

**TRACHEOSTOMY CARE FOR
HEALTHCARE PROFESSIONALS**

A SELF LEARNING PACKAGE

THEORY AND PRACTICAL ASSESSMENTS

TRACHEOSTOMY CARE

FOR

HEALTHCARE PROFESSIONALS

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This self directed learning package is adapted from the work collaboratively produced by the Royal Cornwall NHS Trust, Plymouth NHS Trust and South Devon Healthcare Trust.

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SELF LEARNING PACKAGE

TRACHEOSTOMY CARE

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AIMS AND OBJECTIVES

Aims

- To educate and train healthcare professionals to perform tracheostomy care safely and competently
- The skill will be in accordance with local Trust procedures, with underpinning theoretical knowledge to ensure evidence based practice

Objectives

- For all healthcare professionals (HCPs) to be aware of and adhere to SDHT **Tracheostomy Guidelines** *ref number 0280*
- Patients will receive the best care and treatment in accordance with current understanding and research
- Staff will maintain their competence through regular performance of this skill
- For HCPs to seek out current literature relating to tracheostomy care and question their own practice, the practice of others and SDHT tracheostomy guidelines to ensure practice changes with the dynamic processes of new information

Definition

A tracheostomy is a surgical opening in the anterior wall of the trachea to facilitate ventilation

SUMMARY SHEET

Training entry criteria

- HCPs must show a clear understanding of their governing body's directives regarding this procedure
- Has line managers approval

Criteria for supervisors and assessors

- Competent HCP who has been assessed as having reached the Trusts standard for tracheostomy care
- Competent HCP who practices tracheostomy care a minimum of once a month
- Able to provide supervision on a one-to-one basis
- A supervisor is not necessarily required to be an assessor

Related policies, procedures and standards

- SDHT tracheostomy guidelines
- Trust Health and safety policy
- Trust infection control policy
- Trust standard for documentation

Resources

- Equipment required for tracheostomy care
- Head and neck mannequin

Training content

- Theoretical knowledge will be obtained and demonstrated using a self directed study method
- Practical training will take place in the clinical area

Assessments

- It is advised that training should be completed within a period of one month
- Each HCP will take responsibility for acknowledging their own level of competence and exercise their professional clinical judgement before undertaking this procedure unsupervised
- Self directed theoretical study
- Self assessment must be continuous

LEARNING OUTCOMES

On completion of the theory assessment for tracheostomy care training you will be able to:

- Demonstrate knowledge of national, local and professional policies, procedures and standards in relation to tracheostomy care
- Demonstrate knowledge of your governing body's directives regarding responsibilities and accountability when applied to clinical skills
- State the correct procedure for patient identification and obtaining informed consent
- Demonstrate knowledge of the normal anatomy of the neck
- Explain the rationale for, and risks/benefits associated with, tracheostomy use
- Demonstrate knowledge of equipment used in tracheostomy care and be aware of the associated risks and benefits
- Demonstrate the principles of care of the tracheostomy stoma and patients airway following SDHT tracheostomy guidelines
- Demonstrate knowledge of the psychological problems patients may experience having a tracheostomy
- Demonstrate knowledge of how to identify the resources available for information and practical advice
- Demonstrate knowledge of the rationale behind self assessment and a clear understanding of how to use the assessment tool

SELF-DIRECTED LEARNING METHOD

This training package is for use by HCPs for initial training, continual updating and self assessment

- It is designed for you to direct your own learning to achieve the competence level and Trust standard required for this skill
- The flexibility of self directed learning will allow you to utilise your time for study to obtain both theoretical knowledge and practical skills
- You must successfully complete the theory preparations and assessments prior to undergoing supervised practice. The length of time for supervised practice should be negotiated between the individual and the supervisor

It is expected that you direct yourself to gain competence in the theoretical assessment using the Trusts resources. These may include:

Health and safety dept/infection control dept
Skills room
Pharmacy
Medical library
Head and neck CNS
Physiotherapists
ITU nurses/outreach team
Elizabeth Ward
Midgley Ward
Respiratory nurse specialist

It is essential that you make full use of your clinical supervisor/assessor to help with both the learning and assessment stages of this skill

THEORY ASSESSMENT

Self directed learning package

You must successfully complete the theory assessment before beginning any practical learning of this skill

Name:.....

Designation:.....

Area of work:.....

