharge from hospital (or if transfering from an existing provider, prior to the particiapant's transfer).

3. If a particiapant is transitioning into SAVVY care from another service provider and not from a hospital or community nursing team, the care plan, training and worker assessment, MUST be completed by the particiapant's clinical team and NOT the existing provider.

4. SAVVY will always seek to work with appropriate mainstream health providers such as community nursing teams to provide the right level of care for particiapants in the most cost effective manner and to manage continuity of care.

5. As per the NDIA practice standards: Skills descriptors (High Intensity Needs), and SAVVY's Local Health District (South East Sydney Local Health District, SESLHD), carers will be trained and assessed in the following competencies and skills by the discharging medical facility:
    a. Explain reasons for and purposes of the tracheostomy
    b. Describe the type and size of the current tracheostomy tube
    c. Describe and demonstrate Tracheostomy Tube stabilisation
    d. Demonstrate safe and effective suctioning of the tracheostomy tube including:
        i. Size of suction catheter/apparatus
        ii. Insertion depth of catheter
        iii. Length of suction procedure
        iv. Use of suction equipment
        v. Assessment of outcomes of procedure
        vi. Normal and abnormal sputum, especially tenacity and infection
    e. Demonstrate safe and effective care of the tracheostomy stoma and the skin of the neck including:
        i. Cleaning of stoma
        ii. Application of dressing products, if applicable
        iii. Listing signs of infection and poor skin integrity
    f. Provide effective humidification of inspired gases including:
        i. Explanation of the purposes of humidification
        ii. Demonstration of attachment of humidification devices including passive humidification attachment
        iii. When, why and how to use nebulised saline
    g. Identifies and justifies essential equipment to be with person at all times
    h. Demonstrates safe and effective care of all equipment including:
        i. Correct use, cleaning and maintenance
        ii. Identification of contact person for malfunctioning equipment
        iii. Demonstrates safe and effective care where home ventilation will be used, including:
        i. Correctly assembling ventilator equipment and circuit components
        ii. Correctly switching ventilator on and off
        iii. Correctly attaching/removing ventilator to/from tracheostomy
        iv. Demonstrate competence with inflating/deflating cuff and changing inner cannula (e.g. Between fenestrated and non-fenestrated) as needed to correctly attach/remove ventilator, as prescribed by home ventilation specialist
        v. Demonstrate awareness of ventilator alarms and how to respond to them
        vi. Demonstrate awareness of possible problems requiring immediate intervention that may arise during ventilation via tracheostomy, and appropriate knowledge of how to respond to these problems
        vii. Knowledge of how and when to clean equipment, change disposable items and perform basic machine maintenance such as changing filter

viii. Note: This competency only applies to patients on home ventilation

i. Identifies, articulates and demonstrates the appropriate action [on an airway mannequin] for emergencies including:
    i. Dislodged tube
    ii. Blocked airway
    iii. Acute respiratory distress
j. Demonstrates the following clinical skills on airway mannequin and patient:
    i. Changing of tracheostomy tube
    ii. Suctioning
    iii. Changing of tapes
    iv. Application of oxygen
k. Describes and demonstrates effective infection prevention principles including:
    i. Hand hygiene
    ii. Cleaning and storage of reusable equipment
l. Where to get further equipment consumables.

6. Review: particiapants care plans should be reviewed at a minimum each year. As part of the particiapants review, assigned care workers should complete refresher training and assessment of their skills and competencies in providing the particiapants care.

Definitions

1. Trachea: The anatomical structure used for breathing

2. Tracheostomy: An artificial opening in the trachea, which may be permanent or temporary

3. Tracheostomy tube: A tube placed through a tracheostomy to provide an airway and to remove secretions from the lungs

4. Stoma: An opening, either natural or surgically created, which connects a portion of the body cavity to the outside environment

5. Cannula: A tube that can be inserted into the body, often for the delivery or removal of fluid or air

6. Suction: The use of devices to clear airways of materials that would impede breathing or cause infections

7. Aseptic non-touch technique: Prevents microorganisms on hands from being introduced into a susceptible site

Delegations

Roles	Responsibilities
Board of Directors	• Endorse and ensure compliance with the Tracheostomy Management Policy and Procedure • Be familiar with the organisation's legislative requirements relating to the policy
CEO	• Manage and monitor compliance with this policy • Support staff competence and compliance with this policy and procedure • Develop a collaborative relationship with local community nursing providers in order to support particiapant care continuity of care.
Management	• Manage and monitor compliance with this policy • Support staff competence and compliance with this policy and procedure • Ensure any intake of a particiapant requiring tracheostomy and Ventilator care follows the policy requirements for documentation, training and assessment. • Monitor and address issues relating to continuity of care by ensuring any employee turnover or availability does not impact on particiapant care
Staff, volunteers, contractors and students	• Comply with the Tracheostomy Management Policy and Procedure • Complete training and assessment by the clinical team prior to a particiapant's transfer to SAVVY care • Follow the particiapant's individual care plan developed by the particiapants clinical team • Act in accordance with legislation and organisation's systems relating to the policy

Procedures - Tracheostomy Kit

1. A tracheostomy kit is to accompany the patient at all times and this must be checked each shift by the care worker caring for the patient to ensure all equipment is available.

