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## Nasopharyngeal and Oropharyngeal Suctioning

*Rationale and supporting evidence*

# Nasopharyngeal and Oropharyngeal Suctioning

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## *Rationale and supporting evidence*

### Document Structure

The protocol is divided into four sections: **indications, pre-procedure, procedure** and **post-procedure**.

Each step in the protocol includes the **actions**, the **rationale** underlying the actions, additional **notes** and the supporting **evidence**.

### Definition of procedure

Suctioning is used to maintain a patent airway and improve oxygenation by removing mucous secretions or foreign material (vomit or gastric secretions) from the mouth, nose and throat. Nasopharyngeal suctioning involves passing a suction catheter through the nose and clearing the nasal passage and pharynx. Oropharyngeal suctioning involves passing a suction catheter through the mouth to clear the oral passage and pharynx. This procedure does not cover nasal/oral suctioning or new-born suctioning.

### Indications and contraindications of nasopharyngeal and oropharyngeal suctioning

#### *Indications:*

1. respiratory illness where there is evidence of upper airway obstruction due to secretions.
2. Obvious choking/aspiration during vomiting or feeding
3. To clear the airway during resuscitation manoeuvres
4. When a patient is unable to swallow and clear their own secretions (reduced LOC, coma)
5. Palliative and end-of-life care

#### *Contraindications:*

This procedure is not applicable for newborns suctioning at delivery. **Please refer to Helping Babies Breathe (HBB)** for recommendations on caring for healthy babies and assisting babies that do not breathe on their own after birth. **Please refer to MSF Neonatal Guidelines and MSF Essential Obstetric and Newborn Care for more information.**

#### *Patients requiring extra caution:*

Patients with recent neck and head surgeries or who have suffered craniofacial trauma

**Important to note:**



The healthcare provider is responsible to use his/her clinical judgment throughout the procedure. If the healthcare provider notices or observes any abnormalities in the patient it is his/her responsibility to alert a senior staff member and/or the treating clinician as soon as needed.

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## Pre-procedure for nasopharyngeal and oropharyngeal suctioning

Action	Rationale	Notes	Evidence
1. Perform hand hygiene 	<ul style="list-style-type: none"> <li>- To avoid cross-contamination and minimize chance of infection</li> <li>- As per moment 1 of hand hygiene</li> <li>-</li> </ul>	<p>This hand hygiene should be performed as the healthcare provider is going to touch a patient. Hand hygiene should be performed preferably using alcohol-based hand rub <u>OR</u>, if visibly soiled, using soap and water.</p> <p>Gloves are NOT indicated for preparing for naso/oropharyngeal suctioning; however, if the healthcare provider has a lesion, cut or sore on his/her hands, he/she should wear gloves before performing any act on a patient. Likewise, if the patient's skin is not intact, non-sterile gloves should be worn.</p> <p><b>Please refer to the intersectional ICO document “IPC-Pillar 1: Hand Hygiene” for more information on the WHO 5 moments of hand hygiene.</b></p>	(Fraise & Bradley, 2009)(Médecins Sans Frontières, 2019b)(World Health Organization, 2009)
2. Confirm the patient's identity	<ul style="list-style-type: none"> <li>- To ensure the act is performed on the correct person</li> </ul>	<p>Confirm identity by asking the patient for their full name and date of birth.</p> <p>If the patient is unresponsive or unable to identify him/herself, verify the patient's name, date of birth and patient number on his/ her identification wrist/ankle band and ask the caregiver the patient's full name and date of birth.</p>	(NPSA, 2007)(RCN, 2010)
3. Assess patient's need for suctioning	<ul style="list-style-type: none"> <li>- To avoid causing unnecessary harm to the patient</li> <li>- To provide safe and effective care</li> </ul>	<p>Suctioning should be performed with caution and only if necessary.</p> <p>The healthcare provider should perform a respiratory assessment to determine the need of suctioning and to evaluate effectiveness post-procedure.</p> <p>Pooling of secretions may lead to airway obstruction. Primary indications for suctioning include:</p> <ul style="list-style-type: none"> <li>• decreased oxygen saturation;</li> <li>• audible secretions (gurgling sounds with inspiration and expiration);</li> <li>• weak, ineffective cough;</li> </ul>	(BC Campus, n.d.)(Czarnec ki & Kaucic, 1999)(Rapin et al., 2016)

