BEST PRACTICE STANDARDS FOR THE PROVISION OF TRACHEOSTOMY CARE FOR ADULT PATIENTS WITHIN THE HOSPITAL SETTING

Publication Date: October 2012
Review Date: October 2012
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1. INTRODUCTION

This document outlines the basic standards and requirements that contribute to best practice for safe, adult tracheostomy care in hospital, both within the Critical Care environment and in the general hospital setting. It is recommended that individual Trusts / organisations ensure that any local policies, either directly or indirectly related to tracheostomy care, reflect these standards. Whilst the main emphasis of the document is on tracheostomy care and management, there is reference in the emergency management sections to the laryngectomy” patient, or “neck breather”.

Tracheostomy is a common procedure within the critical care environment, and the majority of tracheostomy patients within the acute hospital setting are cared for within either the Intensive Care or High Dependency Unit. However, increasing numbers of patients, particularly patients with neurological conditions, are requiring tracheostomies for extended periods of time, resulting in more patients being transferred from critical care to ward areas with a tracheostomy in place. Further to this, there are also increasing numbers of patients being discharged to community care with a long-term or permanent tracheostomy, many of whom will require future admissions to hospital for non-tracheostomy related conditions.

Although tracheostomies have many benefits, there are associated risks and complications. Historically, lessons learnt from tracheostomy incidents have highlighted poor communication, lack of care planning and poor choice of ward placement as being contributory factors. However, these risks can be significantly minimised if individual organisations undertake to:

- Develop the workforce in relation to tracheostomy care and emergency response.
- Provide clear pathways to ensure that patients with a tracheostomy or laryngectomy are identified upon admission to hospital.
- Provide cohort wards for patients with a tracheostomy, when patients do not require a Critical Care bed.
- Provide standardised tracheostomy documentation and care plans
- Have a multi-disciplinary approach to holistic care planning, weaning and decannulation processes.

*It is of utmost importance that a patient with a neck stoma is identified correctly as to whether they have a tracheostomy or a laryngectomy.*

The standards within this document have been based upon evidence and recommendations from the following sources:

- The Intensive Care Society
- The National Tracheostomy Safety Project
- St George’s Hospital Tracheostomy Guidelines
- The Difficult Airway Society
- The 4th National Audit Project (NAP 4)
- Lessons learnt and shared from previous tracheostomy related incidents.
1.1 DEFINITIONS:

- **Cohort wards:** This term refers to designated wards that cater holistically for the needs of the patient with a tracheostomy. Such wards minimise risks to tracheostomy in-patients by the provision of an environment and workforce that are equipped to meet the specialist airway needs of this patient group, in terms of clinical skills plus basic and emergency tracheostomy equipment.

- **1st responder skills:** This term relates practitioner who is first to attend or discover a tracheostomy emergency. This may be a nurse or allied health professional, for example a physiotherapist, or a doctor. 1st responder skills may be required at any point or location during a patient’s stay in hospital. A first responder is expected to be able to:
  o Recognise a tracheostomy emergency
  o Summon appropriate help
  o Provide 1st responder airway troubleshooting and support until advanced help arrives, as per tracheostomy 1st responder emergency algorithm (appendix).

- **2nd responder skills:** The 2nd responder is a practitioner who is skilled in advanced airway manoeuvres and equipment during a tracheostomy emergency, in accordance with the Tracheostomy 2nd responder algorithm. This person is likely to be an anaesthetist or critical care doctor.

- **Tracheostomy weaning:** this is a structured, elective process that prepares a patient for eventual, planned, permanent removal of the tracheostomy tube.

- **Tracheostomy decannulation:** Under controlled situations, this term refers to the elective removal of a tracheostomy tube by a competent practitioner at the endpoint of successful weaning. However, *accidental* decannulation is the result of a non-elective removal / displacement of a tracheostomy tube. This is most likely to occur in patients who are confused / agitated. The risk of this is heightened in areas where nurse to patient ratios are insufficient to closely observe the tracheostomy patient.

