

# Essentials in Paediatric Airway Suctioning: Oral, Nasal & Nasopharyngeal

2022

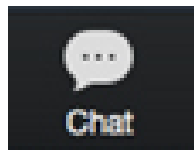
# Webinar Guidelines



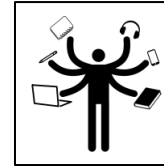
Use mute when you are not speaking. Unmute anytime to ask questions.



Turn video on for a more personalized/engaging experience. If internet connection is low turn on when speaking.



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Avoid multitasking during the session.



Participation is encouraged. This webinar includes interactive case studies with polls. All answers are anonymous.



Tell us about yourself

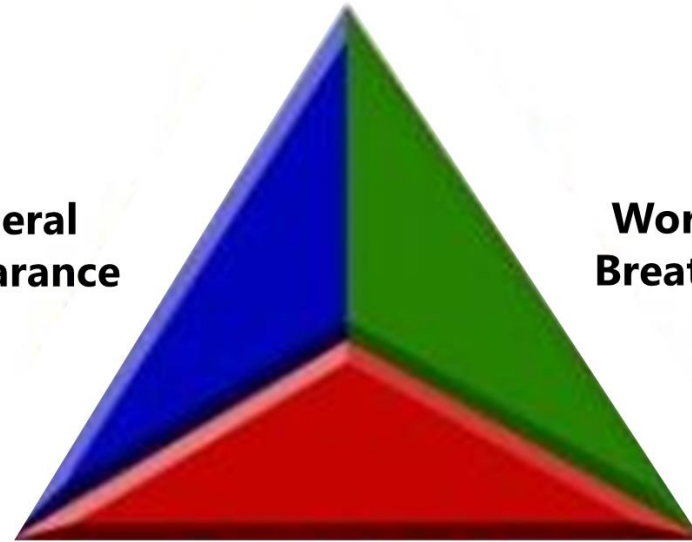
# Objectives

1. Review the Paediatric Assessment Triangle
2. Review paediatric respiratory assessment
3. Describe different types of secretions
4. Identify when suctioning is needed
5. Discuss types of suctioning
6. Discuss troubleshooting strategies for common problems related to suctioning

# Paediatric Assessment Triangle (PAT)

**T** – tone  
**I** – interactivity  
**C** – consolability  
**L** – look/gaze  
**S** – speech/cry

**General  
Appearance**



**Work of  
Breathing**

Abnormal  
airway sounds,  
abnormal  
positioning,  
retractions,  
flaring,  
apnea/gasping

**Circulation  
to skin**

Pallor, mottling, cyanosis

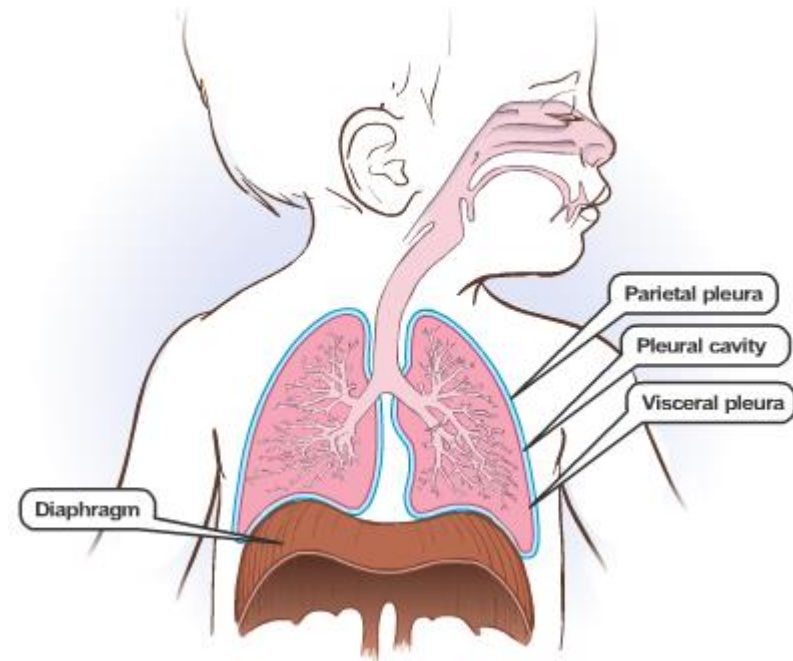
# Respiratory Assessment

## Inspection:

- Size and shape of the chest
- Chest movement
- Respiratory effort
- Respiratory rate
- Oxygen saturation

## Auscultation: (1 full min)

- Quality and characteristics



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# Indications for Suctioning

Many children that require suctioning need to be suctioned throughout the day. Each child will have different needs.

