Document Control

Title

Nasopharyngeal Suction Standard Operating Procedure

Author's job title
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Directorate	Department
Health and Social Care Community Services	Respiratory CREADO

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Superseded Documents

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Consulted with the following stakeholders:

- Ward Managers
- Physiotherapy In Patient Manager
- Physiotherapy Advanced Practitioner
- Infection Control Team
- Assistant Director of Nursing

Approval and Review Process

- Respiratory Therapy Group

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Respiratory, Physiotherapy, CREADO	Respiratory, Airway, Suction

CONTENTS

1. Introduction

This document sets out Northern Devon Healthcare NHS Trust's procedure for the use of Nasopharyngeal Suction. It provides a clear process to ensure a consistent approach across all clinical areas within the Trust.

2. Purpose

- The Standard Operating Procedure (SOP) has been written to:
- Support the main Suction Policy and should be used in conjunction with this.
- Identify the procedure to be implemented when the use of Nasopharyngeal Suction is required. Please note that this is a guideline only and a clinician's clinical judgement should be utilised following thorough assessment of the patient.

3. Scope

This Standard Operating Procedure (SOP) relates to the following staff groups who may be involved in the assessment and delivery of Nasopharyngeal Suction on the wards:

- Registered nurses
- Physiotherapists
- Medical staff

4. Location

This Standard Operating Procedure ~ Nasopharyngeal Suction can be implemented in all clinical areas where competent staffs are available to undertake this role.

Staff undertaking this procedure must be able to demonstrate continued competence as per the organisations policy on assessing and maintaining competence.

5. Equipment

- Functional suction unit
- Suction catheters with port incorporated or the addition of a port
- Patient 6' (ft) tubing
- Sterile water and jug
- Personal protective equipment
- Oxygen mask and tubing

- Observation machine
- Sterile gloves
- Water based gel

6. Procedure – Adult and Paediatrics (Without an artificial airway in Situ)

Nasopharyngeal is an invasive and potentially traumatic procedure it should only be used following a thorough assessment and where other less invasive interventions have proved ineffective.

If repeated suctioning is to take place then the use of a nasopharyngeal airway should be considered following discussion with medical staff and inserted by a clinician who is clinically competent to do so.

- Assess the need for suction.
- This procedure should be performed as a sterile non touch technique.
- Explain the procedure to the patient and gain consent. Explain to the patient how it will feel, why it is necessary, how long it will take and that they may ask for the procedure to stop at any time.
- For patients who are unable to give consent the Mental Capacity and Best Interest Assessment form must be completed and reviewed regularly, so that a decision to treat in best interests can be made. The form can be found on BOB.
- Position the patient in side lying to avoid vomiting and aspiration. Upright/ head up position can also be utilised to make insertion of the catheter easier.
- Decontaminate your hands and don appropriate personal protective equipment.
- Check their observations and monitor them throughout the procedure.
- Have an oxygen mask and tubing with oxygen flowing close to hand and ready to use.
- Pre oxygenate the patient if they are likely to become hypoxaemic as a result of the procedure.
- For patients who are self-ventilating on air but may become hypoxaemic during or after the procedure pre and post oxygenate for 2 minutes.
- For self-ventilating patients who run on a hypoxic drive and may become hypoxaemic during or post procedure raise their oxygen 20% above baseline for between 20-30 seconds.
- Set the suction pressure. Turn on the suction at the unit/ machine. Ensure the patient tubing is attached to the suction unit/ machine. Occlude the end of the patient tubing with your thumb. Observe the dial on the suction unit, adjust the pressure using the pressure regulator knob to the desired level (see below).

	Suction pressure
Adult	12-20 kPa or 100-150 mm Hg
Infants	11-13 kPa or 80-100 mmHg
Neonates	8-11 kPa or 60-80 mm Hg

The suction pressure needs to be high enough to clear secretions but low enough to minimise trauma.

- Select an appropriate sized catheter-

	Catheter Size French Guage (Fg)
Adult	10 Fg
Child (3 years- 18 years)	8-10 Fg
Toddler (1 year- 3 years)	6-8 Fg
Infant (1 month – 1 year)	6 Fg
Neonate (birth- 28 days)	5-6 Fg

- If using a nasal airway in adults the catheter needs to pass easily through it.
- Open the end of the catheter packaging.
- Attach the catheter whilst contained within the packaging, to the end of the patient tubing incorporating a port if there isn't one within the suction catheter.
- Place a sterile glove on your dominant hand and using a sterile technique, remove the suction catheter from its packaging.
- Lubricate the catheter tip with water based gel.
- With your thumb OFF the port and using your sterile hand slide the catheter gently into the nasal passage, over the nasal cavity aiming it to the opposite eye corner; opt for the right nostril rather than the left if possible. If obstruction is encountered withdraw slightly and start again, never use force to push the catheter. To reduce the risks of entering the oesophagus slide the catheter down during inspiration. If the patient swallows during the procedure then the catheter may have gone into the oesophagus. If this happens withdraw slightly and continue the procedure.
- If resistance is met on insertion of the catheter this may be the carina, the catheter should be withdrawn 1 cm before applying suction, to avoid trauma.