		<ul style="list-style-type: none"> <li>• drooling;</li> <li>• gastric secretions or vomit in the mouth</li> </ul>  <b>CAUTION:</b> Suctioning can cause laryngospasm and apnoea in children. <b>Please refer to the nursing care procedure on respiratory assessment for further information.</b>	
4. Explain procedure to patient or caregiver in his/her preferred language, why they require it and the risks and benefits of the procedure. Allow the patient/caregiver to ask questions and obtain verbal consent	<ul style="list-style-type: none"> <li>- Understanding the procedure helps reducing fear and anxiety and ensures cooperation</li> <li>- A patient can only give consent if he/she understands the procedure</li> <li>- Obtaining consent is a fundamental in patient safety and is a legal requirement</li> </ul>	<p>Explain to the caregiver if the patient is a child or a person unable to consent themselves.</p> <p>If the patient is conscious, the healthcare provider should explain that the sensation of suctioning may feel like 'their breath being taken away'. Suctioning can also cause vomiting in conscious patients.</p> <p>Caregivers may be essential to ensure the cooperation of a paediatric patient.</p> <p>Once fully informed, the patient/caregiver has the right to refuse any medication or treatment. If this is the case, it must be clearly documented in the patient's file and the treating clinician informed.</p> <p>If the healthcare provider is meeting the patient and/or caregiver for the first time, he/she should introduce him/herself by name and explain that they are the patient's current healthcare provider. Regardless of the patient's level of consciousness, the healthcare provider should talk to the patient throughout the procedure as the sense of hearing is frequently unimpaired even in unconscious patients.</p>	(Griffith, 2003)(International Council of Nurses, 2012)(NMC, 2013)(Nursing and Midwifery Council, 2015)(E)
5. If during the respiratory assessment secretions deemed dry and thick, consider administering 0.9% sodium chloride nebulizer or nasal saline drops before suctioning	<ul style="list-style-type: none"> <li>- To ensure efficiency of suction</li> <li>- To loosen dry and thick secretions</li> </ul>	<p>Suctioning may not be as effective if the secretions are too dry and thick to collect.</p> <p>To loosen tenacious secretions in adults, regular nebulizer treatment may be considered while in younger children/infants the use of nasal saline drops is recommended.</p>  <b>CAUTION:</b> DO NOT administer any nebulizer without a medical	(Dougherty & Lister, 2015)

		<p>prescription.</p> <p><b>Please refer to the nursing care procedure on administration of medication via inhalation using a nebulizer for more information.</b></p>	
6. Provide privacy	- To maintain patient dignity	<p>Despite the patient's level of consciousness, maintaining patient dignity and privacy is still a priority.</p> <p>The healthcare provider should consider the presence or absence of a caregiver during the procedure.</p> <p>Privacy may be obtained by setting up privacy screens or drawing curtains.</p>	(E)
7. Perform hand hygiene	 <ul style="list-style-type: none"> <li>- To avoid cross-contamination and minimize chance of infection</li> <li>- As per moments 4 &amp; 5 of hand hygiene</li> </ul>	<p>This hand hygiene should be performed as the healthcare provider has touched the patient and is now leaving the patient surroundings. Hand hygiene should be performed preferably using alcohol-based hand rub <u>OR</u>, if visibly soiled, using soap and water.</p>	(Fraise & Bradley, 2009)(Médecins Sans Frontières, 2019b)(World Health Organization, 2009)
8. Clean/disinfect tray/trolley and suction pump and allow to dry	<ul style="list-style-type: none"> <li>- To avoid cross-contamination and minimize chance of infection</li> <li>- A surface is not aseptic until it has dried</li> </ul>	<p>A tray is preferred, but if none available a trolley can be used. The tray/trolley should be of sufficient size to safely contain all equipment. A kidney dish is not sufficient in size.</p> <p><b>Please refer to the intersectional IPC document "IPC-Pillar 2: Environmental Decontamination" for appropriate solution and technique to clean/disinfect surfaces and reusable material.</b></p>	(Médecins Sans Frontières, 2019a)
9. Gather equipment on dry tray/trolley: <ul style="list-style-type: none"> <li>a. Suction catheter</li> <li>b. Suction tubing</li> <li>c. Connectors</li> <li>d. Suction pump</li> <li>e. For nasopharyngeal suctioning</li> </ul>	- To avoid interruptions during the procedure	<p>Effective stock rotation should be employed to monitor expiration dates of equipment and promote the integrity of packaging.</p> <p>Verify that all packaging is intact and the expiry dates of the equipment. If packaging tampered or material expired, DO NOT use. Expired material should be sent back to the pharmacy for proper disposal. The oldest</p> 	(BC Campus, n.d.)(Intermountain Primary Children's Hospital, 2016)(Kennedy & Herod,