A change in the colour, amount, consistency or smell of secretions may be the first sign that a child is getting sick or that something else is wrong.

Suctioning should be considered when:

- Their cough is more frequent or sounds more congested than usual
- They cannot clear secretions on their own
- They are having trouble breathing or their breath sounds are harsh
- You can see secretions in their mouth or nose
- You can hear a gurgling noise while breathing

# Contraindications for Suctioning

- After certain upper airway procedures as ordered by MRP
- Trauma patients with known or suspected basal skull injury, until medically cleared
- Active nasal bleeding, unless required to maintain a patent airway

## Risks of suctioning include:

- Airway trauma
- Respiratory decompensation



# Nursing Considerations

## Assessment

- Children require individualized plans that can change depending on clinical status. This includes the following:
  - Suctioning frequency
  - Route that is most appropriate
  - Comfort measures and family support
  - Restraint during suctioning (least restraint)
  - Pre-oxygenation needs
  - Holding or pausing feeds (to avoid and risk of pulmonary aspiration)

## Monitoring

- Vital signs, tolerance and secretion characteristics

## Evaluation

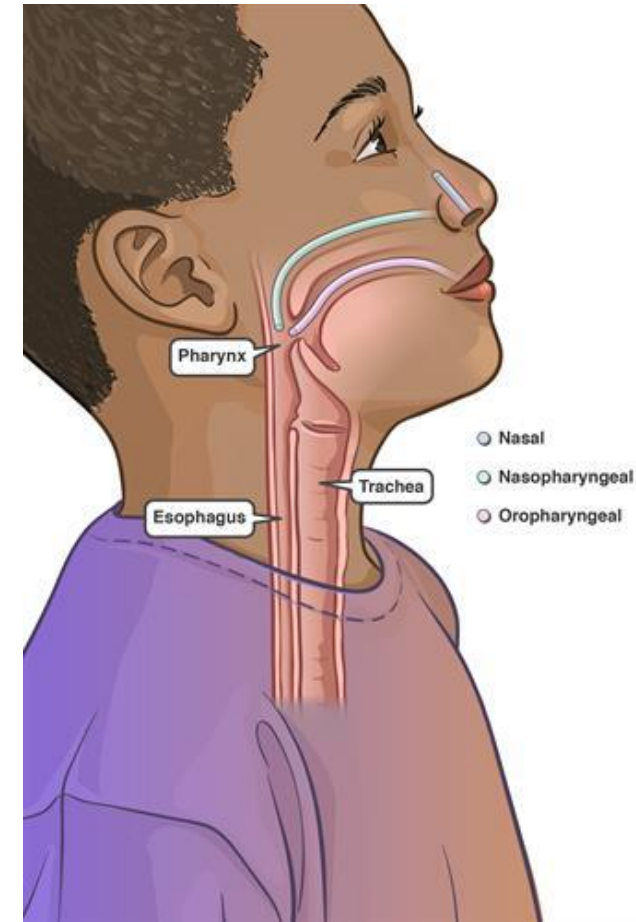
- Before and after suctioning, assess breath sounds to determine effectiveness of suctioning

# Types of Secretions

Secretion Characteristics	Potential Causes
Thickened	<ul style="list-style-type: none"><li>• Not enough humidity</li><li>• Dehydration</li><li>• Chest physiotherapy just performed</li></ul>
Yellow or green Foul smelling Increased production	<ul style="list-style-type: none"><li>• Infection</li></ul>
Red-streaked or bloody	<ul style="list-style-type: none"><li>• Infection</li><li>• Not enough humidity</li><li>• Trauma to airway</li></ul>
Brown	<ul style="list-style-type: none"><li>• Old blood</li><li>• Infection</li></ul>
Frothy pink	<ul style="list-style-type: none"><li>• Pulmonary edema (fluid build up in lungs)</li></ul>