2. A key concept of tracheostomy management is to ensure patency of the airway (tracheostomy tube). A blocked or partially blocked tracheostomy tube may cause severe breathing difficulties and this is a medical emergency. Immediate access to the tracheostomy kit (equipment) for the individual patient is essential.

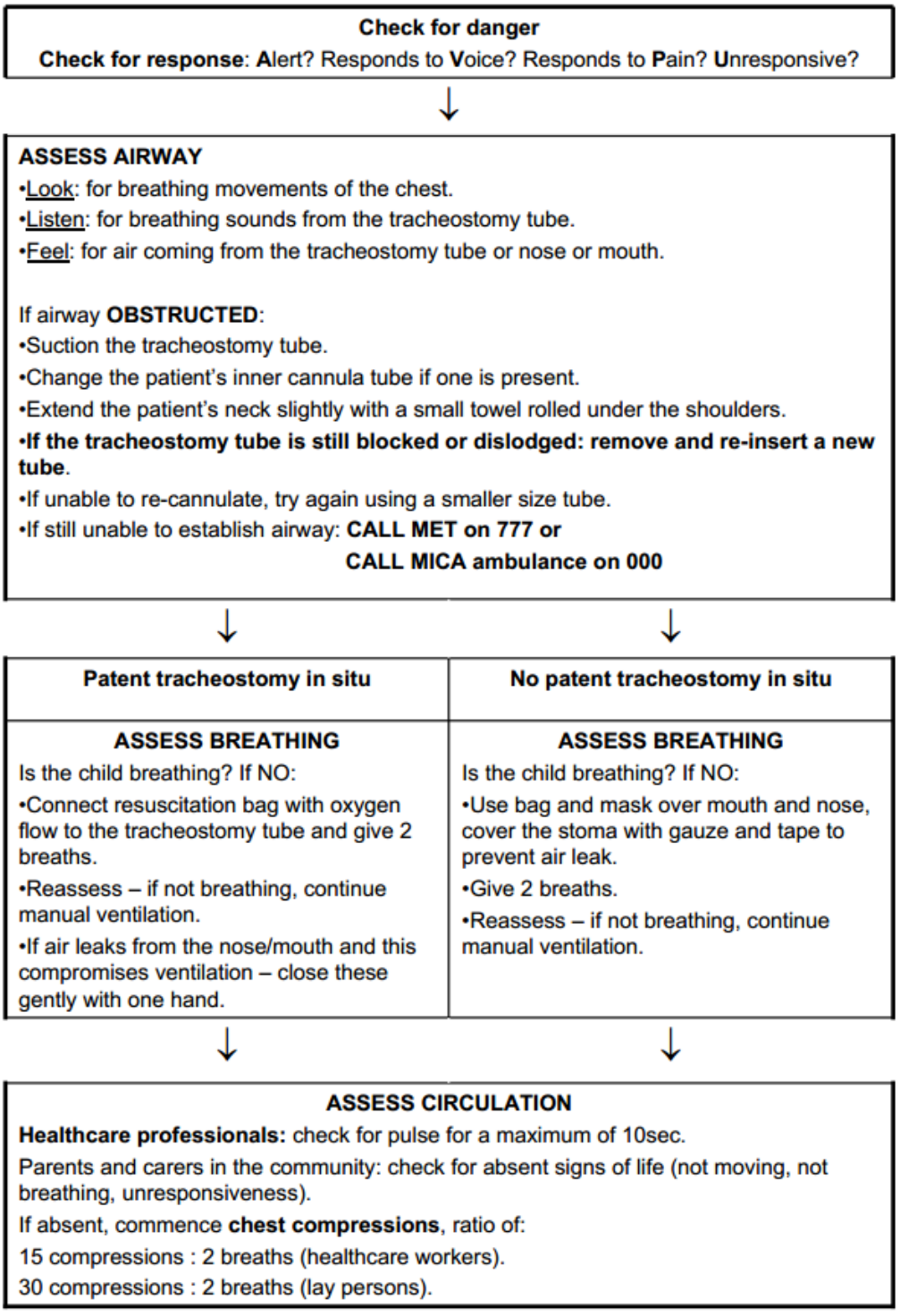
3. A Tracheostomy kit contains
    a. One tracheostomy tube of the same size insitu (with introducer if applicable)
    b. One tracheostomy tube one size smaller (with introducer if applicable)
    c. Spare inner tubes for double lumen trache tubes (if applicable)