<ul style="list-style-type: none"> <li>a. 0.9% sodium chloride</li> <li>b. 19G needle</li> <li>c. 2 ml syringe</li> <li>f. Bottle of potable water</li> <li>g. Cup for water</li> <li>h. Aspiration bulb (for neonates only)</li> <li>i. Non-sterile gloves</li> <li>j. Oral sucrose solution (for infants &lt;6 months)</li> <li>k. Personal Protective equipment <ul style="list-style-type: none"> <li>a. Apron</li> <li>b. Protective glasses</li> <li>c. Mask</li> </ul> </li> <li>l. Detergent/disinfectant for surfaces</li> <li>m. Alcohol-based hand rub</li> <li>n. Waste bin (s)</li> </ul>		<p>material should be consumed first.</p> <p>Nasopharyngeal suction is the removal of obstructions in the nose and throat with the use of a flexible tube with conical tip. Nasopharyngeal suctioning is preferred in patients with clenched teeth.</p> <p> In neonates or infants less than 1 year, an aspiration bulb (also known as a penguin) should be used to clear secretions in the nose and mouth but it won't remove obstruction in the throat. The aspiration bulb does not require a suction pump and will not be discussed in this procedure. Please refer to your sections standard operating procedure on neonatal suction.</p> <p>Oropharyngeal suctioning is the removal of obstructions in the mouth and throat with the use of a rigid, plastic tube (yankauer) in adults or a flexible tube in adults, paediatrics and neonates.</p> <p>In adults, a yankauer should be used if the secretions are thick, there are small particles (ex: vomit) or in large volume.</p> <p>Suction catheter size is often based on the age/size of the patient:</p> <ul style="list-style-type: none"> <li>• 0-5months (3-6kg) 6Fr</li> <li>• 6- 12 months (4-9kg) 8Fr</li> <li>• 1 year – 3 years (10-15kg) 10/12Fr</li> <li>• 3 – 16 years to adult 12Fr</li> <li>• Adult 14Fr</li> <li>• Large adult 16Fr</li> </ul> <p>The catheter should be 1/3 the size of the opening of the nostril to allow for removal of secretions without obstructing the airway.</p> <p>The use of connectors is often necessary to fit the suction catheter to the tubing and the suction tubing to the pump.</p> <p>Ensure the suction machine is functional and that the tubing system, including the reservoir/canister, is clean. Suction catheters, tubing and</p>	<p>2015)(Médecins Sans Frontières, 2013)(NHS, 2012)(Open Pediatrics, 2014)(World Health Organization (WHO), 2013)</p>
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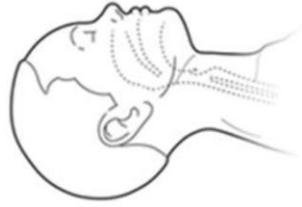
		<p>connectors are single use items.</p> <p>To optimize safety and success in naso/oropharyngeal suctioning, it is essential to immobilize a neonatal or paediatric patient during the procedure. Therefore, a second healthcare provider/use of a caregiver to assist in immobilization is encouraged.</p> <p>If the risk assessment has deemed that the healthcare provider will soil their uniform with bodily fluids, an apron must be worn. If there is a risk of spraying or splashing to mucosa (eyes, noses or mouth) the healthcare provider must wear protective glasses and a mask.</p>	
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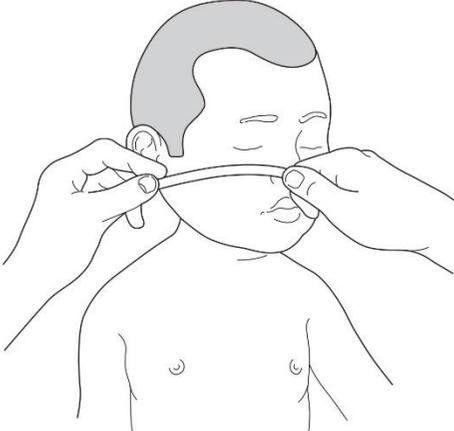
### Procedure for nasopharyngeal and oropharyngeal suctioning

Action	Rationale	Notes	Evidence
10. Fill cup with potable water and set on clean tray	- To prepare for rinsing of tubing	<p>The tray should be set on a firm and secure surface to prevent spillage.</p> <p>The amount of potable water needed is dependent on the amount of secretions needed to suction and the length of the tubing. In general, the amount of water should be sufficient to clear the connection tubing at least three times.</p>	(E)
11. If performing nasopharyngeal suctioning, prepare 2ml of 0.9% sodium chloride and place on clean tray	<ul style="list-style-type: none"> <li>- To loosen nasal secretions</li> <li>- To facilitate suctioning</li> </ul>	Draw up 2mls of 0.9% sodium chloride in a 2ml syringe.	(E)
12. Perform hand hygiene	 <ul style="list-style-type: none"> <li>- To avoid cross-contamination and minimize chance of infection</li> <li>- As per moment 1 of hand hygiene</li> </ul>	This hand hygiene should be performed as the healthcare provider is going to touch a patient. Hand hygiene should be performed preferably using alcohol-based hand rub <u>OR</u> , if visibly soiled, using soap and water.	(Fraise & Bradley, 2009)(Médecins Sans Frontières, 2019b)(World Health Organization, 2009)