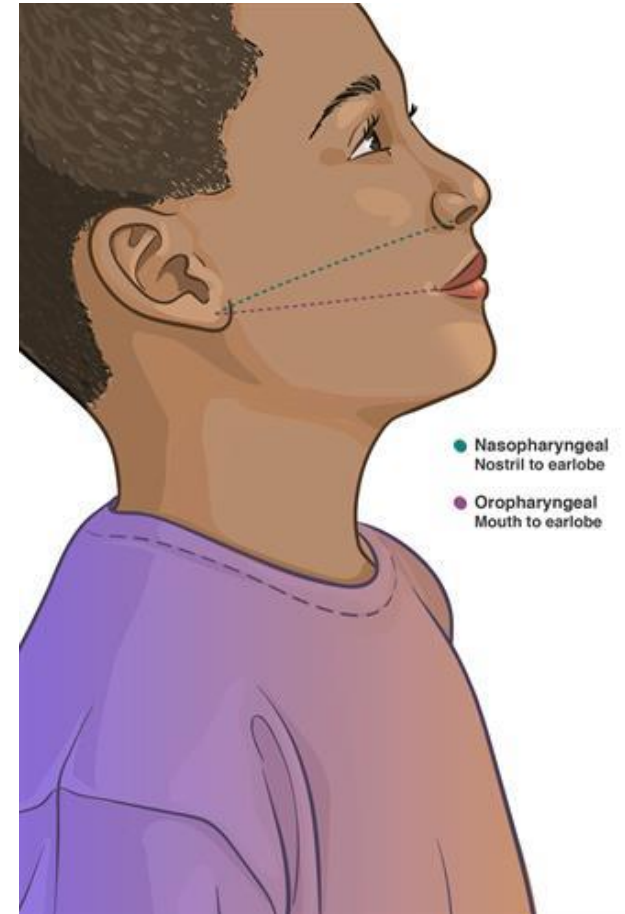
# Types of Suctioning

- Oral and oropharyngeal
- Nasal and nasopharyngeal
- Deep suctioning



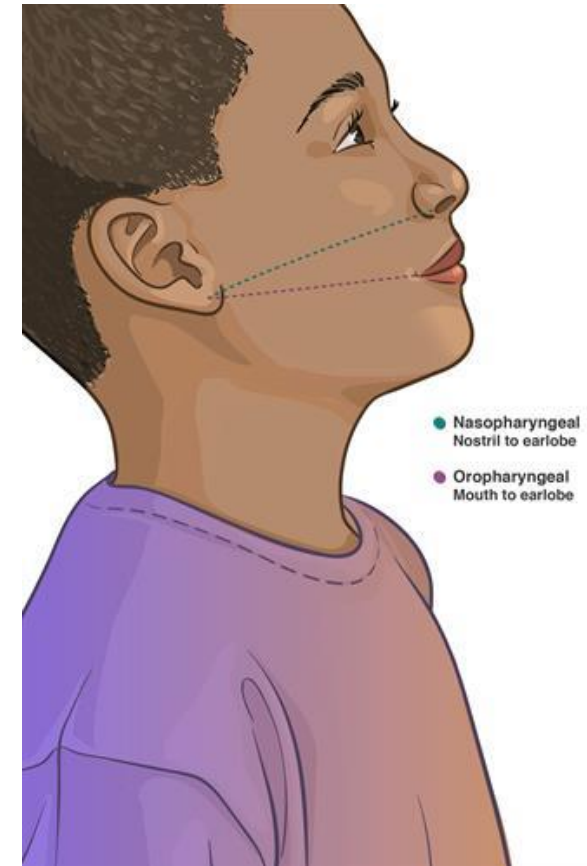
# Oral and Oropharyngeal Suctioning

- Useful when a child is:
  - unable to remove secretions by coughing (for example, they have a weak cough)
  - drooling because they cannot swallow
- Depending on age the child may be able to do this on their own as needed. Family caregivers may also be able to perform oral suctioning
- Oropharyngeal suctioning with a catheter: To know the depth, measure the corner of the mouth to the base of the earlobe



