

Alberta Children's Hospital

Tracheostomy and Ventilator Education Program Module 4: Assessing Your Child

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Respiratory Assessment

- A basic introduction about knowing your child and how to assess their respiratory health and how they breathe
- Knowing how to assess your child will help you understand when and why they may need help



Why does your child have a trach?

- There are many reasons for a child to have a tracheostomy tube
- It is very important for you to know why your child has a trach tube
- It is important to know your child's airway needs



Children's Home Care Edmonton Zone 2016, Used with Permission



Respiratory Assessment

- Children all look very different in terms of what their normal respiratory assessment looks like as well
- Knowing your child means knowing what their normal looks like
 - That way you will know when there is something out of the ordinary for your child and when they may be having trouble breathing
 - Every parent has a sense of when their child is feeling unwell and just isn't themselves
 - Trust your instincts about your child



Behaviour

- Your child acts and behaves in a certain way that you are very familiar with
- When something is wrong or your child is out of sorts, you can tell
- Sometimes even a change in behaviour can indicate a respiratory issue a child who is normally happy and chatty can become quiet or irritable due to feeling unwell or having trouble breathing -
 - They may look frightened or upset or change their posture:
 - They may try to arch forward or sit up to help with their breathing
 - They may rock their body forward and backward to help with their breathing (anxious behaviour)
 - They may bob their head forward or extend their neck to help with their breathing



Colour

- They may also change colour when they are experiencing trouble breathing
 - o They may become paler than their normal
 - They can also turn reddish when they are angry, frustrated, feverish or working hard
 - You may see a dusky bluish colour around their mouth, nose and mucous membranes – this is called cyanosis (a bluish colour of the skin and mucous membranes due to reduced oxygen in the blood)
 - This is a late sign of respiratory distress and must be taken very seriously



Heart Rate

- Your child has a normal heart rate range for their age and condition you have seen it on the monitors in your child's room
- Your child's heart rate will change for many reasons:

 When they are sleeping, upset, excited, unwell
 When they are feeding
- Knowing your child's heart rate when they are stable will help alert you when their heart rate is changing
- Ask your health care team to help you learn how to assess your child's heart rate



Respiratory Rate

- Your child has a normal respiratory rate range for their age and condition
- Respiratory rates vary widely for children when they are eating, crying, sleeping, upset, and in respiratory distress having trouble breathing
- Knowing what your child's usual respiratory rate will alert you when their respiratory rate changes
- Ask your health care team to help you learn how to assess your child's respiratory rate



Respiratory Effort

- Breathing does not require much effort in a child with no respiratory or cardiac conditions
- Your child may have a condition where their breathing effort is normally high
- Knowing what your child's normal breathing looks like will help you understand when their effort is higher or they are working harder to breathe
- Ask your health care team to show you how to assess your child's respiratory effort



Respiratory Effort

- The main muscle for breathing is the diaphragm
- The diaphragm may not be enough muscle support for a child in respiratory distress - they may also use their accessory helper muscles to breathe
- When you can see the accessory muscles work to help the diaphragm with breathing – we call this retractions
- Belly breathing is when belly muscles are used to help the diaphragm
- Nasal flaring is when the nostrils open up wider to get more air flow when needed



Retractions: When the accessory muscles work to help the diaphragm with breathing:

Intracostal Retractions:

- Intracostal muscles between the rib spaces
- Help the diaphragm with rib cage
 movement outwards and upwards



Suprasternal and Supraclavicular Retractions:

- Sternocleidomastoid / scalene muscles in the neck above the breastbone and above the collar bones
- Help the diaphragm with rib cage
 movement upwards

Substernal Retractions:

- Abdominal muscles below the breastbone
- Help the diaphragm movement up and down





Breath Sounds

- Knowing how your child's normal breath sounds are is important
- You don't need a stethoscope to assess your child's breath sounds
- A rattling or wheezing sound can indicate that there is secretions in the airways or the trach – you can also feel these secretions when you have your hand on your child's chest or back
- A change in your child's cough may mean they have secretions that need to be suctioned, or that they may have a respiratory infection



Signs of Respiratory Distress

- Increased work of breathing:
 - Nasal flaring
 - Accessory muscle use retractions
- Changes in:
 - o Colour
 - Respiratory rate
 - Heart rate
 - o Cough
 - Breath sounds (e.g. wheeze, rattling)



Respiratory Assessment

- Your health care team will help you learn how to assess your child's respiratory status and how to identify signs of respiratory distress in your child
- You won't have monitors at home, so learning how to assess your child without monitors is very important