Commencement of skills training:.....

THEORY ASSESSMENT 1

Infection control

1. Why must the tracheostomy site be kept clean and dry?

For patient comfort
To prevent infection

2. To comply with universal precautions policy, what protective clothing and equipment should be worn by the HCP performing tracheostomy care?

Apron, gloves, eye protection

3. Why is handwashing essential before and after the procedure?

To reduce risks of cross infection

4. In what order of priority would you do the following if your mucous membrane (in the mouth) or conjunctiva (in the eye) is contaminated by the patient's sputum or blood?

3. Complete an incident form
4. Inform line manager
1. Rinse the area thoroughly with water
2. Take a record of the patient's details

THEORY ASSESSMENT 2

Knowledge required prior to skill acquisition

1. What is a tracheostomy?

A surgical opening into the trachea through the neck

2. Give 5 reasons for tracheostomy:

- (i) upper airway obstruction e.g. tumour
- (ii) facial injuries including surgery
- (iii) radiotherapy reaction and oedema
- (iv) intubation > 2 weeks
- (v) aid tracheo-bronchial toilet

3. Where is the most common surgical site for tracheostomy?

2-3 cms below thyroid notch-cricoid cartilage
Between 2nd and 3rd or 3rd and 4th tracheal rings

4. List the different types of tracheostomy tube available at SDHT

Plain cuffed and uncuffed, fenestrated
Single cannula eg some portex, double cannula eg shiley/tracoe twist

5. When will the cuff be inflated on a tracheostomy tube?

Initially on formation of tracheostoma to prevent aspiration of blood and serous fluid from wound.

As a seal for IPPV

6. What is the recommended cuff pressure?

15-22mmHg

7. When must cuff pressure be checked?

At each shift change

8. What device is available to check cuff pressure in mm of mercury?

Cuff manometer

9. When would it be safe to deflated the cuff?

(i) when consultant advises/ maintaining sats/ not on IPPV

(ii) when pt managing secretions/ good cough reflex

10. Why is it useful to perform suction at the back of the patient's mouth when deflating the cuff?

To remove secretions from above the cuff

11. When would the first tube change be performed and why then?

At approx 4 days when tract formed

12. How often must a tracheostomy tube with an inner cannula be changed?

Monthly

13. What are the advantages of an inner cannula?

Ease of cleaning and clearing secretions to maintain airway

14. How often should an inner cannula be removed for inspection?

Each change of shift or as patient requires

15. How do you clean an inner cannula?

As per manufacturers guidelines e.g. Kapitex- sterile water, Shiley- soap and water

16. When would it be suitable to use a fenestrated tracheostomy tube?

When decanulation is considered- weaning
To facilitate speech

17. Which patients would it be unsuitable to use a fenestrated tube?

Patients where upper airway is not patent
Patients who cannot manage own secretions safely

18. When would it be suitable to use a speaking valve?

When cuff is deflated or plain tube inserted with fenestration
When tube has been downsized to allow air to flow around tube
When patient can breathe through mouth

THEORY ASSESSMENT 3

Risks

1. When by-passing the upper airway with a tracheostomy, what normal anatomical occurrences are absent?

Nasal passageway for warming, humidifying and filtering air
Bypass larynx where air vibrates to form sound

2. What are the complications associated with by-passing part of the non-specific immune system in the respiratory tract?

Increased risk of chest infection

3. Name 5 complications associated with tracheostomy in each of the categories below:

- (i) early complications

- 1)haemorrhage
- 2)blockage by secretions
- 3)displacement
- 4)surgical emphysema
- 5)cardiac arrhythmias

- (ii) late complications

- 1)damage to tracheal mucosa
- 2)fistula
- 3)chest infections
- 4)swallowing problems
- 5)flange pressure sores

4. List the problems that would help you to identify a patient with swallowing problems

- (i) requires a lot of suction- copious amounts
- (ii) pooling of secretions/drooling
- (iii) aspiration of fluids-coughing/choking on food/fluids
- (iv) spiking temperature
- (v) weak cough
- (vi) gurgly voice

5. How can you measure the safe fit of tracheostomy tapes?

1 finger space between neck and tie
ensure patient comfortable

6. In what circumstances may a tracheostomy tube be sutured in place?

Consultant preference
Post op i.e. RFFF to avoid occlusion of vessels

7. What would you do if you thought any of the electrical equipment for tracheostomy support was damaged or not working correctly?