- Once a cough is stimulated and the catheter inserted adequately apply suction by covering the port with your thumb.

- Remove the catheter gently whilst applying continuous suction for the following duration

	Duration
Adult	Up to 15 seconds
Children of more than 1 year old	No longer than 10 seconds
Neonate and infants up to 1 year old	Do not exceed 5 seconds

- Do not pass the catheter back and forth repeatedly as this may spread infection and cause trauma.

- Once the catheter is fully withdrawn from the airway, discontinue suction and wind the catheter around the gloved hand and remove the glove over the catheter and discard, in accordance with local infection control policy.

- Re-apply oxygen if the patient becomes hypoxaemic following the procedure or if they are already receiving supplemental oxygen.

- Flush through the suction tubing using sterile water in a jug.

- Reassess the patient's clinical response to the procedure and whether they need further suctioning. Always allow plenty of time for the patient to recover between each suction pass.

- If frequent suctioning is to be carried out, more than 2-3 passes, a nasopharyngeal airway should be considered and discussed with medical staff. Only clinicians competent at inserting a nasal airway are able to do so.

7. Procedure - Paediatrics with an artificial airway in Situ

- Follow the above steps until the selection of the catheter. In paediatric patients with an airway or adjunct the catheter selection will depend on the internal diameter of the artificial airway.

- Double the size of the internal diameter (I.D.) of the artificial airway to obtain the correct catheter size, this can be found in the notes or on the packaging of the airway. The catheter diameter must be less than half the size of the tube and must fit easily through it.

- Establish the length of the artificial airway, this will be the pre-determined depth that the catheter will pass.

- Attach the end of the suction catheter to the patient tubing, incorporating a port if there isn't one within the suction catheter.
- Place a sterile glove on your dominant hand and using a sterile non touch technique, remove the suction catheter from its packaging.
- With your thumb OFF the port, slide the catheter gently into the artificial airway to the pre-determined depth; use the graduations on the catheter as a guide. Ensure that the lateral and distal holes in the catheter tip just pass the tip of the artificial airway.
- Apply suction by covering the port with your thumb.
- Return to the above procedure from duration of suction onwards.

8. References

- Pritchard, M. Flenady, V. and Woodgate, P. (2005) Preoxygenation for tracheal suctioning in intubated, ventilated newborn infants. **The Cochrane Library (Oxford)**
- Wallace, JL. (1998) Suctioning – a two edged sword: Reducing the theory practice gap. **Journal of Neonatal Nursing** 4 (6) 14-17.
- Youngmee, A. and Yonghoon, J. (2003) The effects of the shallow and the deep endotracheal suctioning on oxygen saturation and heart rate in high risk infants. **International Journal of Nursing Studies**. 40 (2) 97-104
- Pryor J.A & Prasad S.A. (2002) **Physiotherapy for Respiratory and Cardiac Problems** 3 rd Edition.
- Young C.S (1984) **Review of Adverse Effects of Airway Suction**, Physiotherapy 70, 3, Page 104 – 105.
- Anderson J. **Clinical Guideline: Airway Suctioning** (2006). Hull and East Yorkshire Hospitals NHS Trust.
- Sankner M.A et al (1973) Prevention of Tracheo-bronchial Damage with Suction Procedures. **Chest** 64 page 284 – 290.
- Young C.S (1984a) Review of Adverse Effects of Airway Suction, **Physiotherapy** 70, 3, Page 104 – 105.
- Broad M, Cross J, Harden B, Quint M, Ritson P, Thomas S, Respiratory Physiotherapy An On-Call Survival Guide
- Knox T, 2011, practical Aspects of oro-nasopharyngeal suction in children, Nursing children and young people vol 20, no 7, pages 14-17)
- **Adult, Paediatric and Neonatal Airway Suction Policy**, (March 2012) St George's Healthcare NHS Trust
- **Benger, J., Nolan, J. & Clancy, M.** (2009) Emergency Airway Management. Cambridge University Press: Cambridge. P 35-38

- Hough, A (2001) **Physiotherapy in Respiratory Care**. Third Edition. Nelson Thomes Ltd: Glos. p207-208

9. Associated Documentation

Northern Devon Healthcare NHS Trust Policies for:

- Suction Policy
- Single Use Policy
- Consent Policy
- Aseptic Techniques Policy
- Mental Capacity Act Policy
- Standard Infection Control Precautions Policy
- Oxygen Policy