Cardiff Critical Care Standard Operating Procedure

Process for Completion of Surgical Tracheostomy

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Indications

The elective insertion of a tracheostomy may be required in a patient managed on critical care for several reasons including:

- To facilitate weaning from mechanical ventilation
- To improve patient comfort (e.g. during decreasing sedation)
- To facilitate tracheal suction
- To allow ongoing airway protection both on and after critical care (e.g following traumatic brain injury or in the case of neurological disease)

Decision Making

It is expected that the decision to proceed to tracheostomy will be taken by senior Critical Care clinicians.

There are no absolute contra-indications to the insertion of a tracheostomy except for refusal by a mentally competent adult patient. Any delay must be balanced against the potential disadvantages of delaying tracheostomy.

It is understood that patient conditions may change rapidly in critical care. Prior to list submission, it is expected the following relative contra-indications will have been considered appropriately:

- Patients requiring high oxygen concentration or high ventilator pressures
- Patients who are severely cardio-vascularly unstable
- Patients with raised intra-cranial pressure
- Patients who have clotting abnormalities (including thrombocytopaenia)
- Patients who are at increased risk of tissue infection or breakdown following tracheostomy insertion

In most of the above situations the procedure may be delayed until the patient's condition(s) has improved / been corrected.

Consent

Consent Form 1 (Surgical)

Where possible appropriate consent should be obtained from the patient prior to the procedure by the surgeons, using a standard adult consent form 1.

Consent Form 4 (Critical care)

Where consent is not possible, and the procedure is elective in nature, it is considered best practice to discuss the procedure with the patient's relatives or advocates. Patient's relatives or advocates should be provided with the ICU tracheostomy information sheet. Once given time to review the information, where possible assent for the procedure should be gained. The **consent form 4 is to be completed by the ITU physicians.**

Tube Selection:

The duty critical care consultant, in conjunction with appropriate multi-disciplinary team members, should suggest the most appropriate tracheostomy tube for insertion and this should be supplied prior to the patient attending theatre. The ENT surgeon completing the procedure will have final choice on tube for insertion based on intra-operative findings.

The standard choice of tracheostomy tube for insertion in the Kapitex TracheoTwist plus in sizes 7, 8, 9. Where an adjustable flange tube is required then the Portex Uniperc tracheostomy tube should be used (available in sizes 7, 8, 9). **Under no circumstances should a single lumen tracheostomy tube be inserted.**

A flowchart for tracheostomy tube selection can be found in appendix 1.

Booking Procedure

Booking of surgical tracheostomies should be performed by the junior doctor covering the clinical area where a surgical tracheostomy is required using the TheatreMan electronic booking system (http://theatreman). The following table explains process of booking:

Task	Complete or N/A
Login in to the TheatreMan electronic booking system (http://theatreman) using the generic ICU login on the whiteboard	
Find the Emergency/Trauma List (at the top of the page) and click on it and then book another (on the right)	
Complete the details as required on the electronic form	
In the surgeon drop down menu search for "ENT"	
Operation type is "Planned in Hours"	
Search for "Temporary Tracheostomy" in the procedure menu	
Enter the suggested tube type and size into "comments" section (see 'tube selection' section, appendix 1 or discuss with senior clinician as required)	
In the box Emergency Priority select CAT 3	
Ensure the "Tracheostomy Pathway" box is ticked	

Surgical tracheostomies can be booked at any time however will be prioritised on Tuesdays and Thursdays in the second CEPOD theatre.

Preparation of patient for Tracheostomy Insertion
Below is a checklist of aimed to help prepare the patient for theatre

Task	Complete or N/A
Bedside nurse at the aware of the planned procedure and that it has been discussed with the patient/relatives	
ITU technicians are aware so patient/monitoring/drugs/infusions can be prepared for transfer	
NG feed should be stopped at 0600 on the day	
Maintenance fluid prescribed if required	
Blood bank should have at least 1 valid group & save sample (2 for electronic issue)	
Coagulation has been checked and corrected as required	
Heparin infusion should be stopped 6 hours pre-procedure and APTTR checked.	
Treatment dose LMWH/Oral anticoagulants withheld	
Patient seen by ENT surgeon	
Patient seen by Anaesthetist	
Consent form 1 completed by ENT surgeons (for patients able to consent)	
Consent for 4 completed by ITU senior clinician (for patients unable to consent)	
Theatre care plan completed by bedside nurse	
Tracheostomy tube of type and size stated above is with the patient ready for transfer	
Notes/Drug chart available for transfer	
Equipment to Gather	**Complete or N/A**
Ambu Bag, Water's circuit and Face Mask	
Bed drip stand	
Oxylog ventilator	
2 Full CD Oxygen cylinders	
Transfer monitor with battery bracket. **Check capnography is visible on monitor**	
Syringe Drivers if needed	
Closed suction adapter and catheter mount (if not already present on ETT)	
Tracheostomy Tubes x2 (intended size and one size below)	

POST PROCEDURE

Post-procedure investigations and documentation:
Documentation of the procedure will follow standard surgical guidelines, but should include as a minimum:

- Date and time
- Name and grade of operator, assistant(s), and anaesthetist.
- Description of procedure
- Description of any complications
- Details of tracheostomy tube inserted
- Any post-operative instructions

Post-procedure instructions

Please check the post-operative documentation for the following:

- A post-procedure chest X-ray may be suggested if there have been any complications during or after insertion.
- Suture Removal
    - Sutures holding tracheostomies in place should be removed on day 8-10 post insertion unless there is a documented medical reason for them to stay in situ.
    - Where a long-stitch to the wall of the trachea is used it should be removed as per the instructions of the surgeon responsible.
- Tracheostomy Exchange
    - Where possible no tracheostomy should be exchanged before day 7.

APPENDIX 1: Tracheostomy Tube Selection Guide