d. Spare ties (cotton and/or Velcro)
e. Scissors
f. Resuscitation bag and mask (appropriate size for patient)
g. One way valve (community use only)
h. Wall or portable suction equipment
i. Appropriate size suction catheters
j. 0.9% sodium chloride ampoule and 1ml syringe
k. One Heat Moisture Exchanger filter (HME) or tracheostomy bib
l. Fenestrated gauze dressing
m. Cotton wool applicator sticks
n. Water based lubricant for tube changes
o. Mucous trap with suction catheter for emergency suction
p. Occlusive tape (i.e. sleek)
q. 10 ml syringe if cuffed tube insitu

4. Special safety considerations
    a. Ensure access to a working and charged phone and/or mobile phone at all times
    b. It is recommended that all patients have continuous pulse oximetry (SpO2) during all periods of sleep (day and night) and when out of line of sight of competent caregiver
    c. An information sheet that provides specific data regarding the date of last tracheostomy tube change, type and size of tracheostomy tube, (including inner diameter, outer diameter, length cuffed or uncuffed tube, cuff inflation, suctioning distance, critical alert if applicable), should be placed in each particiapant's care folder

5. Emergency Management
    a. The majority of particiapants with a tracheostomy are dependent on the tube as their primary airway.
    b. Cardiorespiratory arrest most commonly results from tracheostomy obstructions or accidental dislodgement of the tracheostomy tube from the airway.
    c. Obstruction may be due to thick secretions, mucous plug, blood clot, foreign body, or kinking or dislodgement of the tube.
    d. Early warning signs of obstruction include tachypnoea, increased work of breathing, abnormal breath sounds, tachycardia and a decrease in SpO2 levels.
    e. Late signs of obstruction include cyanosis, bradycardia and apnoea - do not wait for these to develop before intervening.

6. The Resuscitation Flowchart
    a. For a tracheostomy patient follows APLS principles.
    b. It is recommended that a copy of this flow chart is readily available e.g. placed in a prominent position in the particiapants care folder and home.



7. Complications
    a. Complications can be classified by timing: intraoperative; early (usually defined as the first postoperative week); late; and post-decannulation.
    b. Late complications include:
        i. Acute airway obstruction
        ii. Blocked tube (occluded cannula or mucous plugging)
        iii. Infection (localised to stoma or tracheo-bronchial)
        iv. Aspiration
        v. Tracheal trauma
        vi. Dislodged tube
        vii. Stomal or tracheal granulation tissue
        viii. Tracheal stenosis

8. Post operative management of a new tracheostomy
    a. SAVVY does not provide support to particiapants util they have been discharged from hospital and therefore do not provide post-operative management of a new tracheostomy

9. Routine Tracheostomy Management
    a. Routine tracheostomy management consists of:
        i. Equipment & environment
        ii. Supervision and monitoring
        iii. Humidification
        iv. Suctioning
        v. Management of abnormal secretions
        vi. Tracheostomy tube tie changes
        vii. Tracheostomy tube changes
        viii. Stoma care
        ix. Feeding and nutrition
        x. Oral care
        xi. Communication
        xii. Tracheostomy decannulation

10. Equipment and environment
    a. Each shift, the care worker should ensure
        i. All equipment for tracheostomy care is within easy access/reach
        ii. Tracheostomy kit to be available with the patient at all times
        iii. Suction equipment is set up with correct pressures
        iv. Emergency oxygen equipment is set up and in working order
        v. Appropriate monitoring equipment available and correct alarm parameters set

11. Supervision and monitoring
    a. Assessment of and decisions regarding required level of supervision, clinical observations and monitoring are to be documented clearly in the patient's care plan by the treating clinical team.
    b. Monitoring **may** include:
        i. Heart rate +/- continuous cardiac monitoring
        ii. Respiratory rate
        iii. Pulse oximetry continuous/overnight
        iv. Oxygen requirements
        v. Work of breathing
        vi. Temperature
        vii. Blood pressure
        viii. Behaviour - alert, irritable, lethargic
        ix. Additional monitoring and/or assessment: Blood gases, tcCO2 and etCO2 as per medical orders.