Remove from use immediately
Clean as per guidelines and send for service/repair

THEORY ASSESSMENT 4

Care of the patient with a tracheostomy

1. What methods or equipment can you use to help your patient communicate his/her anxieties and understandings?

Pen and paper, picture board, servox, lightwriter, closed questions that require yes/no responses, speaking valve, TIME

2. Before commencing any procedure, what must you give the patient and what must you ensure you have received from the patient?

Give adequate explanations to gain informed consent

3. Why should there always be two HCP's to perform tracheostomy care?

1 to reassure patient and access emergency equipment, 1 to perform procedure

4. What equipment must be kept at the patients bedside?

Tracheal dilators, spare tubes (1 same size, 1 smaller), suction, normal saline for nebuliser, sachets for suction, clean tapes, syringe, suction catheters, protective clothing, scissors, humidification, oxygen, manometer, pulse oxymeter, light source, ambu bag

5. If the tracheostomy becomes blocked what will you do?

Summon help, assess patient, suction, nebulise, oxygen, deflate cuff, remove and clean inner tube, ventilate via mouth/nose if necessary, change tube if necessary DO NOT WAIT AND SEE

6. What stoma care will you perform and how often?

Review at each shift, assess stoma, clean with NaCl and dry carefully, use of barrier creams to protect skin

7. How will you know when your patient is fit for decannulation?

Patient is physically strong enough, upper airway obstruction resolved eg able to speak, maintaining oxygen sats when tube occluded, MDT decision making process

THEORY ASSESSMENT 5

Suction

1. How would you decide when an individual patient requires suction?

Secretions visible, oxygen sats low, gurgly or noisy breathing, sudden dyspnoea

2. What procedure must be performed prior to suction to reduce risk of infection?

Hand washing, gloves

3. Why is it essential to explain the procedure to the patient?

Compliance with instructions, gain consent, reduce anxiety

4. What is sometimes required to be administered to a patient prior to suctioning?

Nebuliser, oxygen to hyperoxygenate patient for up to 3 minutes

5. State the recommended suction pressure for adults

100-200mmHg

6. Why should the sterile catheter be inserted without suction and how far into the trachea should the catheter be inserted?

To reduce trauma to trachea
<15cm

7. Why is it best practice to maintain continuous suction while withdrawing the catheter?

Reduce trauma to tracheal wall, more effective removal of secretions

8. How long is it acceptable to maintain suction and what is the complication of prolonged suction?

10-15 seconds

mucosal damage, reduced oxygen saturations, increased anxiety

9. If the patient requires further suctioning, what must you do before insertion of a new sterile catheter?

Allow patient to rest to prevent hypoxia

10. How do you clean the suction tubing and how often should this tubing be changed?

Sterile sachets of saline- suction complete contents

Change tubing/bottle every 24 hours or if jar full

11. Following completion of this procedure what aspects of care must be achieved so that the patient is not isolated or compromised?

Call bell within reach, pen and paper, draw back screen/curtains

12. What should be documented and where?

Amount of secretions, colour, consistency etc. Patient comfortable, sats within normal limit documented within nursing care plan

13. What is it important to remember before suctioning a fenestrated tube?

Change inner tube to plain one to prevent suction catheter passing through fenestration

14. How do you calculate the correct size suction catheter?
Divide tube size by 2 and multiply by 3

15. List 3 complications of poor suction technique

(i) cross infection

(ii) mucosal irritation/trauma- increased coughing and excess secretions

(iii) tube blockage

also hypoxaemia, bronchial obstruction, atelectasis, cardiac arrhythmias, vomiting, laryngeal spasm, apnoea

THEORY ASSESSMENT 6

Humidification

1. Define humidification and explain why it is an essential part of tracheostomy care?

Humidification is the warming and moistening of inspired air, to reach the trachea at 32C with humidity of 98% Required to replace normal action of nasal mucosa

2. Explain the different ways in which humidification can be given to a patient with a tracheostomy?

Fisher Paykel, Swedish nose, buchanan bib, nebulised cold water system

3. What are the possible complications associated with heated humidifiers?

- (i) temperature set too high-discomfort/burns
- (ii) infection
- (iii) increased secretions
- (iii) increased moisture in bronchi=pulmonary oedema
- (iv) also fluid can collect in tubing with risk of flow into lungs

Completed satisfactorily: YES NO

Signed:.....(assessor)

Date:.....

