NASOPHARYNGEAL AND OROPHARYNGEAL SUCTIONING

PROCEDURE ©

DOCUMENT SUMMARY/KEY POINTS

- This procedure is to assist with airway clearance if the patient is unable to cough, expectorate, swallow or otherwise clear the upper air passages effectively
- During and following suctioning it is important to assess the patient's: colour, pulse rate, respiratory rate and pattern, chest movement, breath sounds, oxygenation, volume and consistency of secretions, presence of bleeding or evidence of physical trauma and subjective responses including pain.
- When suctioning unstable patients, the following continuous monitoring should be in place: three lead ECG monitoring and pulse oximetry.
- Risks are increased in a combative or unco-operative patient and staff are advised to utilise additional resources.
- Under no circumstances should the suction port be applied directly to the nostril or into the nose.
- Note potential for adverse event/risks
- Note contraindications
- Document the time of suctioning, the amount, colour, consistency of secretions and any adverse reactions to suctioning.

Approved by:	SCHN Policy, Procedure and Guideline Committee	
Date Effective:	1st January 2023	**Review Period:** 3 years
Team Leader:	Clinical Nurse Consultant	**Area/Dept:** Respiratory, SCH

Date of Publishing: 8 December 2022 2:18 PM Date of Printing: 8 December 2022

CHANGE SUMMARY

- Document due for mandatory review; no change to practice.
- Replaces Nasopharyngeal and Oropharyngeal Suctioning - SCH
- Addition of ECG related document
- Alerts added to manage deterioration of patient in relation to Between the Flags
- Updated management of equipment
- Updated references
- Added picture of ear

READ ACKNOWLEDGEMENT

- Nursing, medical and allied health staff caring for infants, children and young people in the acute setting should read and acknowledge they understand the contents of this document.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

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Introduction

- A patent airway is provided by removing accumulated secretions, such as saliva, blood, vomitus, mucous and other foreign material from the nasopharynx and oropharynx that cannot be removed by the patient's spontaneous cough and swallow or by repositioning.
- In some cases, effective oropharyngeal and nasopharyngeal suctioning may elicit a cough. Cough stimulation should not be the primary aim of suctioning as this may increase the risk of vomiting and subsequent aspiration. Physiotherapists may purposely aim to stimulate a cough to clear lower airway secretions as part of their treatment sessions.
- Currently there is no available evidence to support the routine use of normal saline nasal drops.

Adverse Events/Risks associated with suctioning may include:

- Desaturation (O_2 saturation <90%), hypoxia
- Bradycardia/bradyarrhythmia
- Bronchoconstriction/bronchospasm
- Laryngospasm
- Hypotension
- Mechanical trauma
- Infection
- Paroxysmal and uncontrolled coughing
- Retching, gagging, vomiting, aspiration
- Pain
- Mechanical Trauma due to misdirection of catheter
- Raised intracranial pressure

Management of Adverse Events/Risks Stop suctioning immediately should an adverse reaction occur, provide airway support and oxygen as required and seek medical attention

If vomiting occurs:

- Position patient to allow ease of removal of vomitus
- If the patient is unable to clear his/her own secretions, gently suction oropharynx.

ALERT: Between the Flags

Any clinical deterioration as described above or whereby a child is recorded in the yellow or red zones on the SPOC must result in a formal CLINICAL REVIEW or RAPID RESPONSE as per the Clinical Emergency Response System (CERS) protocol.

Patients should NOT be transferred with SPOC Observations in RED zone unless there is a documented plan of care and altered criteria in place by admitting team/ED Consultant or as per the Clinical Emergency Response System (CERS) protocol

Contraindications

Suction may be required in the below situations but should be carefully discussed with the treating team before commencing procedure.

In some case oropharyngeal suctioning may be necessary when nasopharyngeal suctioning is contraindicated

- Pertussis
- Suspected base of skull fractures
- Acute head, facial or neck injury
- Laryngospasm
- Coagulation or bleeding disorders
- Post-operative ear, nose or throat surgery and cleft palate repair due to the risk of interrupting haemostasis.
- Nasal bleeding
- Occluded nasal passages, for example choanal atresia
- Raised intracranial pressure

Equipment

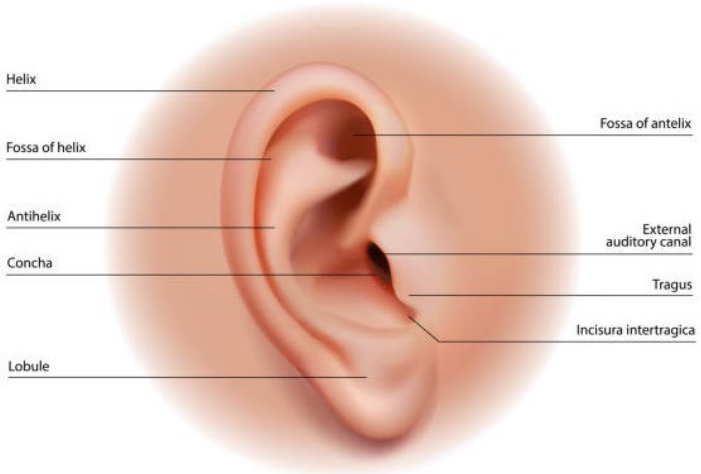
- Sterile suction catheter (e.g. Pedi-Y catheters) - size of catheter chosen will depend on age/size of child's nares and tenacity of secretions. A guide is as follows:
  - Size 6 (FG) neonates
  - Size 8 (FG) young child (usually up to 5 years of age)
  - Size 8 -10 (FG) older child (usually 6 - 10 years of age)
  - Size 10 - 12 (FG) adolescents
- Wall or portable suction checked prior to procedure
- Wall or portable oxygen therapy
- Oxygen saturation monitor and oximetry probe
- Continuous 3 lead ECG monitoring (for unstable patients)
- Oxygen face mask
- Suction tubing
- Personal protective equipment (PPE) (non-sterile gloves, impervious gown, N95 mask and an eye/face shield)
- Consider lubricating gel, however, ensure suction holes are not occluded by gel

