



Clinical Practice Procedures: Airway management/Suctioning

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Date	February, 2021
Purpose	To ensure a consistent procedural approach to suctioning.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
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Author	Clinical Quality & Patient Safety Unit, QAS
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Suctioning

February, 2021

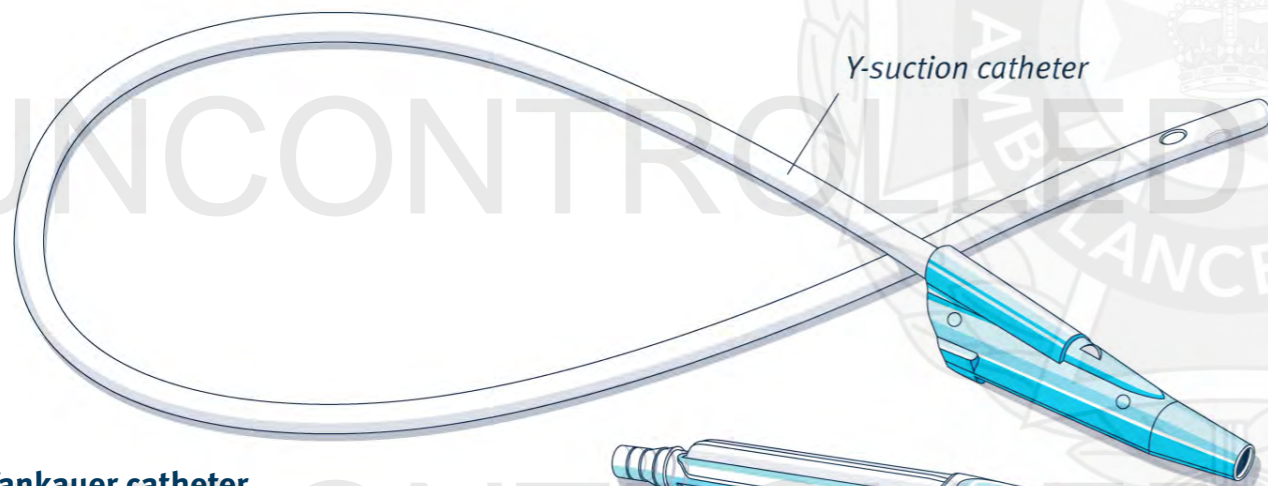
Critically ill patients have a weakened ability to spontaneously clear secretions. The appropriate suctioning of soiled airways decreases the risk of aspiration, promotes optimal pulmonary gas exchange and helps prevent nosocomial pneumonia.

The QAS supplies four (4) suction adjuncts:

Y-suction catheter	Size 6, 8, 12 & 16 FG
Yankauer catheter	Single size only
Meconium aspirator	Single size only
SSCOR DuCanto Catheter™	Single size only

Y-suction catheter

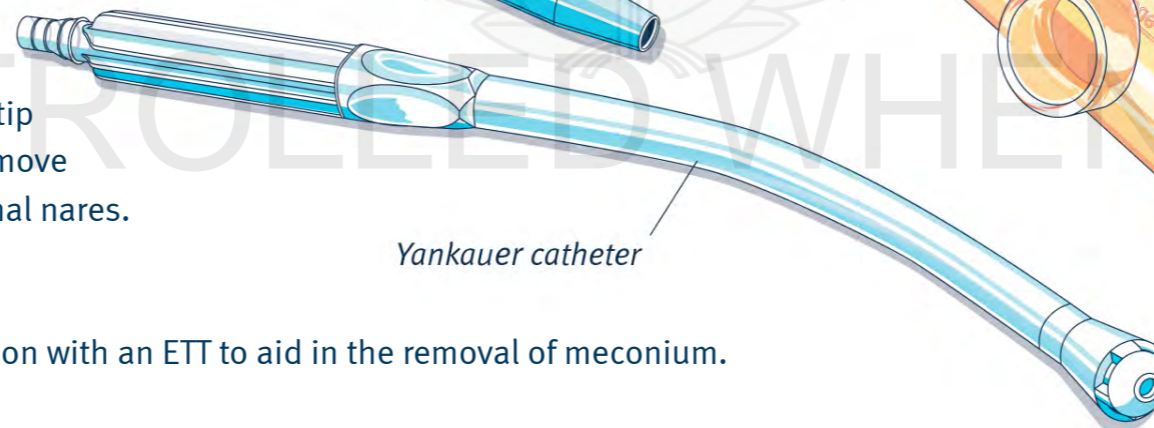
A soft flexible catheter typically used for suctioning endotracheal tubes. Additionally suitable for the suctioning of the patient's nares, nasopharynx, oropharynx, stoma, tracheostomy and airway adjuncts.