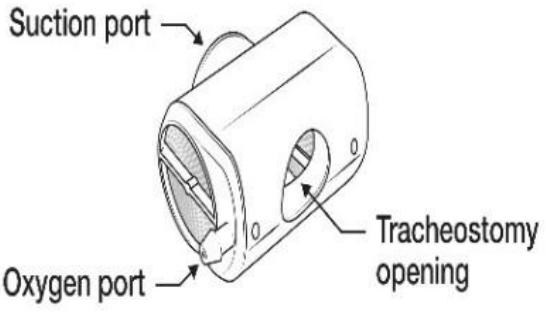
c. It is recommended that all patients have continuous pulse oximetry (SpO2) during all periods of sleep (day and night) and when out of line of sight.
d. Children with a tracheostomy tube should be closely supervised when bathing or showering. They should also wear a HME filter or tracheostomy bib filter (unless on CPAP or ventilation) to minimise the risk of aspiration.

12. Leaving the home during care
    a. The particiapant's ability to leave the home is assessed by the clinical team and outlined in the particiapant's care plan. This assessment will be based on:
        i. particiapants' clinical stability, clinical vulnerability.
        ii. Caregiver competency in tracheostomy care – including knowledge and skill in airway (tracheostomy) emergency management.
    b. When leaving the home, the tracheostomy kit MUST accompanies the particiapant at all times

13. Humidification
    a. A tracheostomy tube bypasses the upper airway and therefore prevents the normal humidification and filtration of inhaled air via the upper airway. Unless air inhaled via the tracheostomy tube is humidified, the epithelium of the trachea and bronchi will become dry, increasing the potential for tube blockage. Tracheal humidification can be provided by a heated humidifier or Heat and Moisture Exchanger (HME) or a Tracheostomy bib filter.

14. Heated humidification
    a. Delivers gas at body temperature saturated with water which prevents the thickening of secretions. The temperature is set at 37°C delivering a temperature ranging from 36.5°C - 37.5°C at the tracheostomy site. Heated humidification for tracheostomy patients should be delivered via a humidifier. Indications for the use of heated humidification include:
        i. Oxygen delivery via tracheostomy mask
        ii. Mechanical Ventilation
        iii. Respiratory infection with increased secretions
        iv. Management of thick secretions

15. Heat Moisture Exchanger (HME)
    a. Contains a hygroscopic paper surface that absorbs the moisture in expired air. Upon inspiration the air passes over the hygroscopic paper surface and moistens and warms the air that passes into the airway.
        i. HME is recommended for all patients with a tracheostomy tube.
        ii. HME fit directly onto the tracheostomy tube.
        iii. **Do not wet the HME filter prior to use**
        iv. HME are changed daily or as needed if the filter appears to be excessively moist or blocked.
        v. HME with oxygen and suction port are suitable for low flow oxygen administration



16. Tracheostomy bibs
    a. Consist of a specialised foam that traps the moisture in the expired air, upon inspiration the foam moistens and warms the air that passes into the airway.
        i. At the RCH BuchananTM tracheostomy bibs are used.
        ii. These are changed daily or more frequently as required
        iii. Tracheostomy bibs are reusable - hand wash in warm water using a mild detergent/soap, then rinse thoroughly and allow to air dry.
        iv. Tracheostomy bibs should be discarded monthly or more frequently if discoloured or the material is damaged.

17. Suctioning
    a. Suctioning of the tracheostomy tube is necessary to remove mucus, maintain a patent airway, and avoid tracheostomy tube blockages. The frequency of suctioning varies and is based on individual patient assessment.
    b. Indications for suctioning include:
        i. Audible or visual signs of secretions in the tube
        ii. Signs of respiratory distress
        iii. Suspicion of a blocked or partially blocked tube
        iv. Inability by the child to clear the tube by coughing out the secretions
        v. Vomiting
        vi. Desaturation on pulse oximetry
        vii. Changes in ventilation pressures (in ventilated children)
        viii. Request by the child for suction (older children)
    c. Safety considerations:
        i. Tracheal damage may be caused by suctioning. This can be minimised by using the appropriate sized suction catheter, appropriate suction pressures and only suctioning within the tracheostomy tube.
        ii. The depth of insertion of the suction catheter needs to be determined prior to suctioning. Using a spare tracheostomy tube of the same type and size and a suction catheter insert the suction catheter to measure the distance from the length of the tracheostomy tube 15mm connector to the end of the tracheostomy tube. Ensure the tip of the suction catheter remains with-in the tracheostomy tube.
        iii. Record the required suction depth on the tape measure placed at the bedside and in the patient records. Attach the tape measure to the cot/bedside/suction machine for future use.
        iv. Use pre - measured suction catheters (where available) to ensure accurate suction depth
        v. The pressure setting for tracheal suctioning is 80-120mmHg (10-16kpa). To avoid tracheal damage the suction pressure setting should not exceed 120mmHg/16kpa.
        vi. It is recommended that the episode of suctioning (including passing the catheter and suctioning the tracheostomy tube) is completed within 5-10 seconds.
    d. Equipment:
        i. Suction apparatus (wall attachment or portable unit)
        ii. Suction canister
        iii. Tubing
        iv. Suction catheter
        v. Sterile water
    e. Table 1: recommended suction catheter sizes