<p>13. Assist patient into position</p>	<ul style="list-style-type: none"> <li>- To facilitate suctioning</li> <li>- To prevent trauma to the airway</li> </ul>	<p>Conscious adults and older children should be positioned sitting upright or minimally with the head of the bed at 30-45°.</p> <p>Unconscious patients should be supine with the head turned to a side.</p> <p>If the patient is receiving oxygen via nasal prongs and will be suctioned orally, the nasal prongs may stay in place and hyper-oxygenation (administering a higher than usual concentration of oxygen before the procedure) is not necessary.</p> <p>For infants and paediatric patients, immobilization with a towel or sheet may be useful while suctioning.</p> <p>Ask the caretaker if they could assist in immobilizing the patient. If he/she is unable, ask for assistance from a colleague. If the paediatric patient appears very anxious and combative, ask for assistance in addition to the caretaker.</p> <div data-bbox="1093 826 1912 1378"> </div> <p>Figure 1 - 2: Using a sheet/towel to wrap/immobilize an infant or child.</p>	<p>(BC Campus, n.d.)(Dougherty &amp; Lister, 2015)(World Health Organization (WHO), 2013)(E)</p> <p>Figure 1-2 reprinted with permission from WHO <i>Pocket Book of Hospital care for children</i>. World Health Organization (WHO). Annex 1: Practical Procedures, page 334. Copyright 2013.</p>
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<p>14. If performing <b>nasopharyngeal suctioning in a patient 0-6 months</b>, consider non-pharmacological methods to reduce pain</p> 	<p>- To minimize pain and anxiety</p>	<p>Non-pharmacological methods to reduce pain in infants and neonates include swaddling, skin to skin care and sensory stimulation (touch, massage and voice of caregiver).</p> <p>For older children, the use of distraction techniques may also be used before and during a naso/oropharyngeal suctioning.</p>	<p>(Médecins Sans Frontières, 2018a)(Saul, 2017)(The Royal Children’s Hospital Melbourne, 2018)</p>
<p>15. Perform hand hygiene, put on non-sterile gloves and other PPE according to risk of exposure</p> 	<p>- To avoid cross-contamination and minimize chance of infection</p> <p>- To reduce the risk of contamination of healthcare provider’s hands with blood and other body fluids</p> <p>- As per moment 1 of hand hygiene</p>	<p>This hand hygiene should be performed as the healthcare provider is going to touch a patient and put on gloves. Hand hygiene should be performed preferably using alcohol-based hand rub <u>OR</u>, if visibly soiled, using soap and water.</p> <p>Use of gloves does not replace hand hygiene. Assess the risk of exposure and adapt PPE accordingly. PPE could include:</p> <p>Use of an apron is to protect the healthcare provider from spraying or splashing of blood and other body fluids onto his/her uniform.</p> <p>If there is a risk of spraying or splashing to mucosa (eyes, noses or mouth) the healthcare provider must wear protective glasses and a mask.</p> <p>Goggles and face shields may be cleaned/disinfected according to local procedure and re-used.</p> <p>Surgical masks must be replaced under the following circumstances:</p> <ul style="list-style-type: none"> <li>• After three hours if worn for long periods;</li> <li>• In case of soiling and spraying or splashing;</li> <li>• If it has been lowered onto the chin.</li> </ul> <p><b>Please refer to the intersectional infection prevention and control “IPC-Pillar 3: Transmission-Based Precautions” for more information.</b></p>	<p>(Fraise &amp; Bradley, 2009)(Médecins Sans Frontières, 2019b)(Mers ey Care NHS Trust, 2012) (Worcestershire NHS Trust, 2016)(World Health Organisation (WHO), 2009)(World Health Organization, 2009)</p>
<p>16. Open the end of the chosen suction catheter pack and attach to the suction</p>	<p>- To reduce transmitting a</p>		<p>(Dougherty &amp; Lister, 2015)</p>

