Hospital in-patients with a Tracheostomy

Introduction

- **Patients with a tracheostomy or laryngectomy are at increased risk of death or harm if inappropriate or inadequate care is provided.**
- **Patients with a tracheostomy or laryngectomy should be cared for in an environment that has trained staff, appropriate equipment and can manage tracheostomy daily care and emergencies.**

On admission to hospital of a patient with a tracheostomy/laryngectomy or formation of a tracheostomy/laryngectomy whilst an in-patient

1. **Check patient has 'Alert' on TRAK**
2. **If not, insert 'Alert' for patient**
    a. **Under EPR, Allergies/Alerts/Risks, Alerts, Permanent Alert, Select New. A text box will appear, select 'Alert Category' – 'Clinical' from dropdown list, select 'Alert' either 'Airway alert – Tracheostomy' or 'Airway alert – Laryngectomy' from dropdown list.**
    b. **In the Extra Information Box, type \iptrach then press SPACEBAR**
3. **Inform Critical Care**
    a. ***RIE*** **– Bleep 2306**
        i. **Advise of admission**
        ii. **The patient will be cared for on Critical Care or Ward 204 only**
        iii. **Bedside equipment will be provided by Critical Care**
    b. ***WGH*** **– Call 31664**
        i. **Advise of admission**
        ii. **The patient will be cared for on a ward agreed by the Critical Care Team.**
        iii. **Bedside equipment will be provided by Critical Care**
    c. ***SJH*** **– Call 54056 or 54063 for ITU Charge Nurse.**
        i. **Advise of admission and request Emergency Tracheostomy Box and Bedside Poster Signs.**
        ii. **Patients will be cared for on a ward agreed by ITU and Bed Manager +/- HAN. If this is outwith Ward 18/19a or ITU, the ITU Charge Nurse will identify a staff member to attend the ward and ensure staff have appropriate equipment in situ. (Staff member will attend from either ITU, HAN, HAW OR Ward 19a).**
        iii. **Support for these patients will be co-ordinated by ITU and if they are not in ITU they will be noted at all ITU medical and nursing handovers and hospital bed meetings whilst still in-patients.**
4. **If the tracheostomy is permanently removed please remove the 'Alert' on TRAK**
5. **On patient discharge from hospital please return the Emergency Tracheostomy Box and Head of Bed Signs to Critical Care**

Bedside equipment for all tracheostomised patients

- **Emergency tracheostomy box** containing:
  - Spare tracheostomies, one same size as in patient and one size smaller than that in patient
  - Stitch cutters / 1 x 10ml syringe / head torch (RIE) / 2 x sachets of KY jelly
  - 2 x 14G suction catheters / tracheal dilator forceps
  - Paediatric face mask
  - Miniature bed sign
- **Spare non-fenestrated inner tube**
- **Head of bed sign** (date and type of tracheostomy and what to do in emergency)
- **Laminated Emergency tracheostomy management algorithm**

Tracheostomy occlusion/blockage

CALL FOR HELP, FOLLOW GUIDELINES ON HEAD OF BED SIGN

- Oxygen to face & stoma
- Remove cap/inner tube
- Pass a suction catheter
- Deflate cuff/remove tube
- Consider ventilation via upper airway or stoma using a mask or tube (If ventilating via mouth occlude stoma site)

A Mapleson C circuit with capnography may help assessment of airway patency

Emergency decannulation

If patient accidentally decannulates, **CALL FOR MEDICAL HELP**.

Ensure patient is oxygenated via bag-valve-mask or Mapleson C circuit with capnography over mouth (occlude stoma site) until medical help arrives.

Once a senior medic is present the default would usually be to

1. Oxygenate the patient either via
   a. The mouth using BVM or Mapleson C circuit with airway adjuncts OR
   b. The stoma using a paediatric face mask applied to the stoma
2. Secure an airway using an uncut ETT (with cuff beyond stoma) in the emergency. Then refashion a tracheostomy as required or appropriate, usually in daylight hours as a planned procedure.
3. However depending on the reason for tracheostomy and how well formed the stoma is, the stoma may be re-cannulated immediately, often using fibreoptic scope and an airway exchange catheter.

NB. An expert may choose to use the tracheal dilators – these should not be used by non-experts.

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Emergency tracheostomy management - Patent upper airway

Call for airway expert help
Look, listen & feel at the mouth and tracheostomy
A Mapleson C system (e.g. 'Waters circuit') may help assessment if available
Use **waveform capnography** when available: exhaled carbon dioxide indicates a patent or partially patent airway

Is the patient breathing?

No → Call Resuscitation Team
CPR if no pulse / signs of life

Yes → Apply high flow oxygen to **BOTH** the face and the tracheostomy

Assess tracheostomy patency

Remove **speaking valve** or **cap** (if present)
Remove **inner tube**
Some inner tubes need re-inserting to connect to breathing circuits

Can you pass a suction catheter?