Y-suction catheter

Yankauer catheter

Rigid plastic catheter with a large suction tip surrounded by a bulbous head used to remove secretions from the oropharynx and external nares.



Yankauer catheter

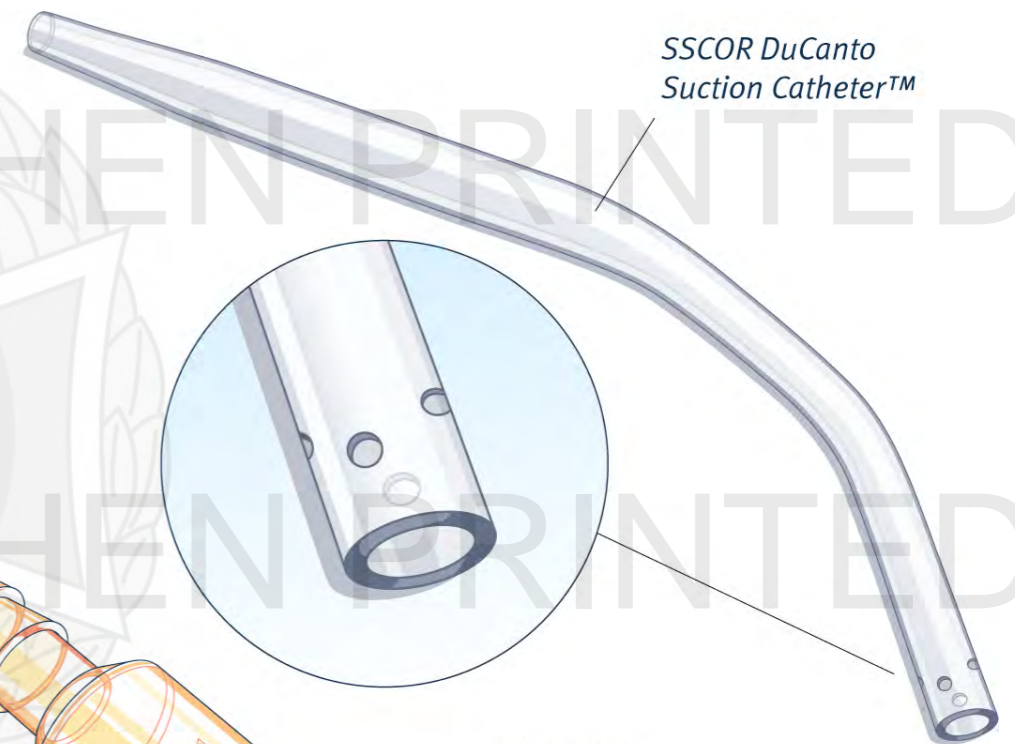
Meconium aspirator

Rigid plastic suction aid used in conjunction with an ETT to aid in the removal of meconium.