Tracheostomy tube size (in mm)	**3.0mm**	**3.5mm**	**4.0mm**	**4.5mm**	**5.0mm**	**6.0mm**	**7.0+ mm**
Recommended suction catheter size (Fr)	7	8	8	10	10	10 -12	12

18. Preparation
    a. Ensure Tracheostomy Kit is present
    b. Appropriate size suction catheters (with graduations if available)
    c. Tape measure with depth required for tracheostomy tube suctioning
    d. Appropriate suction pressure: correct suction pressure for use on a tracheostomy tube is **80-120mmHg maximum when occluded**. The Medigas suction gauges used on the wards are measured in kPa. **The equivalent of 80- 120mmHg is 10-16kPa**.

19. Procedure
    a. Explain to the patient and their family that you are going to suction the tracheostomy tube.
    b. Apply eye protection
    c. Perform hand hygiene, apply non-sterile gloves
    d. Remove HME, mask or circuit
    e. Peel open suction catheter end and attach to suction tubing, check and adjust suction pressure gauge to between 80 – 120 mmHg.
    f. Utilising a non-touch technique gently introduce the suction catheter tip into the tracheostomy tube to the pre-measured depth.
    g. Apply finger to suction catheter hole & gently rotate the catheter while withdrawing. **Each suction should not be any longer than 5-10 seconds.**
    h. Assess the patient's respiratory rate, skin colour and/or oximetry reading to ensure the patient has not been compromised during the procedure.
    i. Repeat the suction as indicated by the patient's individual condition.
    j. Look at the secretions in the suction tubing - they should normally be clear or white and move easily through the tubing. Document changes from normal colour and consistency and notify the treating team if the secretions are abnormal colour or consistency.
    k. Rinse the suction catheter with **sterile water** decanted into a container (not directly from the bottle).
    l. Replace suction catheter into the packaging
    m. Dispose of waste, remove gloves and perform hand hygiene
    n. Note:
        i. Suction catheters are to be routinely replaced every 24 hours or at any time if contaminated or blocked by secretions.
        ii. Suction water/and the container to be replaced every 24 hours.
        iii. **Routine use of 0.9% sodium chloride is not recommended** as there is little clinical evidence to support this. However, in situations where this may be of benefit e.g., thick secretions and/or to stimulate a cough 0.5ml of 0.9% sodium chloride can be instilled into the tracheostomy tube immediately prior to the suction procedure.

20. Special safety considerations
    a. Some patients may require assisted ventilation before and after suctioning. If required, this will be requested by the parent medical team or Respiratory CNC.
    b. If the correct size suction catheter does not pass easily into the tracheostomy tube, suspect a blocked or partially blocked tube and prepare for immediate tracheostomy tube change.

21. Management of abnormal secretions
    a. Changes in secretions e.g. blood stained or yellow and green secretions may indicate infection and or trauma of the airway.
    b. Notify the parent team for review who may request sending a sputum specimen for culture and sensitivity and consider commencement of antibiotics.
    c. Persistent blood stained secretions from the tracheostomy tube need to be investigated to determine the cause.