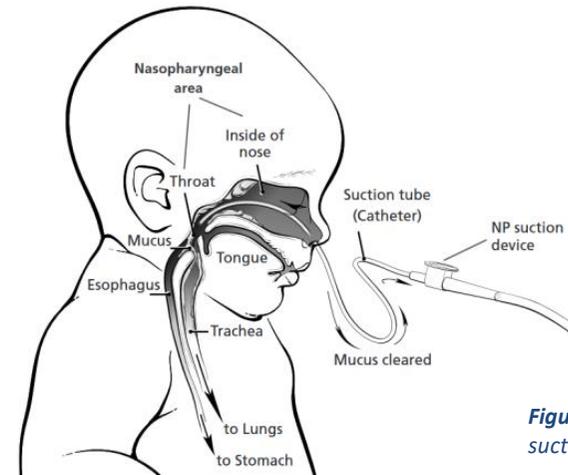
<p>tubing</p>	<p>healthcare associated infection to the patient</p> <ul style="list-style-type: none"> <li>- To set-up suction system</li> </ul>		
<p>17. Ensure the suction pressure is set to the approximate level</p>	<ul style="list-style-type: none"> <li>- To avoid causing trauma to the nasal/oral mucosa</li> </ul>	<p>The lowest possible vacuum should be applied. Suction pressure may be higher if secretions thick or tenacious and lower in unstable patients.</p>  <p>Suction should not exceed 80-100mmHg in neonates and paediatrics and 100-120mmHg in adults.</p> <p>The healthcare provider should ensure the suction system is closed and may use the palm of his/her hand to test the suction pressure.</p>	<p>(Czarnecki &amp; Kaucic, 1999)(Dougherty &amp; Lister, 2015)(The Royal Children’s Hospital of Melbourne, 2016)(E)</p>
<p>18. With assistance, immobilize the head of a paediatric or neonatal patient</p> 	<ul style="list-style-type: none"> <li>- To facilitate suctioning</li> <li>- To prevent trauma to the airway</li> </ul>	<p>The head of the patient should be immobilized and placed in a position that does not obstruct the airway. Immobilization of the patient may also decrease trauma and bleeding throughout the procedure.</p> <p>Head positioning depends on the age of the patient. For neonates and patients under one year the head should be in a neutral position. In older paediatric patients, the head should be tilted slightly back in a sniffing position. Hyperextending the neck may also obstruct the airway.</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;"> <p><b>Neutral position (&lt; 1 year)</b></p>  </div> <div style="text-align: center;"> <p><b>Sniffing position (&gt; 1 year old)</b></p>  </div> </div> <p style="text-align: center;"><i>Figure 3: Head positioning for suctioning depending on age.</i></p>	<p>(Intermountain Primary Children’s Hospital, 2016)(E)</p> <p>Image retrieved from: (Médecins Sans Frontières, 2018b)</p>

<p>19. If <b>using a suction catheter</b>, remove the catheter from its sleeve and measure the distance length of tube to be inserted</p>	<ul style="list-style-type: none"> <li>- To prevent catheter tip from entering the trachea</li> <li>- To provide safe and effective care</li> <li>-</li> </ul>	<p>To measure the approximate maximum depth of catheter insertion, place the tip of the catheter at the tip of the nose/corner of the mouth and straighten it to the earlobe of the patient.</p>  <p><i>Figure 4: Measuring the length of the suction catheter</i></p> <p>Measuring will ensure that the tip of the catheter will not go beyond the pharynx into the trachea.</p>	<p>(NHS, 2012)(North at Ohio Regional EMS, n.d.)(Open Pediatrics, 2014)</p>
<p>20. If performing <b>nasopharyngeal suctioning</b>, insert few drops of 0.9% sodium chloride into the nostril</p>	<ul style="list-style-type: none"> <li>- To facilitate entry of the suction catheter into the nostril</li> <li>- To loosen secretions</li> </ul>	<p>With the 0.9% sodium chloride containing syringe aim perpendicular to and against the nostril opening and insert 2-3 drops in the chosen nostril.</p>  <p>In neonates, do not exceed 0.2ml per nostril.</p> <p>The addition of a few drops of 0.9% sodium chloride can help loosen secretions and facilitate the entry of the suction catheter into the nostril. It is best administering the 0.9% sodium chloride just before suctioning, meaning, to insert the drops only in one nostril then suction into that nostril. If the other nostril needs suctioning, the drops can then be inserted into the second nostril.</p>	<p>(Intermountain Primary Children's Hospital, 2016)</p>
<p>21. Gently introduce the catheter into a</p>	<ul style="list-style-type: none"> <li>- To reduce the risk</li> </ul>	<p>Do not cover the suction vent (called NP suction device in the image</p>	<p>(Dougherty &amp; Lister,</p>

