Benchmark No. 2.
Tracheostomy

(4th edition)

British Association
of
Neuroscience Nurses

Neuroscience Safe Staffing Benchmark Statement

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History

The Neuroscience Nursing Benchmarking Group (NNBG) was established in the 1990`s as a result of increasing concerns over inconsistencies in practices as part of a subsidiary of BANN. The group aims to improve on the quality of care by comparing and sharing practice with each other and set explicit standards for comparison of current practice against the ideal standard. The group is committed to searching for the best evidence related to specific areas of neuroscience practice. Membership of the group consists of representatives from neuroscience units within the UK and Ireland, together with educational colleagues from both the NHS/HSC and Higher Educational Institutes.

NNBG works collaboratively with BANN and further information about NNBG can be found on the BANN website www.BANN.org.uk.

BANN would like to acknowledge the leadership and significant contribution made by the NNBG, and all its contributors, to neuroscience nursing over the years

Benchmark No. 2

Tracheostomy Management

(4th Edition)

Key points

- Tracheostomy care must only be undertaken by staff that have been assessed as competent in accordance with local policy.
- Following an assessment, an individualised care plan should be implemented and evaluated, specific to all aspects of care relating to the patient's individual tracheostomy needs.
- Care needs to be reviewed at least 2 hourly or according to the patients' clinical needs,
- Essential equipment must be present at the bedside with documented evidence that the check is undertaken at least once per shift.
- Humidification is essential for patients with a temporary tracheostomy.
- There is evidence of regular multidisciplinary team meetings to evaluate the care delivered and review the management plan.
- Information relating to the specific tracheostomy tube must be documented and is clearly visible at the bedside.
- Patients should have a 'Tracheostomy Passport' containing personal information relating to their tracheostomy.
- Patients should have a double cannulated tracheostomy tube in situ, except for mini-tracheostomies.
- Cuff pressures (minimum occlusion volumes, MOV) should be regularly monitored.
- Signs of respiratory distress must prompt an urgent airway assessment to investigate for possible tube displacement or blockage.
- Clinical areas caring for patients with a tracheostomy must have a clear procedure for escalating their concerns or emergencies following the nationally accredited algorithm.
- To facilitate tube decannulation, the 'weaning' process must be guided by agreed parameters determined by the multi-disciplinary team.
- Following successful decannulation the patient must be closely observed and monitored for sign of respiratory distress.
- To safeguard intra and inter-hospital transfers, accompanying staff must be competent and ensure the appropriate equipment is available enroute and at the destination.

Benchmark Number: 2: Tracheostomy Management

Date Completed: Feb 2023
Date Reviewed: Feb 2025

FACTOR 1 – Documentation – assessment and implementation of care

Statement of Best Practice		Evidence & References	Achieved	Not Achieved	Variables
1.0	Following assessment of the patient, an individualised care plan is available	NTSP, (2022)			
1.1	The care plan is evaluated every shift or when the patients. health care needs change	Alabdah *et al* (2018)			
1.2	Nursing documentation includes the following information: • Reason for insertion of the tracheostomy • Type and size of tracheostomy tube • Date of insertion • Method of insertion • Date to be changed. • Stoma Care • Vital signs - respiratory rate, O_2 requirements and saturation • Method of humidification • Quality and type of secretions (colour, volume, odour consistency). • Subglottic tube aspirate (colour, volume, consistency, odour). • Inner tube checks • Cuff pressure monitoring • Visual check of tube position • Dressing and tape change • Speaking valve/Passy Muir valve • Essential equipment at the bedside including emergency tracheostomy kit is checked at least once per shift. • Weaning plan • Specific concerns related to insertion or intubation • Preferred method of communication	ICS, (2014) McGrath, (2014) Santos *et al* (2018) Speed *et al*, (2018) Lewith *et al,* (2019)			