22. Tracheostomy tie changes
    a. If tie changes are required before the first tube change – it is imperative that the procedure must be undertaken with both medical and nursing staff present who are able to reinsert the tracheostomy tube in case of accidental decannulation and the appropriate equipment is available at the bedside.
    b. Tracheostomy tie changes are performed **daily** in conjunction with stoma care, or as required if they become wet or soiled to maintain skin integrity.
    c. It is preferable to secure new ties before removing the old ties
    d. As there is a potential risk for tracheostomy tube dislodgement when attending to tie changes a **minimum of two people** who are competent in tracheostomy care are required to undertake tracheostomy tie changes.
    e. During the tracheostomy tie change, **if the old ties are removed prior to securing the new ties, one person is to maintain the airway by securing the tracheostomy tube in place and not removing the hand until the new tracheostomy ties are secured.** The other person inserts the new ties into the flange and secures around the child's neck.
    f. **If the ties become loose it is a priority to re-secure immediately.**
    g. Equipment
        i. Tracheostomy kit
        ii. Two equal lengths of cotton ties (approximately 40cm) or
        iii. Velcro ties (for patients older than 6 years)
    h. Procedure for changing cotton ties
        i. Explain to the patient and their family that you are going to change the tracheostomy ties.
        ii. Apply eye protection
        iii. Perform hand hygiene, apply non-sterile gloves
        iv. Prepare two equal lengths of ties long enough to go around the child's neck.
        v. Position the patient; an infant or child may lie down with the neck gently extended by a small rolled towel placed under the child's shoulders. An older child may like to sit up in a bed or chair
        vi. Insert a clean tie into the holes on each side of the flange
        vii. On each side tie a single loop approximately 0.5cm from the flange on the tracheostomy tube.
        viii. Then tie both sides together in a bow to secure.
        ix. Check the tension of the ties.
        x. Allow one finger to fit snugly between the skin and the ties.
        xi. Re-tie into a double (reef) knot to secure.
        xii. Cut off excess length of ties leaving approximately 3cm.
        xiii. Using scissors remove old ties and recheck tension of new ties.
        xiv. Dispose of waste, remove gloves, and perform hand hygiene.
        xv. Observe around the patient's neck to check skin integrity.
    i. **NB:** The old ties are to remain insitu until the clean ties are secured**. In the event of removing existing ties prior to securing the tube with clean ties it is recommended a second person is present to hold the tracheostomy tube ensuring it remains in place until the ties are secured.**

23. Procedure for changing Velcro ties
    a. Changing Velcro ties is a two person procedure.
    b. Check the Velcro on the tracheostomy ties prior to each use to ensure adhesiveness. If not adherent, discard and replace.
    c. Apply eye protection
    d. Perform hand hygiene, apply non-sterile gloves
    e. One person holds the tracheostomy tube securely in place.
    f. The second person removes the existing Velcro ties and then inserts the clean Velcro ties through one side of the flange, passing the tie around the back of the patient's neck and inserting the Velcro tie through the other side of the flange.
    g. Adjust the ties to allow one finger to fit snugly between the skin and the ties.

h. Check to ensure the Velcro is securely fastened
i. Dispose of waste, remove gloves, and perform hand hygiene.
j. Observe the patient's neck to check skin integrity.
k. Wash Velcro ties daily in warm, soapy water, rinse and allow to dry completely before re-using.

24. Tracheostomy tube changes
    a. The frequency of a tracheostomy tube changes is determined by the Respiratory and ENT teams except in an **emergency situation**. This can vary depending on the patient's individual needs and tracheostomy tube type.
    b. **A minimum of two people** who are competent in tracheostomy care are required for all tracheostomy tube changes (except in an **emergency** if a second person is not readily available – e.g. in transit).
    c. The tube change should occur before a meal or at least one-hour after to minimise the risk of aspiration.
    d. The tube change procedure is performed using standard aseptic principles using non-touch technique.
    e. Equipment
        i. Tracheostomy Kit
        ii. Suction device and appropriate sized suction catheters
        iii. Small towel (rolled to place under the patient's shoulders to extend their neck)
        iv. A cot sheet to wrap the patient (age dependant)
        v. Appropriate light/ illumination
    f. Preparation
        i. Apply eye protection
        ii. Perform hand hygiene, apply non-sterile gloves
        iii. Prepare the equipment on a clean surface area
        iv. Prepare a new tracheostomy tube by removing it from the packaging/container, check the expiry dates and inspect for any signs of damage to the tube and then thread the ties into the flange and tie.
        v. Ensure the spare smaller sized tracheostomy tube is available within arm's reach
        vi. If using Velcro ties insert the ties on one side of the flange only
        vii. Clearly explain the procedure to the patient and their family/carer.
        viii. Consider distraction techniques.
        ix. Place the rolled towel under the patient's shoulders to extend their neck (unless contraindicated). The particiapant may also find it more comfortable to sit upright with their head tilted back.
        x. Position the particiapant so that you have good visibility and access to the stoma. If necessary extend the neck further and open the stoma wider by using your thumb and forefinger.
        xi. Suction the existing tracheostomy tube immediately before removing the existing tube and inserting the new one.
        xii. Dispose of waste, remove gloves, and perform hand hygiene.
    g. Procedure
        i. **Person 1** holds the existing tube with their hand and keeps secured in place
        ii. **Person 2** cuts and removes the cotton ties from around the particiapant's neck. If using Velcro ties - undo and remove from the tracheostomy tube flange.
        iii. **Person 2** holding the new tube asks **person 1** to remove existing tracheostomy tube
        iv. **Person 2** immediately inserts the new tube into the stoma and removes the introducer (if applicable).
        v. **Person 2** holds the tube securely in place while **Person 1** ties and secures the tracheostomy ties
        vi. **Person 1** checks the tension of the ties to allow that one finger will fit snugly/firmly between the skin and the ties, adjust if necessary. If using cotton ties, finish by

making a double (reef) knot and cut off any excess fabric leaving approximately 3cm.