Yes → **The tracheostomy tube is patent**
Perform tracheal suction
Consider partial obstruction
Ventilate (via tracheostomy) if not breathing
Continue ABCDE assessment

No → Deflate the **cuff** (if present)
Look, listen & feel at the mouth and tracheostomy
Use waveform capnography or Mapleson C if available

Is the patient stable or improving?

Yes → **Tracheostomy tube partially obstructed or displaced**
Continue ABCDE assessment

No → **REMOVE THE TRACHEOSTOMY TUBE**
Look, listen & feel at the mouth and tracheostomy. Ensure oxygen re-applied to face and stoma
Use waveform capnography or Mapleson C if available

Is the patient breathing?

Yes → Continue ABCDE assessment

No → Call Resuscitation team
CPR if no pulse / signs of life

Primary emergency oxygenation

Standard **ORAL airway** manoeuvres
Cover the stoma (swabs / hand). Use:
- Bag-valve-mask
- Oral or nasal airway adjuncts
- Supraglottic airway device e.g. LMA

Tracheostomy STOMA ventilation
- Paediatric face mask applied to stoma
- LMA applied to stoma

Secondary emergency oxygenation

Attempt **ORAL intubation**
Prepare for difficult intubation
Uncut tube, advanced beyond stoma

Attempt **intubation of STOMA**
Small tracheostomy tube / 6.0 cuffed ETT
Consider Aintree catheter and fibreoptic 'scope / Bougie / Airway exchange catheter

Emergency laryngectomy management

Call for airway expert help
Look, listen & feel at the mouth and laryngectomy stoma
A Mapleson C system (e.g. 'Waters circuit') may help assessment if available
Use **waveform capnography** whenever available: exhaled carbon dioxide indicates a patent or partially patent airway

Is the patient breathing?

No

Call Resuscitation Team
CPR if no pulse / signs of life

Yes

Apply high flow oxygen to laryngectomy stoma
If any doubt whether patient has a laryngectomy, apply oxygen to face also*

Assess laryngectomy stoma patency

Most laryngectomy stomas will NOT have a tube in situ

Remove **stoma cover** (if present)
Remove **inner tube** (if present)
Some inner tubes need re-inserting to connect to breathing circuits
Do not remove a tracheoesophageal puncture (TEP) prosthesis

Can you pass a suction catheter?

Yes

The laryngectomy stoma is patent
Perform tracheal suction
Consider partial obstruction
Ventilate via stoma if not breathing
Continue ABCDE assessment

No

Deflate the **cuff** (if present)
Look, listen & feel at the laryngectomy stoma or tube
Use waveform capnography or Mapleson C if available

Is the patient stable or improving?

Yes

Continue ABCDE assessment

No

REMOVE THE TUBE FROM THE LARYNGECTOMY STOMA if present
Look, listen & feel at the laryngectomy stoma. Ensure oxygen is re-applied to stoma
Use waveform capnography or Mapleson C if available

Is the patient breathing?

No

Call Resuscitation Team
CPR if no pulse / signs of life

Yes

Continue ABCDE assessment

Primary emergency oxygenation

Laryngectomy stoma ventilation via either
Paediatric face mask applied to stoma
LMA applied to stoma

Secondary emergency oxygenation

Attempt **intubation of laryngectomy stoma**
Small tracheostomy tube / 6.0 cuffed ETT
Consider Aintree catheter and fibreoptic 'scope / Bougie / Airway exchange catheter

* Laryngectomy patients have an end stoma and **cannot be oxygenated via the mouth or nose**
Applying oxygen to the face and stoma is the default emergency action for all patients with a tracheostomy

National Tracheostomy Safety Project. Review date 1/4/16. Feedback & resources at **www.tracheostomy.org.uk**

This patient has had a TRACHEOSTOMY

In Emergency:

CALL FOR HELP

Call 2222 or bleep ITU Reg/Con

Surgical / Percutaneous: .....

Performed on: .....