1.3	The following bed space essential equipment is checked and documented once per shift: a. Spare tracheostomy tube (same size and one size smaller) b. Tracheostomy dilators (as per local protocol) c. Suction equipment, suction catheters, Yankeur d. Personal protective equipment (PPE) e. Sterile gloves - for performing deep suction. f. Non re-breath bag, bag valve-mask, oxygen tubing g. Working oxygen point h. Sterile water i. Humidification j. 10ml syringes k. Tracheostomy dressing and tape. l. Cuff manometer m. Lubricant n. Scissors (stitch cutter if tracheostomy tube is sutured) o. Over bed signs with emergency algorithm p. Patient call bell	AANN (2018 NTSP, (2022) NCEPOD, (2014)			
1.4	Tracheostomy tube information, including behind the bed signs with emergency algorithm, is clearly visible.	ICS, (2014)			
1.5	The patient has a Tracheostomy Passport' containing personal information relating to their tracheostomy.	NCEPOD, (2014)			
1.6	All patients, in ward environments, have a double-lumen tracheostomy tube in situ, (except for mini- tracheostomies).	ICS, (2014)			
1.7	There is documented evidence of regular multidisciplinary team meetings to review the plan of care.	GPIC, (2019)			

Benchmark Number. 10: Tracheostomy Management

Date Complete: Feb 2022
Date Reviewed: Feb 2024

FACTOR 2 – Protocol

Statement of best practice		Evidence & References	Achieved	Not Achieved	Variables
2.0	Research based guidelines/protocols are available that have been reviewed and updated in the last 2 years. These include the following: a. Emergency management b. General care of tubes c. Stoma care d. Suctioning and oxygenation e. Humidification f. Care of subglottic tubes g. Changing of tracheostomy tubes h. Weaning and decannulation i. Dysphagia assessment j. Staff education and competency	AANN (2018) Hussein (2017)			
2.1	**Tracheostomy tube changes** a. A collaborative decision to change the tube has been documented. b. Tracheostomy tube changes are initiated at least every 30 days (or as per manufacturer's recommendations) c. Tracheostomy tube changes are undertaken by two practitioners who are trained and competent. d. If a difficult tube change is anticipated then a clinician experienced in upper airway management and a practitioner experienced in managing patients with a tracheostomy is present e. The procedure is carried out aseptically. f. The practitioners apply appropriate PPE	RCP (2016) AANN (2018) RCN (2022)			

2.2	**Cleaning inner tubes** The inner tube is cleaned at the bedside with sterile water using a non-abrasive cleaning device and is air-dried prior to reinsertion. (abrasive wire brushes will scratch the internal lumen of the tubes and increase the risk of colonisation) The inner tube is checked and cleaned at least 4 hourly or as clinically indicated A spare inner tube is available at the patient's bedside.	Oddo *et al* (2018) Kissoon *et al* (2015)			
2.4	**Cuff management** Cuffed tracheostomy tubes must have their cuff pressure checked using a cuff pressure manometer/ and documented at least once per shift (15–25 cmH_20/10-18 mm Hg (may be higher in ventilated patients).	Oddo *et al* (2018)			
2.5	**Stoma care** The application of a stoma dressing is dictated by individual clinical need: a. When indicated, a polyurethane pre-cut key-hole dressing is inserted around the stoma (gauze dressings are not recommended as loose fibres can enter the airway) b. The stoma is cleaned with normal saline using non-fibre shedding gauze swabs to remove exudates/secretions. c. Cotton tapes/commercial tracheostomy holders should be used to secure the tube, if not contra-indicated d. Tapes are checked at least once per shift and changed as clinically indicated	RCP (2016) AANN (2018)			
2.6	**Humidification** The patient with a tracheostomy receives some form of humidification: - ▪ Cold or heated humidification ▪ Heat moisture exchanger (HME) ▪ Buchanan bib ▪ Saline nebulisers Oxygen therapy is clearly prescribed stating the percentage, duration and delivery system.				