h. Observe the particiapant immediately after the tube change to check they are breathing normally with no signs of respiratory distress and that air is moving in and out of the tube by:
    i. listening for sounds of air coming out of the tube
    ii. looking at the rise and fall of the chest
    iii. feeling with your hand for a flow of air
    iv. Check the tube for blockages, damage and/or wear and tear
    v. Unless instructed otherwise, all tracheostomy tubes are a single use only item
    vi. Single use tracheostomy tubes should be used once only and discarded after every tube change. Do not clean or re-use single use tubes.
    vii. Clean reusable tracheostomy tubes, wash and dry reusable tubes according to the manufacturer's recommendations.
    viii. Dispose of waste, remove gloves, and perform hand hygiene.
    ix. Document procedure and device information in the patient medical record as per requirements stated below.
    x. **Note:** If unable to reinsert tracheostomy tube follow emergency procedure.

25. Safety considerations
    a. A rare complication is for the tube to slip into a false passage instead of the airway. If there are any signs of breathing difficulties/respiratory distress remove the tube and reinsert (a new tube) via the stoma into the airway.
    b. Difficulties in re-inserting the tracheostomy tube can occur at any time. These occur usually as a result of one of the following:
        i. False tract
        ii. Patient agitation or distress
        iii. Closure of the stoma
        iv. Spasm of the trachea
        v. Stoma is blocked by scar tissue (granuloma)
        vi. Skin flaps
        vii. Structural airway abnormalities e.g.: Tracheomalacia/Bronchomalacia or tracheal granulations
    c. At times the difficulty is for no obvious reason and cannot be explained

26. Stoma care
    a. Care of the stoma is commenced in the immediate post-operative period, and is ongoing.
    b. Inspect the stoma area at least daily to ensure the skin is clean and dry to maintain skin integrity and avoid breakdown
    c. Daily cleaning of the stoma is recommended using 0.9% sterile saline solution.
    d. After daily cleaning, ensure dressing inserted at stoma site
    e. Equipment
        i. Tracheostomy kit
        ii. Fenestrated gauze dressing
        iii. 0.9% sodium chloride
        iv. Cotton wool applicator sticks
    f. Preparation
        i. Apply eye protection
        ii. Perform hand hygiene, apply non-sterile gloves
        iii. Collect and prepare all equipment for procedure on a clean surface area
    g. Procedure
        i. Clearly explain the procedure to the patient and their family/carer
        ii. Perform hand hygiene
        iii. Use a standard aseptic technique using non-touch technique.
        iv. Position the patient. Either lay on their back with a small rolled towel under the shoulders or to sit up in a bed or chair.
        v. Perform hand hygiene and apply non-sterile gloves

vi. Remove fenestrated dressing from around stoma
vii. Inspect the stoma area around the tracheostomy tube
viii. Perform hand hygiene and apply non-sterile gloves
ix. Clean stoma with cotton wool applicator sticks moistened with 0.9% sodium chloride. Use each cotton wool applicator stick **once only** taking it from one side of the stoma opening to the other and then discard in waste.
x. Continue cleaning stoma area as above with a new cotton wool applicator stick each time until the skin area is free of secretions, crusting and discharge.
xi. Allow skin to air dry or use a dry cotton wool applicator stick to dry.
xii. Insert the fenestrated gauze under the flanges (wings) of the tracheostomy tube to prevent chafing of the skin.
xiii. Dispose of waste, remove gloves, and perform hand hygiene.
xiv. **Avoid** using any powders or creams on the skin around the stoma unless prescribed by a doctor or respiratory nurse consultants as powders or creams could cause further irritation.

h. Special considerations
   i. If signs of redness or excessive exudate present, consider using a non-adhesive hydro cellular foam dressing e.g. Allevyn®.
   ii. If visible signs of infection are present - contact the particiapant clinical team and consider obtaining a swab specimen for culture and sensitivity.
   iii. If there are any signs of granulation tissue liaise with the particiapant's clinical team for appropriate management.
   iv. The care of the stoma includes routine (minimum - daily) observation of the site and accurate documentation of the findings including the presence of any of the following:
      1. Redness
      2. Swelling
      3. Evidence of granulation tissue
      4. Exudate
      5. Increased discomfort or pain at the site
      6. Offensive odour
i. Refer to the particiapant's care plan or contact the clinical team for advice on the frequency and type of dressing required.

27. Feeding and nutrition
   a. The tracheostomy tube may have an impact on the particiapant's ability to swallow safely, therefore a swallowing evaluation by a speech pathologist should have been completed prior to Buji providing care. The speech pathologist's recommendations on the optimum method of feeding as well as the types and consistency of foods and liquids should be included in the particiapants care plan.