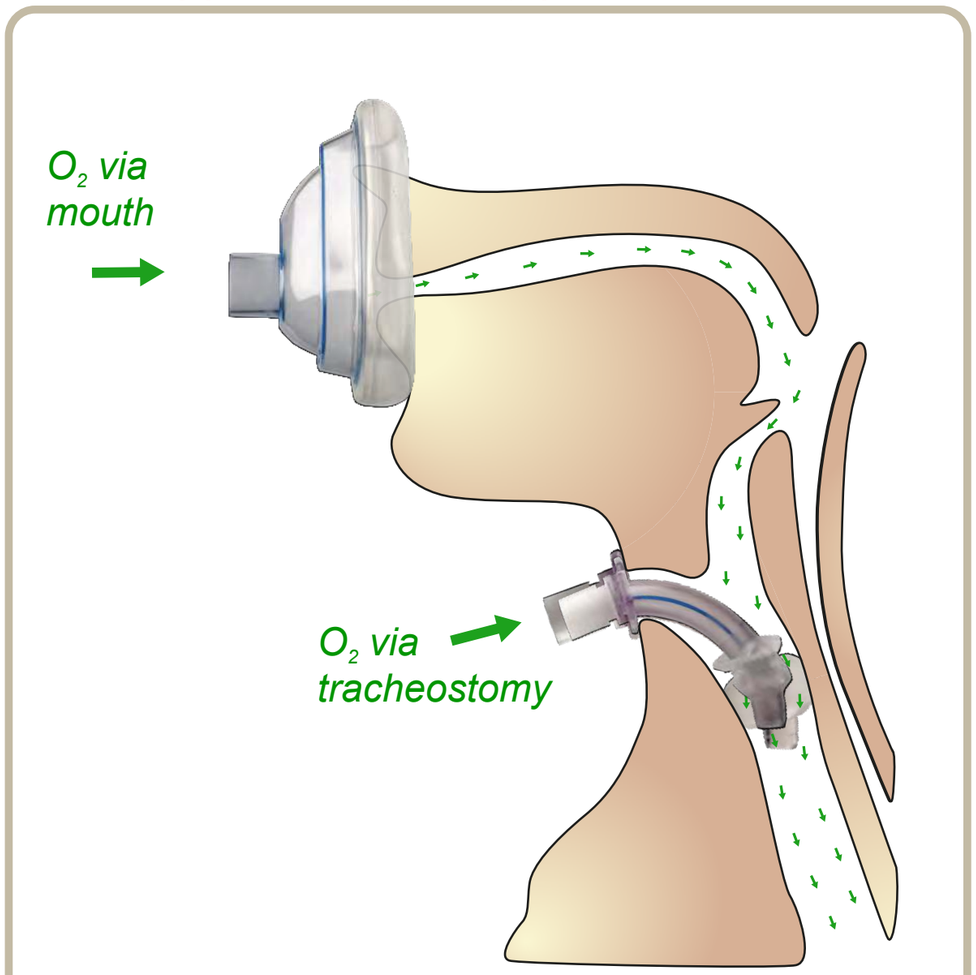
Tracheostomy tube size: .....

(Note: The upper airway may provide an intact airway)

Give oxygen via BOTH stoma & mouth

- **Oxygen to face & stoma**
- **Remove cap/inner tube**
- **Pass a suction catheter**
- **Deflate cuff/remove tube**
- **Consider ventilation via upper airway or stoma using a mask or tube**

  (If ventilating via mouth occlude stoma site)



Ref: Medical Photography/Karen Watson/March 2013

This patient has had a LARYNGECTOMY

In Emergency:

CALL FOR HELP

Call 2222 or bleep ITU Reg/Con

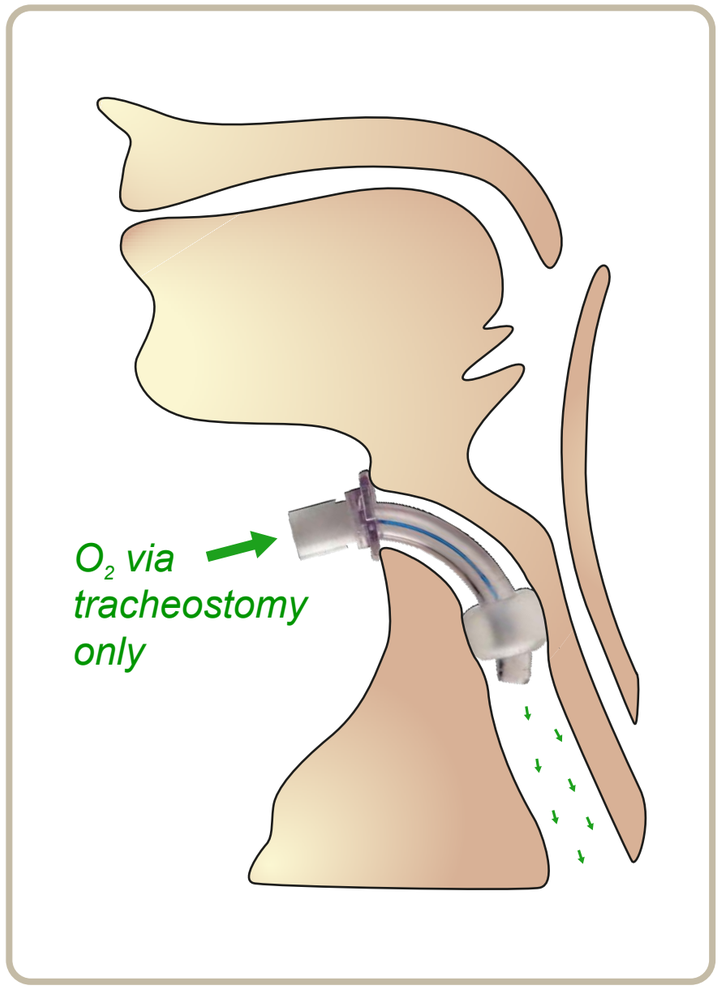
Performed on: .....

Tracheostomy tube size: .....

(Note: there is NO connection between the trachea and the mouth/nose)

DO NOT give oxygen via mouth!

- **Apply Oxygen to stoma**
- **Remove cap/inner tube**
- **Pass a suction catheter**
- **Deflate cuff/remove tube**
- **Consider ventilation via stoma using a mask or tube**



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