nostril or the mouth of the patient with the suction pressure turned off

of trauma to the mucosa upon insertion

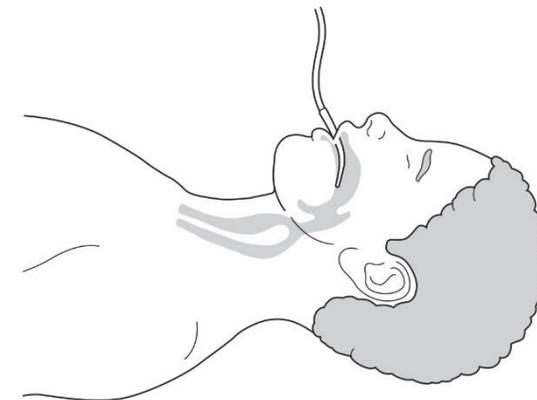
below or is a hole on the handle of a yankauer) as this will 'activate' the suction mechanism. If there is no suction vent on the catheter, bend/pinch the suction tubing to stop suction.



In nasopharyngeal suctioning, the tip of the catheter is inserted via a nostril and should reach the back of the throat but not reach into the trachea.

*Figure 5: Insertion of a flexible suction catheter into the naso-*

In oropharyngeal suctioning, the tip of the suction catheter is inserted via the mouth and should not go beyond the back of the throat.



*Figure 6: Depth of oropharyngeal suction*

2015)(McGrath, Atkinson & Moore, 2012)(Médecins Sans Frontières, 2018b)(Mussman, Parker, Statile, Sucharew, & Brady, 2013)(Ralston et al., 2014)

Figure 4.1 retrieved from: (Intermountain Primary Children's Hospital, 2016)

Figure 4.2 retrieved from: <https://alfa.sadleback.edu/data/suctioning>

		 <p>In neonates, an aspiration bulb is preferred. The aspiration bulb and flexible catheter should not be inserted beyond 3-5 cm from the corner of the mouth.</p> <p>Once resistance is felt, or if the patient begins gagging or coughing, the catheter has reached its maximum depth within the pharynx and should be withdrawn slightly.</p>  <p><b>CAUTION:</b> Deeper airway suctioning is contraindicated and is associated with oedema and irritation of the airways and an increased length of hospital stay in children with bronchiolitis.</p>	
<p>22.</p> <ol style="list-style-type: none"> <li>a. Activate suction by covering vent/unbending suction tubing (when present) and slowly</li> <li>b. Continuously withdraw tubing OR, if using a yankauer, continuously move the catheter tip</li> </ol>	<ul style="list-style-type: none"> <li>- To aspirate secretions</li> <li>- To avoid causing trauma to the mucosa</li> </ul>	<p>Suction is activated by the healthcare provider blocking a hole (vent) on the suction catheter with his/her thumb (when present).</p> <div style="display: flex; justify-content: space-around;">   </div> <p><i>Figure 7: Location of the vent on the yankauer</i></p> <p><i>Figure 8: Location of the vent on the Location of the suction tubing</i></p> <p>Constant movement prevents the catheter from suctioning the nasal or oral mucosa and causing trauma to the tissues.</p> <p>Encouraging the patient to cough may help bring up more secretions from the lower airways to be suctioned.</p>  <p><b>CAUTION:</b> The gag reflex should not be activated during suctioning, if the patient is gagging, the suction catheter is too deep. Slowly pull the catheter back.</p>	<p>(BC Campus, n.d)(Dougherty &amp; Lister, 2015)</p> <p>Figure 7 retrieved from: <a href="https://www.google.com/search?q=suction+with+yankauer&amp;client=firefox-b-ab&amp;source=lnms&amp;tbn=isch&amp;sa=X&amp;ved=0ahUKewi7mXeivLeAhVLL1AKHQ4kDzwQ_AUIDigB&amp;biw=1536&amp;bih=768#imgrc=BttPOIWZtgfqM">https://www.google.com/search?q=suction+with+yankauer&amp;client=firefox-b-ab&amp;source=lnms&amp;tbn=isch&amp;sa=X&amp;ved=0ahUKewi7mXeivLeAhVLL1AKHQ4kDzwQ_AUIDigB&amp;biw=1536&amp;bih=768#imgrc=BttPOIWZtgfqM</a></p> <p>Figure 8 retrieved from: Médecins Sans Frontières,</p>