- **RP:** Resource Pack. The resource pack has been designed to accompany this document. It contains a collection of example charts, documents, care plans etc, which have been offered from various Trusts and organisations within the North West. The charts may be amended / reproduced to meet local needs. The resource pack will be made available via the Cheshire and Mersey Critical Care Network website.
2. ORGANISATIONAL RECOMMENDATIONS:

Trusts are recommended to form a Tracheostomy Steering Committee, comprising a group of multi-disciplinary stakeholders, with clear terms of reference that promote an overseeing of standard setting for promoting safe tracheostomy care within their organisation. Membership of the steering group should include mandatory stakeholder representation as follows:

- Clinical Lead / Chairperson at Consultant level.
- Consultant representation from the specialties of Critical care, Anaesthesia, ENT and Respiratory Medicine. (Critical Care & Anaesthesia may be represented by a single clinician.)
- Tracheostomy cohort ward nurse
- Critical Care Nurse
- Critical Care Outreach Nurse
- Respiratory Physiotherapist
- Practice Educator / Skills tutor
- Resuscitation Officer

In addition to the mandatory members listed above, supplementary membership may include:

- Speech and Language therapist
- Clinical Site manager / Co-ordinator
- Emergency Department representative - Acute Care physician / senior nurse (the individual must be employed as a permanent member of staff).

Terms of Reference:

- Develop and implement local processes or policy in relation to:
  - Basic tracheostomy care
  - Standardised tracheostomy documentation, (care plans / care pathways / care records).
  - Patient placement / tracheostomy cohort wards
  - Tracheostomy Emergency
  - Weaning and decannulation processes
- Workforce development / training needs analysis in relation to tracheostomy care.
- Assess local requirements in relation to the types of tracheostomy tube that are to be kept available on site, to match the needs of both critical care areas and wards.
- Evaluate any tracheostomy incidents within the organisation.
- Report to a corporate group within the Governance structure of the Trust.
2.1 COHORT WARDS / PATIENT PLACEMENT / BED MANAGEMENT:

To minimise risks of airway related incidents, the need for cohorting tracheostomy patients must take precedence over other clinical diagnoses.

Trusts should ensure that:

- In-patients with a tracheostomy who do not require a critical care bed, are cared for in designated, tracheostomy cohort wards. This includes:
  - Patients admitted to hospital from the community with a long-term tracheostomy
  - Patients with a tracheostomy who are transferred in / repatriated from another hospital.
  - Patients who have had a tracheostomy performed during their hospital stay
- Patients who are stepping down from a critical care area to a ward are transferred to designated tracheostomy cohort wards. *Failing that standard, patients should remain in critical care.*
- Prior to stepping down from a critical care area, patients must have a tracheostomy tube with an inner cannula in place.
- Hospital Co-ordinators / Bed Managers / Site Managers who are responsible for patient placement / bed allocation are aware of and adhere to local policy in relation to cohorting tracheostomy patients.
- There is sufficient respiratory physiotherapy investment at cohort ward level, to match the requirements of the tracheostomy patient.

Cohort wards must ensure that:

- They maintain a stock of essential tracheostomy equipment on their ward, in readiness for tracheostomy patient admissions. (See RP)
- They provide emergency **bedside** tracheostomy equipment for all tracheostomy patients (See RP).
- The ward is staffed with a minimum of 2 registered nurses per shift who have received tracheostomy training.
- Nursing staff have access to tracheostomy training and updates at least annually.
- Nurse / patient ratios are assessed for each shift, to ensure that not only the tracheostomy patient is adequately observed, but also to ensure that the care of other patients is not compromised by the increased dependency / acuity of the tracheostomy patient.
2.2 TRACHEOSTOMY EMERGENCY – RECOGNITION AND RESPONSE:

Organisations should ensure that they have local agreements in place for whom to call in case of emergency related to a tracheostomy. Trusts and areas that care for tracheostomy patients should provide:

- Bedside / head of bed tracheostomy or laryngeal signs that give clear, vital information regarding an individual patient’s route of ventilation / respiratory support in case of an emergency situation (see RP).
- Bedside Emergency Algorithms for airway difficulty / respiratory distress in the tracheostomy patient, including management of bleeding from the tracheostomy (see RP).
- Training in resuscitation via a tracheostomy or laryngeal procedure.
- Tracheostomy emergency equipment available at the bedside / with the patient at all times, including for transfers to other departments (see RP).
- Difficult airway trolleys in critical care areas, with equipment for secondary responders to use during advanced airway manoeuvres (see RP).
- An established pathway for accessing experienced ENT support in and out of hours.
2.3 WORKFORCE DEVELOPMENT:

Organisations should ensure that tracheostomy training is made available across the multi-disciplinary team. When planning training / education / induction programmes, the following staff groups and required skills should be considered:

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<th>Staff group</th>
<th>Minimum Skills required</th>
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| Anaesthetists / Intensivists | • Basic care skills and 1st responder training (achieved prior to being on-call)  
• 2nd responder training (within 2 years of commencing training in the specialty) |
| ENT doctors | • Basic care skills and 1st responder training (achieved prior to being on call).  
• 2nd responder training (within 2 years of commencing training in the specialty) |
| Other doctors, excluding FY1s, with responsibilities for: | • Basic care skills  
• 1st responder skills (before going on call) |
| • Cohort wards  
• Cardiac arrest teams  
• Medical Emergency / Rapid Response Team | |
| Clinical site managers | • Basic care skills  
• 1st responder skills (before going on call) |
| Registered Nurses: | • Basic care skills (suction, inner tube care etc)  
• Emergency algorithms as per first responder  
• Weaning and decannulation processes |
| • Critical Care  
• Cohort wards  
• Critical Care Outreach | |
| Respiratory physiotherapists | • Basic care skills (suction, inner tube care etc)  
• Emergency algorithms as per first responder  
• Weaning and decannulation processes |
| Speech & Language therapists | • Basic care skills (suction, inner tube care etc)  
• Emergency algorithms as per first responder  
• Weaning and decannulation processes. |
3. CONSENT AND PATIENT / CARER / RELATIVE’S INFORMATION:

Whenever a patient has mental capacity, consent for a tracheostomy insertion must be obtained from the patient. However, when a patient lacks capacity, a Consent Form 4 should be used and the best interests of the patient be documented clearly.

In addition to verbal discussions with patients / relatives / carers in relation tracheostomy insertion and care, organisations should also make available written patient / carer information about having a tracheostomy, including (see RP):

- Indications for a tracheostomy
- Risks / complications associated with a tracheostomy
- What to expect regarding care of the tracheostomy
- Communicating with the patient who has a tracheostomy

4. TRACHEOSTOMY INSERTION:

Trusts should ensure that elective or planned tracheostomy procedures take place:

- During daylight hours, avoiding late afternoon onwards.
- With means of access to surgeons in case of complications during a percutaneous procedure
- With a choice of type and size of tube to hand prior to commencing the procedure.
- With a difficult airway trolley being quickly accessible in case of complications.
- In accordance with the standards of practice for tracheostomy insertion as published by the Intensive Care Society (see RP).

5. DOCUMENTATION:

Trusts should promote the use of standardised documentation to record and plan tracheostomy care. Documentation should reflect multi-disciplinary, holistic care planning, delivery and evaluation. Documents that should be considered as mandatory for all tracheostomy patients are as follows:

- **Vital Signs Observations (including Early Warning Scores for ward patients):**
  - Patients with a tracheostomy must have a minimum of 4 hourly vital signs and EWS observations whilst they are in hospital, with increased frequency according to local policy and patient condition.
  - Oxygen saturations and percentage of any administered oxygen must also be documented on the vital signs chart.