SSCOR DuCanto Suction Catheter™

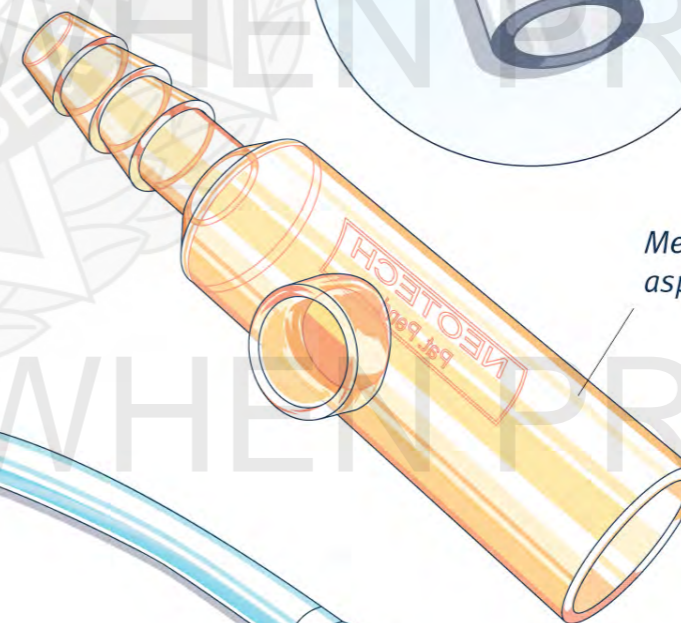
The SSCOR DuCanto suction catheter is a rigid, high-volume suction catheter that can facilitate oropharyngeal clearing in cases of heavy airway soiling during suction assisted laryngoscopy.

The larger internal diameter (6.6 mm) compared with the standard hard Yankauer suction device helps prevent clogging when suctioning solid material or large volumes of fluid.