28. Oral care
   a. Patients with a tracheostomy have altered upper airway function and may have increased oral care requirements. Mouth care should be documented in the particiapant's care plan.

29. Communication
   a. The tracheostomy may impact on the particiapant's ability to produce a normal voice.
   b. Vocalisation depends on several factors such as
      i. Severity of airway obstruction
      ii. Extent of vocal cord function
      iii. The size and type of the tracheostomy tube insitu
      iv. Respiratory muscle strength
      v. Cognitive ability and age related ability
   c. Communication aides include
      i. Pen and paper

ii. Alphabet board
iii. Picture communication device
iv. Electronic devices - phone/tablets
v. Teaching manual for Auslan signing
vi. One-way speaking valve attachment

d. For particiapants with established tracheostomy tubes it is essential that the methods used for communication are identified via discussion with the patient (age appropriate), and the parent/primary caregivers. These methods should be documented in the particiapants care plan AND verbally handed over to SAVVY Care workers to ensure adequate communication and appropriate understanding of the patient and their needs.

30. One- way speaking valves
    a. One-way speaking valves are a small plastic device with a silicone one-way valve; they sit on the end of the tracheostomy tube.
    b. The one-way valve opens on inspiration allowing air to enter the tracheostomy tube and closes on exhalation directing air up through the trachea, larynx and nose and mouth as in normal breathing and normal speech.
    c. Not all particiapants will be able to produce vocal sounds or voice when the speaking valve is first used.
    d. Benefits of using a one-way speaking valve include:
        i. Enhancing normal flow of air through the airway/nose and mouth
        ii. Restoration of physiological PEEP
        iii. Louder and clearer voice
        iv. Improved ability to taste and smell food
        v. Improved secretion management
        vi. Improved protection of the airways during swallowing and feeding
        vii. Improves development of speech and babbling in infants/toddlers
    e. Safety precautions when using one-way speaking valves:
        i. If the particiapant has severe airway obstruction the speaking valve should not be used.
        ii. In cuffed tracheostomy tubes - ensure the cuff is completely deflated.
        iii. The one-way speaking valve should not be worn when the particiapant is sleeping.
        iv. One-way speaking valves do not humidify the air - therefore may be unsuitable for particiapants with copious thick secretions.
        v. If the one-way speaking valve is not functioning properly (i.e. sticking, noisy or vibrates) or the particiapant shows signs of respiratory distress/discomfort, then remove the valve immediately and replace.
        vi. Do not use in combination with HME (heat moisture exchanger)
        vii. Ensure the one-way speaking valve is clean and not damaged in any way before each use.
        viii. Discard and replace immediately if any signs of wear/tear or damage are noted.
        ix. Remove valve before aerosol/nebulizer medication is administered
    f. Care and cleaning of the valve:
        i. The one-way speaking valve should be cleaned at least daily after use by washing in warm mild soapy water, then rinsed thoroughly and allowed to air dry completely before reuse.
        ii. Once dry and when not in use, it should be stored in an appropriate storage container
        iii. Dispose of waste, remove gloves, and perform hand hygiene.
    g. To avoid damage to the valve:
        i. **do not** wash in hot water
        ii. **do not** use a brush on the valve
        iii. **do not** use alcohol, peroxide or bleach to clean the valve

31. Documentation
    a. Ensure all written documentation related to the management of a particiapant with a tracheostomy is in accordance with the SAVVY particiapant Record Management policy.

b. Record the reason and type of the interventions performed relating to tracheostomy care and appropriate outcomes in the progress notes and flow sheets assessment.
c. These include:
    i. Suctioning (amount, colour and consistency of secretions)
    ii. Tracheostomy cares performed including tie changes and stoma dressings
    iii. Stoma condition (at least daily review and ongoing documentation and any changes e.g. signs of infection)
    iv. When a tracheostomy tube change (routine or emergency) is performed document the date and time of the tracheostomy insertion, name of person who inserted the tube, size and type of tube inserted (including inner and outer diameter, tube length and suction depth), Lot number, expiry date of the tracheostomy tube, patient condition throughout and following the tube change and any difficulties experienced during or after the tracheostomy tube change.

References to other SAVVY policies and external sources

1. CS6.1 High Intensity Care
2. The Royal Children's Hospital Melbourne, Tracheostomy Management Clinical Guidelines for Nurses
3. NSW Health, South Eastern Sydney Local Health District Tracheostomy Clinical Management Procedures for Adults Inpatients

Summary of attachments

1. Nil

Version Control

1. 1 April 2023 - New Policy Creation