- **Tracheostomy Care Record:** These are charts that record all aspects of bedside care / interventions related to routine care of the tracheostomy tube (see RP). Such charts must include timed, dated and signed entries to denote:
  - Emergency equipment checks at least once per shift
  - Tracheal suction episodes
  - Inner tube inspections, where indicated, at least 4 hourly.
  - Cuff pressures, where indicated
  - Humidification checks
  - Dressings changes / stoma inspections
• **Tracheostomy Care Plan:** This must provide a comprehensive assessment of care needs that spans both physical and non-physical assessments, from a multi-disciplinary team perspective (see RP). Care planning must incorporate the following elements:
  o Tube type and size
  o Inner cannula care
  o Suction management
  o Humidification delivery
  o Nutrition and swallow assessments
  o Hydration
  o Tracheostomy dressings / skin integrity / tube security
  o Cuff pressures
  o Communication needs and methods
  o Mental awareness / confusion / agitation assessments

Whilst not mandatory, organisations may wish to consider the option of adopting a Tracheostomy Care Pathway document (see RP). These are beneficial for use with patients who have a temporary tracheostomy inserted, usually in the Critical Care or ENT theatre setting. The Tracheostomy Pathway facilitates multi-disciplinary documentation that encompasses all aspects of procedures and care from initial tracheostomy insertion to decannulation.

6. **TRACHEOSTOMY TUBE CHANGES:**

• **The first tracheostomy tube change:**
  o Must be performed by a doctor / practitioner who is not only competent in tracheostomy tube placement, but also has advanced airway management and intubation skills.
  o Except in emergencies, should not be performed within 72 hours following a surgical tracheostomy.
  o Except in emergencies, should not be performed before 5 days (and ideally 7 – 10 days) after a percutaneous tracheostomy.
  o Requires the presence of a 2nd practitioner who is trained in tracheostomy care to a minimum level of first responder skills.
  o Must be recorded in the patient’s records.

• **Subsequent tube changes:**
  o Should be performed as frequently as clinically indicated, and in accordance with the manufacturer’s recommendations.
  o Must only be performed by personnel trained in tracheostomy tube changes.
  o Require the presence of a 2nd practitioner who is trained in tracheostomy care to a minimum level of first responder skills.
  o Must be recorded in the patient’s records

Emergency tube changes should be classed and reported as a clinical incident in accordance with local policy, for later consideration by the Tracheostomy Steering Committee.
7. Weaning and Decannulation:

Organisations should adopt standardised processes for weaning and decannulation, to ensure that weaning is commenced under optimal clinical conditions and in a safe, adequately staffed and monitored environment (see RP).

Patients who are weaning and progressing to decannulation must have:
- Multi-disciplinary agreement that weaning is appropriate.
- A structured and target driven weaning plan.
- Close observation of respiratory status and progress.
- Planned decannulation, preferably in the morning when the patient is well rested
- Pre and post decannulation observations recorded (see RP).

For patients who may be considered to benefit from tracheostomy speaking valves as part of their weaning process, (eg Passey-Muir valves), the following criteria must be applied:
- The patient must be assessed for suitability by a practitioner who is competent in the use of speaking valves.
- When a speaking valve is in use, the patient must receive close observation from a practitioner who has received training in the use of tracheostomy speaking valves.

8. Monitoring compliance with these standards:

It is recommended that organisations perform initial benchmarking of their practice in relation to the standards laid out within this document, followed by subsequent audits to monitor compliance. To assist with this process a traffic light scoring matrix can be found within the accompanying resource pack (see RP).

The findings from initial and subsequent audits should be reported via the Tracheostomy Steering Committee and escalated via the Trust’s governance structure, highlighting any gaps in service delivery at local level.

Should Trusts require further support in the implementation of these standards, advice can be obtained from The Cheshire and Mersey Critical Care Network.
Acknowledgements:

This document has been brought together by the following staff from Trusts within the Cheshire and Mersey Critical Care Network.

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Special thanks to the following staff who have contributed at various points during the project:
Dr Jane Snell, Anaesthetic Trainee
Dr Becky Gale, Anaesthetic Trainee
Beverley Riley, Practice Educator Facilitator, Whiston Hospital
Andrea Berry, Warrington Hospital
Sarah Clarke, Director and Nurse Lead, Cheshire & Mersey Critical Care Network