2.7	**Suctioning** a. Suction pressures no greater than 20 kPpa // 150mmHg is recommended. b. Appropriately sized, single-use multi-eyed catheters are used (catheter diameter should be less than half the inner diameter of the tube to allow airflow around the sides of the catheter). c. Fenestrated tracheostomy tubes – the non-fenestrated inner tube is inserted prior to suctioning. d. Suctioning should last no longer than 10 seconds at each pass. e. Suction is only applied during withdrawal of the catheter. f. A closed-circuit suctioning device is utilised for patients requiring mechanical ventilation or high flow O_2. g. Open suction technique is performed as an aseptic technique. (Consider pre-oxygenation prior to suctioning, dependent upon the patient's clinical needs)				
2.8	**Weaning** The person or team responsible for tracheostomy management is clearly defined, particularly if it is not the specialty with primary responsibility for the rest of the patient's care. Prior to decannulation, an assessment of the upper airway is undertaken before any occlusive test of the tracheostomy is applied. Weaning is a sequential process with consideration of the following: - a. The patient has agreed parameters determined by the MDT b. The patient has been regularly reviewed. c. If unable to follow the weaning plan, this is documented. d. Safe staffing levels are available to maintain patient safety. e. Throughout the weaning process, the patient is continually monitored for signs of respiratory distress, f. A period of cuff down trials is clearly documented. g. If a patient has had a tracheostomy tube in situ for a prolonged period of time, cuff deflation should normally be tolerated for around 24 hours prior to attempting further interventions and proceeding with the decannulation plan. h. Feeding regimes are paused prior to commencement of any stage of the weaning process to minimise the risk of aspiration.				

	Speaking valves and occlusion caps The use of a speaking valve may be advocated prior to tube removal (aim for successful 24hr trial to determine if safe for decannulation). *Failure to deflate the cuff when a speaking valve or cap is attached will result in total occlusion of the patient's airway and suffocation*. • Tube occlusion technique "capping" for a pre-determined period may be trialled in some clinical settings. • Tracheostomy 'BED SIGNS' are clearly visible.				
2.9	**Decannulation** It is important to ensure that the cuff is deflated, and the patient can breathe through their upper airway. Following successful decannulation: • The patient is closely observed and monitored for signs of respiratory distress. • An airtight dressing is applied over the stoma site and observed for signs of inflammation.				
2.10	**Communication** Prior to insertion of the tracheostomy, the patient/relatives are informed that they will lose their ability to speak clearly whilst the tube is insitu. Patients with a tracheostomy will have complex communication needs and must be assessed by speech and language therapist in order to meet their specific needs. Alternative forms of communication should be readily available to aid conversation. Consideration must be given to the psychological impact of the loss of voice.				
	Nutrition A formal dysphagia assessment must be undertaken by a speech and language therapist or dysphagia trained practitioner. The patient must be reviewed by the dietician to ensure good nutritional care.				

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Factor 3 – Education

Statement of Best Practice		Evidence & References	Achieved	Not Achieved	Variables
3.0	All practitioners involved in the care of a patient with a tracheostomy are provided with a structured competency-based training program. This includes an understanding of: a. Identification of different neck breathers (tracheostomy, laryngectomy) b. The rationale for insertion of the tracheostomy tube c. Potential risks and complications associated with a tracheostomy d. The range of equipment used for neck breathing patients e. Infection control f. Associated documentation g. Weaning tools h. Cuff management i. Emergency escalation algorithm j. Nursing care (as outlined in section 2)	Berston *et al* (2019) Epic 3, (2014) Global Tracheostomy Collaborative			
3.1	Staff are aware of how to access relevant protocols, guidelines and evidence-based information.	McGrath *et al* (2017)			

FACTOR 4 – Patient Information

Statement of Best Practice		Evidence & References	Achieved	Not Achieved	Variables
4.0	Patient information is available and reviewed in accordance with local policy.				
4.1	Patients/carers must be given current evidence based verbal and written information including: a. Rationale for the intervention b. How often the patient will be reviewed. c. Possible complications d. Risks and benefits e. Equipment that they are likely to encounter e.g., humidification, suctioning. f. Likely duration of the tracheostomy	Coe *et al* (2018)			
4.2	Any information verbal /written that is given to the patient/carers is documented in the patients notes.				

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