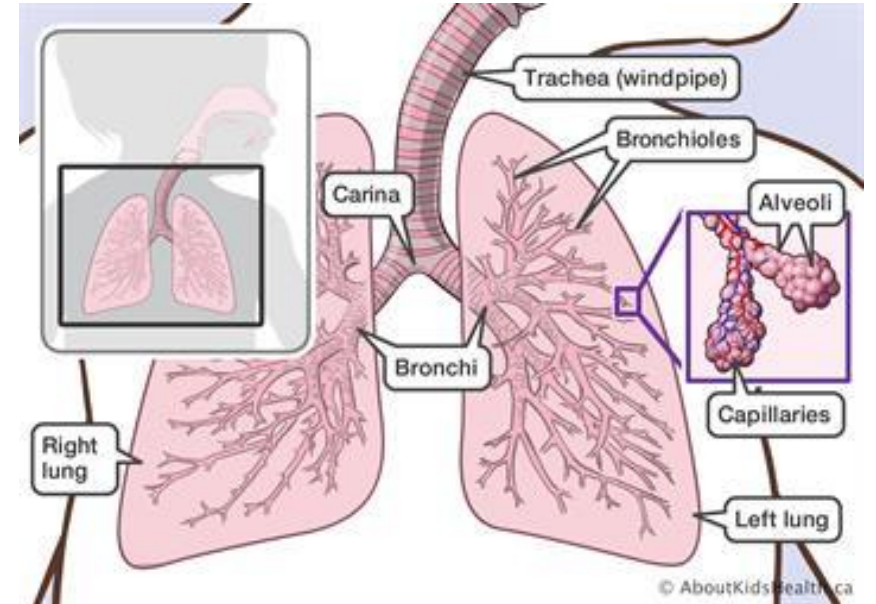
# Nasal and Nasopharyngeal Suctioning

- Nasal suctioning removes mucus in the nasal passages. Depth of catheter is measured to approximately the cheekbone
- With nasopharyngeal suctioning, a catheter is passed through the nose to the back of the throat, but does not pass beyond the glottis
- To know the depth for nasopharyngeal suction: measure from one nostril to the base of the earlobe on the same side of the face.



# Deep suctioning

- Suctioning of the trachea below the vocal cords
- Depth beyond nasopharyngeal to stimulate an effective cough to remove secretions
- Can be done via the nose or artificial airway (e.g. tracheostomy tube)
- Deep suctioning via the nose may often pass into the esophagus



# Positioning and Comfort Measures

- Semi-fowlers or sitting position with head tilted
  - consider the age of the patient
- Patients can also be held by caregivers if appropriate
- Consider bundling if age appropriate

# Safety Check

- Check equipment at the start of each shift to make sure that the:
  - suction pressure is set (check this each time you suction too)
    - Infants: 80-100 mmHg
    - Child/Teen: 100-120 mmHg
  - tubing is clean
  - collection canister is clean
- Check the size of the suction catheter
  - No more than half the diameter of the nare





# Suction Set Up



# Personal Protective Equipment

- Suctioning via any route can create aerosols and/or droplets (directly or by stimulating a cough or sneeze)
- Appropriate PPE should be donned based on point of care risk assessment and hospital policies

# Suction Technique

- Check the pressure setting and lubricate the end of the catheter.
- Insert catheter to measured depth. Do not apply suction on insertion.
- Apply suction and begin twisting catheter while withdrawing.
- Keep suction time to less than 10 seconds.
- Clear catheter with sterile water after each suction pass
- Continuous monitoring of child's colour, respiratory effort, oxygen saturations during and post suctioning.



# Troubleshooting Suctioning Problems

- The child may feel short of breath because suctioning removes oxygen from their airway
- When suctioning, if the child becomes blue or oxygen saturation decreases significantly, remove the catheter immediately. Administer oxygen if it's available until the child recovers
- Know when to call for help

# Patient Case

You are caring for an 11 month old patient with viral respiratory illness and recognize the need to NP suction.

With NP suction the patient has an incredibly strong cough reaction, rolling and turning the head in bed. The cough sounds very productive and you get a large amount of secretions. However, the patient still sounds congested after one suction pass.

What are your next steps?

# Patient Case Cont'd

After you suction again, the patient suddenly starts vomiting.

What should you do?



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