			2018c
23. Do not suction for more than 10 seconds (5 seconds in neonates)	- To avoid adverse effects	Prolonged suctioning may result in acute hypoxia, cardiac arrhythmias, mucosal trauma, infection and the patient experiencing a feeling of choking.   In <b>neonates</b> , do not suction for more than 5 seconds.  The patient should be observed throughout the procedure.	(Day, Farnell & Wilson-Barnett, 2002)(Dougherty & Lister, 2015)(Médecins Sans Frontières, 2018a)
24. Allow patient to rest for 30 seconds, re-apply oxygen if needed	- To prevent hypoxia		(BC Campus, n.d)(Dougherty & Lister, 2015)(E)
25. While patient resting, insert the tip of the suction catheter into the potable water	- To clear the tubing of secretions - To prevent tubal blockage		(BC Campus, n.d.)(Dougherty & Lister, 2015)
26. Reassess patient and repeat steps 21-28 until airway clear	- To suction all secretions	If performing nasopharyngeal suctioning, the other nostril will likely need clearing. Repeat steps 21-28 for second nostril.  After oropharyngeal suctioning, or after both nostrils suctioned during nasopharyngeal suctioning, the healthcare provider should listen for audible secretions and evaluate respiratory status.   <b>CAUTION:</b> If at any point the healthcare provider notices any worsening signs or symptoms in the patient, the treating clinician should be notified immediately.	(BC Campus, n.d.)(Czarnecki & Kaucic, 1999)(Dougherty & Lister, 2015)

### Post-procedure for nasopharyngeal and oropharyngeal suctioning

Action	Rationale	Notes	Evidence
27. With the suction activated, insert the tip of the suction catheter/yankauer into potable water. Continue until all material is rinsed clear of visible secretions	<ul style="list-style-type: none"> <li>- To reduce the risk of infection</li> <li>- To clean the suction tubing</li> <li>- To prepare material for next suctioning</li> <li>- To avoid blockages in suction tubing</li> </ul>	<p>Suction material may be kept for up to 24 hours for the <u>same patient</u>. The suction catheter/yankauer needs to remain protected from environmental contaminants and identified to belong to a particular patient to avoid cross-contamination.</p> <p>If the healthcare provider is not able to render the suction catheter/yankauer or suction tubing visibly clean, it should be discarded and replaced immediately.</p>	(E)
28. Ensure waste is disposed of according to local procedure, including emptying the reservoir/canister appropriately	<ul style="list-style-type: none"> <li>- To ensure safe disposal of material</li> <li>- To avoid exposure to medical waste</li> <li>- To avoid the reuse of medical material</li> </ul>	<p>The use of multiple waste bins is required: organic, soft and bio hazardous waste.</p> <p>Please follow the local waste management procedure for sorting and disposal of waste.</p>	(DH, 2005)(Médecins Sans Frontières, 2013)(E)
29. Clean/disinfect the reservoir/canister and suction pump	<ul style="list-style-type: none"> <li>- To avoid cross-contamination and minimize chance of infection</li> <li>- To be prepared for repeat suctioning</li> </ul>	<p><b>Please refer to the intersectional IPC document “<i>IPC-Pillar 2: Environmental Decontamination</i>” and to biomedical devices maintenance protocols for appropriate solution and technique to clean/disinfect surfaces and reusable material.</b></p> <p>The maintenance and decontamination of reusable devices promotes their sustainability.</p>	(Médecins Sans Frontières, 2019a)(E) 
30. Remove non-sterile gloves and other PPE, discard single-use items	<ul style="list-style-type: none"> <li>- To avoid cross-contamination and minimize chance of</li> </ul>	Some PPE items may be single-use and are to be discarded. Reusable items should be brought to the designated location to be cleaned/disinfected.	(DH, 2005)(Médecins Sans Frontières, 2019a)

	<p>infection</p> <ul style="list-style-type: none"> <li>- To ensure safe disposal of material</li> <li>- To avoid exposure to medical waste</li> </ul>		(MHRA, 2004)
31. Clean/disinfect tray/trolley	<ul style="list-style-type: none"> <li>- To avoid cross-contamination and reduce microbial load before storage</li> </ul>	<b>Please refer to the intersectional IPC document “IPC-Pillar 2: Environmental Decontamination” for appropriate solution and technique to clean/disinfect surfaces and reusable material.</b>	(Médecins Sans Frontières, 2019a)
32. Perform hand hygiene	 <ul style="list-style-type: none"> <li>- To protect the healthcare provider from contamination and minimize the risk of dissemination of patient flora in the environment</li> <li>- As per moments 3, 4 &amp; 5 of hand hygiene</li> </ul>	<p>This hand hygiene should be performed as the healthcare provider has had possible exposure to a patient’s body fluids, has touched the patient and is now leaving the patient surroundings. Hand hygiene should be performed preferably using alcohol-based hand rub <u>OR</u>, if visibly soiled, using soap and water.</p> <p>Use of gloves does not replace hand hygiene.</p>	(Fraise & Bradley, 2009)(Médecins Sans Frontières, 2019b)(World Health Organization, 2009)
33. Document procedure date, time and pre-/post-assessment results obtained in the patient’s file	<ul style="list-style-type: none"> <li>- To maintain accurate records of all assessments and care provided</li> </ul>	The healthcare provider should document how the secretions were suctioned (naso/oro) and if there were any adverse reactions.	(NMC, 2010)(E)
34. Follow-up patient	<ul style="list-style-type: none"> <li>- To provide safe and effective care</li> </ul>	The healthcare provider should complete another respiratory assessment, including oxygen saturation level with a pulse oximeter, to determine if the suctioning was effective and beneficial to the patient.	(BC Campus, n.d)(Czarnecki & Kaucic, 1999)(Dougherty & Lister, 2015)(E)