Procedure

Ideally, nasopharyngeal and oropharyngeal suctioning should be a 2-person procedure

1. Perform basic hand hygiene. Apply PPE (non-sterile gloves and eye/face shield (non-sterile gloves, impervious gown, N95 mask and an eye/face shield).
2. Perform respiratory assessment. Ensure SpO2 monitoring is attached. Patients who are unstable (have any observations outside of the white zone on SPOC, or recent change in condition) should also have continuous 3 lead ECG monitoring applied.
3. Explain procedure to child (age dependent) and parents/caregiver and give reassurance. Gain verbal consent if possible.
4. Patients receiving supplemental oxygen should be assessed for the need for hyperoxygenation prior to and/or during suctioning to minimise the potential adverse effect of hypoxia during suctioning.
5. Assemble equipment - ensure oxygen therapy with attached oxygen face mask is available prior to commencement of the procedure. Ensure suction pressures are checked.
6. Parent/carer or assistant may swaddle (wrap and support) the patient whilst the patient is lying in the supine position on the bed, with access to the mouth and nose.
7. Open sterile suction catheter packaging slightly and attach suction catheter to suction tubing.
8. Measure insertion length:
    i. Appropriate insertion length for nasopharyngeal suctioning is determined by measuring the distance from the tip of the nose to the tragus of the ear.
    ii. Appropriate insertion length for oropharyngeal suctioning is determined by measuring from mid chin to angle of the mandible.

Human ear



9. Set the suction on the wall to the appropriate level. The amount of pressure exerted is not dependent on the degree to which the dial is turned on. To check the pressure settings the suction catheter should be occluded. If a pressure gauge is available, the recommended suction pressures are listed in table below:

	<1 year	1-5 years	6 years and above
Maximum Suction Pressure	60-80mm Hg (8-10kPa)	90-110mm Hg (10 -15kPa)	110-150mm Hg (15 -20kPa)

NOTE: Increase suction pressures do not equate to greater secretion yield but may increase the risk of mechanical trauma. If pressure is set any higher, no more secretions are removed but the amount of trauma is increased.

10. Remove sterile suction catheter from packaging.

11. Apply lubricating gel to the outside of the suction catheter (distal) if this is deemed appropriate, e.g., previous history of difficulty in passing suction catheter through nasopharynx.

12. If performing nasopharyngeal insert catheter next to the nasal septum gently and advance to the back of the nose do not occlude suction port and do not force suction catheter.

- If performing oropharyngeal suctioning insert catheter into posterior oropharynx

13. Occlude suction port continuously only on removal of catheter. Do not rotate catheter - it does not increase amount of fluid obtained, however gently rolling the catheter between your thumb and fingertips during removal to augment the position of the eyelet openings at the distal end of the catheter can improve clearance.

ALERT: Under no circumstances should the suction port be applied directly to the nostril or into the nose.

14. The suctioning should only take a maximum of 5 –10 seconds. Do not force suction catheter, if you are unable to gently pass catheter, stop procedure and seek senior nursing or medical advice.

15. Assess the need to repeat the procedure. Allow the patient to rest between each pass of the suction catheter and provide reassurance to the patient. Include use of saline to flush catheter and tubing if further attempts are required. Thick secretions in the lumens will decrease the effectiveness of subsequent passes. It is recommended that no more than three suction passes be made during anyone suctioning episode.

16. Disconnect suction catheter from tubing.

17. Dispose of gloves and suction catheter into clinical waste container. Remove PPE and discard.

18. Perform basic hand hygiene.

19. Check patient is comfortable and reassess respiratory status.

20. Document the time of suctioning, the amount, colour, consistency of secretions and any adverse reactions to suctioning.

Outcomes

- Audible and visible secretions are removed.
- The patient's airway is clear, and the effort of breathing is improved.
- Improved oxygenation, saturations and or colour.
- The patient is comfortable, pain free from the procedure and the patient's emotional and psychological wellbeing are assessed as optimal.
- No adverse reaction has occurred. If an adverse event has occurred, the appropriate interventions have been implemented.

Related Documents

- Oxygen Therapy and Delivery Devices – SCHN
- Continuous Electrocardiography (ECG) Monitoring – SCHN

References

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