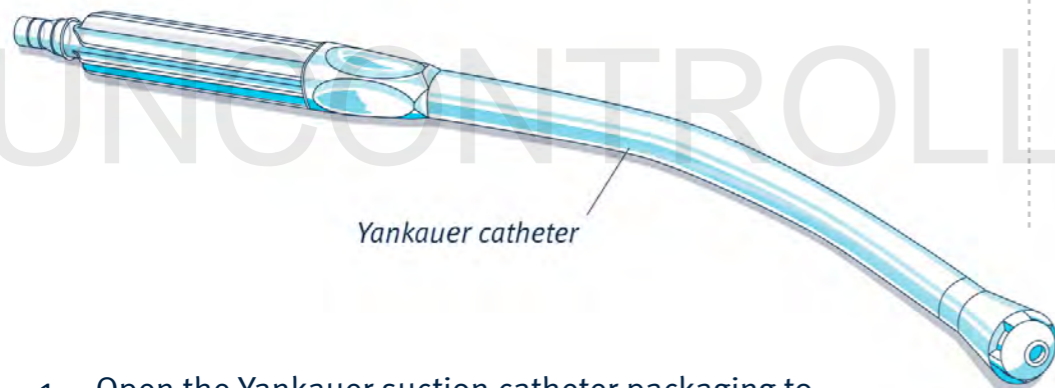


SSCOR DuCanto Suction Catheter™

Meconium aspirator



PROCEDURE oropharyngeal suctioning – Yankauer



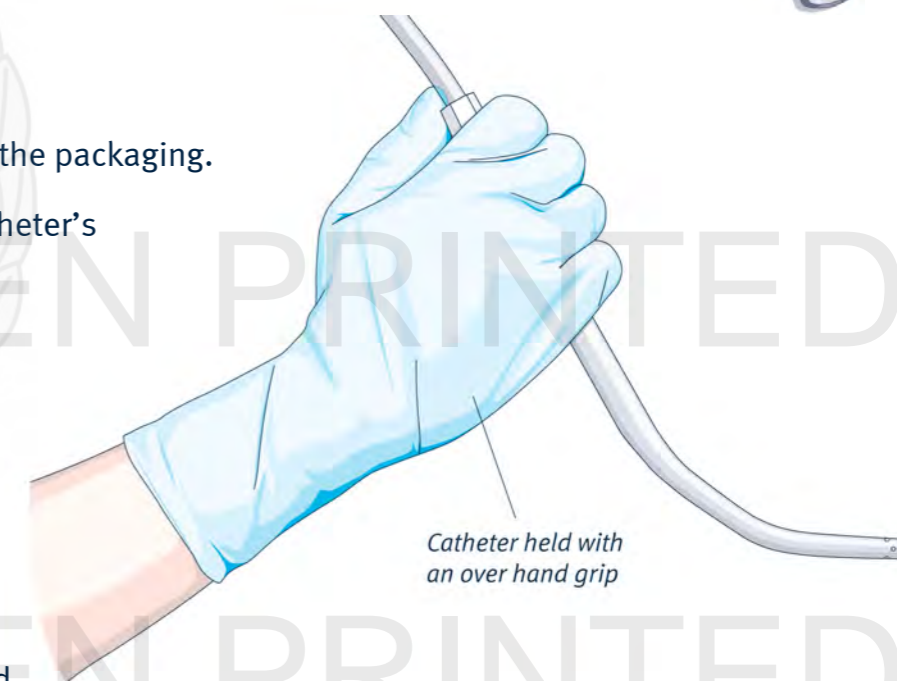
1. Open the Yankauer suction catheter packaging to expose the connection port only.
2. Ensure the catheter is connected to the suction tubing and the suction tubing is connected to an appropriate suction device.
3. If variable suction is available, adjust the suctioning pressure accordingly:
 - Neonates: 60–80 mmHg
 - Paediatrics: 80–100 mmHg
 - Adults: 80–120 mmHg
4. Test for adequate suction by occluding the catheter's side port.
5. Remove the suction catheter from the packaging.
6. With the side port remaining open, gently insert the catheter's tip into the patient's oral cavity.
7. Activate suctioning while gently withdrawing the catheter from the oropharynx.
8. Ensure commencement of appropriate oxygenation /ventilation. If required, repeat the suctioning procedure.

PROCEDURE oropharyngeal suctioning – SSCOR DuCanto Suction Catheter™

1. Open the SSCOR DuCanto Suction Catheter™ packaging to expose the connection port only.
2. Ensure the catheter is connected to the suction tubing and the suction tubing is connected to an appropriate suction device.