		Subsequent suctioning and follow-up should be timely and based on the patient's clinical condition or medical prescription.	
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(E) is based on clinical experience.

**Annex 1: List of necessary materials needed for nasopharyngeal and oropharyngeal suctioning**

Code	Label	Notes/Pictures
SCTDTUSY20D	TUBE, SUCTION YANKAUER, adj. aspiration, sterile, s.u. CH20	
SCTDTUBE081	TUBE, silicone, autoclavable, int. Ø 8 mm, 10 m	
SCTDCONN7A1	CONNECTOR, biconical, asym., ext Ø 7-11 & 10-13mm, autoclav	
SCTDCONN7S-	CONNECTOR, biconical, symmetrical, ext Ø 7-11 mm, autoclav	
EMDPUME4--	SUCTION PUMP, ELECTRICAL (Medela Vario 18), 100-230V,50-60Hz	
SCTDTUSU06-	TUBE, SUCTION, conical tip, 50 cm, single use, CH06	A flexible tube typically made of plastic designed for periodic aspiration of liquids and/or semi-solids from a patient's upper airway. 
SCTDTUSU08-	TUBE, SUCTION, conical tip, 50 cm, single use, CH08	
SCTDTUSU10-	TUBE, SUCTION, conical tip, 50 cm, single use, CH10	
SCTDTUSU14-	TUBE, SUCTION, conical tip, 50 cm, single use, CH14	
SCTDTUSU16-	TUBE, SUCTION, conical tip, 50 cm, single use, CH16	
EANERESU102	ASPIRATION BULB (Laerdal NeoNatalie), silicone 986000	
EEMDPUMC403	(suction pump Vario18) ANTIBACTERIAL FILTER s.u., 077.0573	
EEMDPUMC404	(suction pump Vario18) TUBING PVC, 1.8m, s.u.,ster. 077.0951	 Fingertip tubing
DINJSODC9A5	SODIUM chloride, 0.9%, 5 ml, amp.	
SINSSYDL02-	SYRINGE, s.u., Luer, 2 ml	
SINSNEED19-	NEEDLE, s.u., Luer, 19 G (1.1 x 40 mm) cream, IV	

SMSUGLOE1S-	GLOVE, EXAMINATION, latex, s.u. non sterile, small	
SMSUGLOE1M-	GLOVE, EXAMINATION, latex, s.u. non sterile, medium	
SMSUGLOE1L-	GLOVE, EXAMINATION, latex, s.u. non sterile, large	
EMEQGLAS1P-	GLASSES, PROTECTIVE, plastic	 EMEQGLAS1P-      EMEQGLAS3CO
EMEQGLAS3CO	COVERGLASSES, PROTECTIVE, plastic	
ELINAPRP1P-	APRON PROTECTION, PVC, reusable	 Do not sterilise by steam autoclave  Destroy if damaged (perforated, etc.)
DEXTALCO5S-	ALCOHOL-BASED HAND RUB, solution, 500 ml, bot	
	Detergent/disinfectant for surfaces	

### History of this nursing care procedure

Date	Author	Version	Details
27-11-2018	Brigitte Ireson-Valois	1	No previous document: shared with NCCG
10-05-2019	BIV	2	Compilation of feedback and edits suggested by NCCG. Shared with NCCG
11-07-2019	BIV	3	Includes edits and changes suggested by NCCG. Shared with paediatric, critical care and IPC working groups
26-08-2019	BIV	4	Compilation of feedback and edits from the external working groups
17-10-2019	BIV	4.1	Edits for consistency with other procedures. Shared with NCCG
05-02-2020	AM	6.0	Incorporating PWG + NCWG comments
22.03.2020	AM	v1.0-2020	Finalized.