Comments:

SUPERVISED PRACTICE

SELF DIRECTED LEARNING PACK

You must successfully complete the theory assessment before attempting any practical learning of this skill.

You must successfully complete the theory and supervised practice before undertaking this skill unsupervised.

Supervisor:.....

Date supervised practice completed:.....

Signature:.....

Comments:.....

Learners signature:.....

Comments:.....

ASSESSMENT PRACTICE

Key skill 1

Shows evidence of professional accountability while performing the tracheostomy care

Cues

- (i) Applies a knowledge of the Professional code of conduct (NMC 2002)
- (ii) Identifies the specific role and individual responsibilities
- (iii) Written records reflect own accountability and responsibility in line with Guidelines for records and record keeping (NMC 2002)

Rating

Self assessment

Formative

Summative

1	2	3	4	5
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Date.....

Date.....

Date.....

Signatures

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Assessor

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Assessor

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Assessor

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Student

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Student

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Student

Comments:

ASSESSMENT PRACTICE

Key skill 2

Applies a knowledge of the management of the care of a patient with a tracheostomy

Cues

- (i) Able to demonstrate an understanding of the principles behind performing a tracheostomy and associated A&P
- (ii) Demonstrates a knowledge of different tubes in use
- (iii) Shows appropriate levels of caring for the 'total' patient and members of MDT involved in care
- (iv) Demonstrates an awareness of problems associated with tracheostomy tubes and action to be taken

Rating

Self assessment

Formative

Summative

1	2	3	4	5

Date.....

Date.....

Date.....

Signatures

.....
Assessor

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Assessor

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Assessor

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Student

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Student

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Student

Comments:

ASSESSMENT PRACTICE

Key skill 3

Applies a knowledge of the infection control issues in the care of a patient with a tracheostomy

Cues

- (i) Able to demonstrate an understanding of the principles of asepsis and wound management
- (ii) Demonstrates a knowledge of health and safety policies relating to this topic
- (iii) Shows a good understanding of cleaning and maintenance of associated equipment, and disposal of waste

Rating

Self assessment

Formative

Summative

1	2	3	4	5
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Date.....

Date.....

Date.....

Signatures

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Assessor

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Assessor

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Assessor

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Student

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Student

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Student

Comments:

ASSESSMENT PRACTICE

Key skill 4

Applies a knowledge of the specific care issues of suctioning technique and provision of humidification

Cues

- (i) Able to demonstrate an understanding of the relationship between humidification and suction
- (ii) Makes use of communication techniques to ensure patient compliance and comfort
- (iii) Shows a good understanding of cleaning and maintenance of equipment
- (iv) Aware of the problems associated with administration of humidification and suction

Rating

Self assessment

Formative

Summative

1	2	3	4	5
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Date.....

Date.....

Date.....

Signatures

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Assessor

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Assessor

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Assessor

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Student

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Student

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Student

Comments:

EVALUATION OF TRAINING PACKAGE

Title of training package.....

Duration of training.....

Final assessment date.....

Successful assessment: **YES** **NO**

Please complete the following evaluations:

Very user friendly

5 4 3 2 1

Very difficult to use

Instructions were clear

5 4 3 2 1

Instructions unclear

Information easy to find

5 4 3 2 1

Information hard to find

Knowledge has increased

5 4 3 2 1

Knowledge not increased

Able to reflect on your
Training and its benefits

5 4 3 2 1

Difficult to reflect on your
training and its benefits

Please return to: Julie Hewett, Macmillan head and neck CNS
Elizabeth Ward, Torbay Hospital

**TRACHEOSTOMY CARE FOR HEALTHCARE
PROFESSIONALS WITHIN SOUTH DEVON HEALTHCARE
TRUST**

Notification of completion

To assist in the maintenance and updating of ongoing educational records, it would be appreciated if the assessor of this package could complete the following information:

Name of individual assessed:.....

Grade of individual assessed:.....

Workplace of individual assessed:.....

Date by which individual successfully completed all aspects of their practice based assessments:.....

Signature of assessor:.....

Name of assessor (please print) :.....

Date:.....

On completion please detach and return to Mike Wall: Clinical tutor c/o The Bowyer Building, Torbay Hospital

Thankyou for your assistance