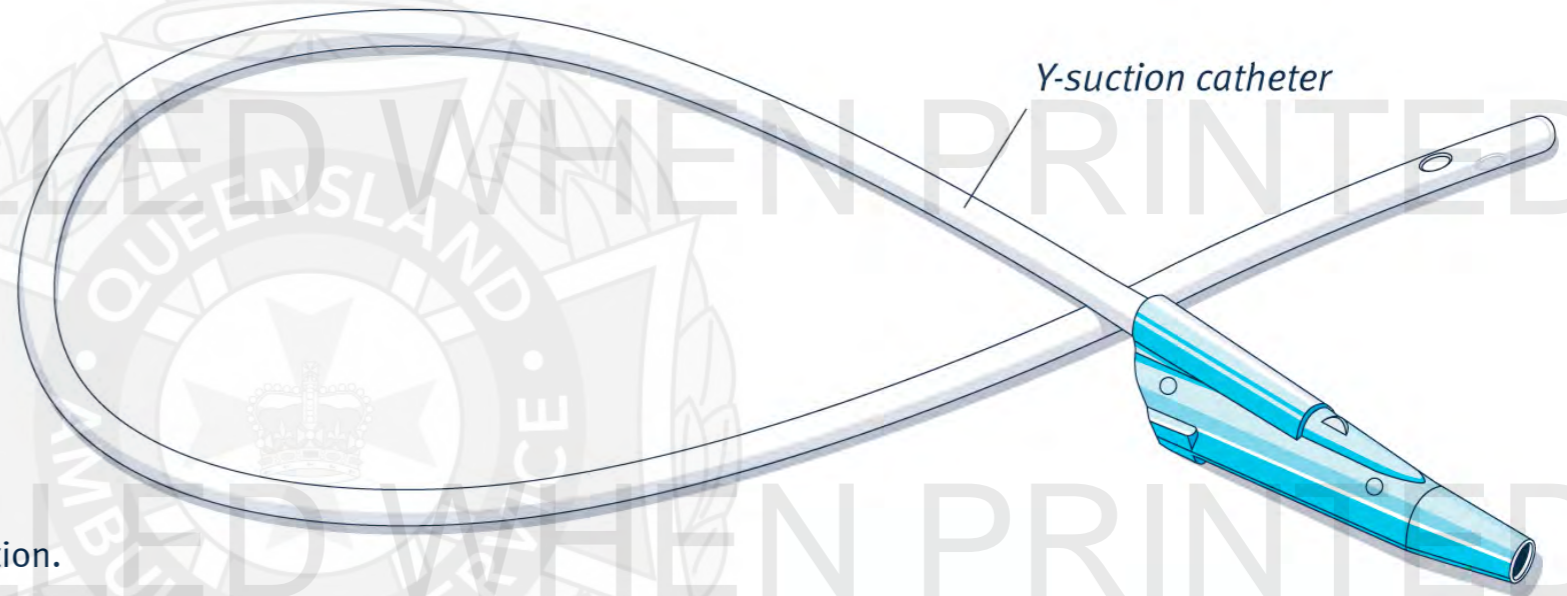


3. If variable suction is available, adjust the suctioning pressure accordingly:
 - Neonates: 60–80 mmHg
 - Paediatrics: 80–100 mmHg
 - Adults: 80–120 mmHg
4. Test for adequate suction.
5. Remove the suction catheter from the packaging.
6. Gently suction by inserting the catheter's tip into the patient's oral cavity.
7. If continuous suction assisted laryngoscopy is required, the catheter may be held with an 'over hand grip' and placed against the left margin of the laryngoscope blade.
8. Suction the oropharynx as required.
9. Withdraw the catheter from the oropharynx.
10. Ensure commencement of appropriate oxygenation/ventilation.



PROCEDURE nasopharyngeal suctioning

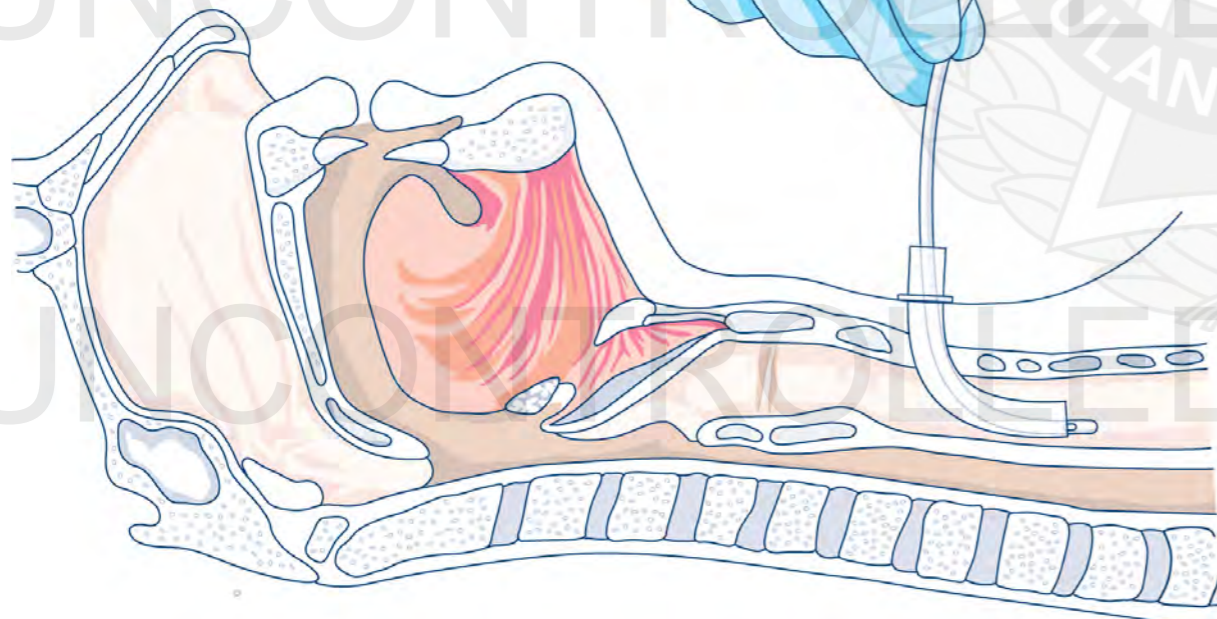
1. Select the appropriate size Y-suction catheter.
2. Open the Y-suction catheter packaging to expose the connection port only.
3. Ensure the catheter is connected to the suction tubing and the suction tubing is connected to an appropriate suction device.
4. If variable suction is available, adjust the suctioning pressure accordingly:
 - Neonates: 60–80 mmHg
 - Paediatrics: 80–100 mmHg
 - Adults: 80–120 mmHg
5. Test for adequate suction by occluding the catheter's side port.
6. Remove the suction catheter from the packaging.
7. With the side port remaining open, gently insert the catheter's tip into the patient's nostril down to the back of the throat. If resistance is felt, or the patient's cough reflex is stimulated, remove and reattempt insertion.
8. Activate suctioning while gently withdrawing the catheter in a rotating motion.
9. Ensure commencement of appropriate oxygenation/ventilation. If required, consider repeating using the alternate nostril.



PROCEDURE tracheostomy tube suctioning

1. Select the appropriate size Y-suction catheter (suction catheters should be half the size of the tracheostomy tube).
2. Open the Y-suction catheter packaging to expose the connection port only.
3. Ensure the catheter is connected to the suction tubing and the suction tubing is connected to an appropriate suction device.
4. If variable suction is available, adjust the suctioning pressure accordingly:
 - Neonates: 60–80 mmHg
 - Paediatrics: 80–100 mmHg
 - Adults: 80–120 mmHg
5. Test for adequate suction by occluding the catheter's side port.
6. Remove the suction catheter from the packaging ensuring that the distal catheter's sterility is maintained.
7. If present, remove the patient's heat moisture exchanger (swedish nose), BVM or ventilator circuit.
8. With the side port remaining open, gently insert the catheter's tip into the patient's tracheostomy advancing to just beyond the tube's distal opening (the total length plus 0.5 cm).
9. Activate suctioning while gently withdrawing the catheter in a rotating motion.
10. Ensure commencement of appropriate oxygenation/ventilation. If required, repeat the suctioning procedure.

Tracheostomy – insertion of Y-suction catheter into tracheal tube



Occlusion of the side port on the catheter



Side port

Procedure – Suctioning

PROCEDURE airway suctioning (meconium)

1. Ensure the meconium aspirator is connected to the suction tubing.
2. Intubate the newly born with an appropriately sized ETT.
3. Once successfully intubated, connect larger end (15 mm OD) of the meconium aspirator to the ETT adaptor.
4. Occlude the suction control port to regulate the suction.
5. While suctioning, gently withdraw the ETT to remove the meconium
– suctioning should be limited to ≤ 2 second episodes.

IMPORTANT: Recent evidence suggests that routine tracheal intubation for suctioning of meconium in the newly born is not clinically beneficial as it is unlikely to alter the outcome and may cause harm.^[1] Therefore, endotracheal suctioning is only to be performed in newly-born patients if they are showing signs of severe respiratory distress or present with a significantly depressed APGAR score. Under no circumstances is endotracheal suctioning to be performed on vigorous or moderately depressed newly-born.

+ Additional information^[1]

- The potential for aerosolised sputum exposure is **HIGH**. All precautions that serve to minimise risk to the clinician must be applied.
- There is no thumb port control to maintain suction on the SSCOR DuCanto Suction Catheter™, therefore this presents both positive and negative consequences:
 - It facilitates intubation of actively vomiting patients because it can be positioned hands free while holding a laryngoscope and ET tube/bougie
 - Extra care must be taken not to cause airway trauma by not directly placing on delicate structures in the airway.
- The size of the Y-suction catheter should be less than half the internal diameter of the endotracheal/tracheostomy tube.
- If variable suction is available, adjust the suctioning pressure accordingly:
 - *Neonates:* 60–80 mmHg
 - *Paediatrics:* 80–100 mmHg
 - *Adults:* 80–120 mmHg

