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Ensemble pour soutenir les familles... un jour à la fois!

Together to support families... one day at a time!

## TRACHEOSTOMY: SUPPLEMENTAL CLINICAL DATA FORM

Name

Summary of the child's main diagnoses

Service request

Given this child's requirements for care as described below and the consensus recommendations of an expert committee representing the four Quebec university hospital centres with a pediatric mission (document available upon request), we recommend \_\_\_\_\_ homecare hours of support per week, including \_\_\_\_\_ hours of care for nighttime surveillance.

Required care

Tracheostomy care

Preparation and administration of medications

Enteral nutrition

Other care

**Tracheostomy care**

**Direct child surveillance during the day**, especially the young or neurologically impaired child. The child must at all times be under the direct supervision of an adult who is trained in the assessment of respiratory status and emergency interventions.

**Continuous surveillance during sleep (naps and nighttime)** with the aid of an oxygen saturation monitor. The parent must:

- Verify that the monitor is well connected to a source of power;
- Place the monitor probe on the child, repositioning as required until valid measures are obtained consistently;
- Respond to alarms; the parent must immediately respond to alarms, assess the condition of the child, verify the monitoring equipment and intervene as required. Failure to promptly respond to alarms may result in an acute and serious deterioration in the child. Caregivers must be able to determine if the alarm is clinically relevant or not (eg, malposition of the oxygen saturation probe).

In addition to continuous monitoring via an oxygen saturation monitor, some children with fragile airway conditions may also require continuous **“eyes on” monitoring by an awake adult** who is trained in the evaluation of the child’s respiratory status and able to respond promptly to emergency situations.

**Skin care around the tracheostomy:** The integrity of the skin around the tracheostomy, under the flanges of the tracheal cannula and underneath the tracheostomy ties must be evaluated daily for signs of inflammation. The skin must be kept clean and dry. Children who have abundant respiratory secretions may also require placement of a compress around the tracheostomy site to keep the skin dry. This compress must be changed if wet or soiled. The skin around the tracheostomy and underneath the flanges of the tracheal cannula must be cleaned 1 to 2 times per day as needed or more frequently if there are abundant secretions. The time needed for this care is approximately 10 minutes per cleaning, with a range of 2 to 20 minutes.

Depending upon this child’s underlying conditions, we estimate:

- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 to 2 people (a 2<sup>nd</sup> person may be needed if the child is young and/or unable to stay still during care)
- Recommended method of care: <https://complexcareathomeforchildren.com/respiratory-support/tracheostomy-care/tracheostoma-skin-care-changing-the-tracheostomy-dressing-changing-the-inner-cannula-of-a-tracheostomy-if-present/>

**Changing the tracheostomy ties:** The tracheostomy ties must be verified for position and tightness daily. The ties must be changed at least 2 times per week and more often if they become wet or soiled. The time required for this care is approximately 5 to 20 minutes/change.

Depending upon this child's underlying conditions, we estimate:

- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 to 2 people (a 2<sup>nd</sup> person may be needed if the child is young and/or unable to stay still during care)
- Recommended method of care: <https://complexcareathomeforchildren.com/respiratory-support/tracheostomy-care/changing-tracheostomy-ties/>

**Aspiration of tracheo-bronchial secretions:** Aspiration or suctioning of respiratory secretions is required at least 2 times per day (morning and at bedtime) and more often as required. The frequency of aspiration depends upon the amount and thickness of secretions, the size of the child's airways, the capacity of the child to clear secretions independently (eg, with cough), the level of the child's activity, etc. The child's need for suctioning significantly influences the quantity of homecare support required. During respiratory illnesses, children likely will require more frequent suctioning. At baseline, some children require suctioning often (eg, 5 or more times/day, 2 to 4 times/night) with some children needing even higher frequency (eg, 10 to 20 times/day, 5 to 7 times/night). Each episode of suctioning takes approximately 3 to 5 minutes with a range of 15 to 30 seconds to 30 minutes for repeated aspirations.

**Installation of saline drops (NaCl 0.9%)** with a ready-to-use vial of saline is sometimes necessary prior to aspiration of secretions, especially if secretions are thick. The installation of saline drops is performed as needed, adding approximately 2 to 5 minutes to each episode of aspiration of secretions.

Depending upon this child's underlying conditions, we estimate:

- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 to 2 people (a 2<sup>nd</sup> person may be needed if the child is young and/or unable to stay still during care)
- Recommended method of care: <https://complexcareathomeforchildren.com/respiratory-support/aspiration-of-secretions/suctioning-a-tracheostomy-tube/>

**Changing the tracheal cannula:** The tracheostomy cannula must be changed at least once per month and more often as required, especially during respiratory infections, with accumulation of secretions or if there is a sudden obstruction of the cannula. The time required is on average 15 to 20 minutes/change. It is strongly recommended to have two trained caregivers present during the change of the tracheal cannula.

Depending upon this child's underlying conditions, we estimate:

- Frequency of care:
- Total time/day:
- Number of caregivers required: 2 people
- Recommended method of care: <https://complexcareathomeforchildren.com/respiratory-support/tracheostomy-care/changing-of-a-simple-tracheal-cannula/>

**Humidification:** Some children require addition of humidity to inspired air, with specific equipment:

The “**artificial nose**” is a device placed on the connector of the tracheostomy cannula which moistens, warms and filters inhaled air. It must be inspected regularly (every 3 to 4 hours) to ensure that is appropriately in place, clean, permeable to air and not blocked with secretions. If there is an accumulation of secretions, the device must be removed, cleaned and replaced. The artificial nose is replaced every day or more often if it is filled with secretions or if there is a build-up of water.

These tasks take approximately 3 to 5 minutes/episode.

Depending upon this child's underlying conditions, we estimate:

- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 to 2 people (a 2<sup>nd</sup> person may be needed if the child is young and/or unable to stay still during care)

**Direct administration of humidity:** Via the use of a tracheal collar and an air compressor for humidity delivery. This care involves preparation of the equipment, connection of the humidifier tubing to the tracheal collar. The parent must fill the water tank of the humidifier with distilled water and regularly verify that there is an adequate amount of water present. The parent must also monitor the tubing to verify that there is no excess of water accumulated in the tubing and to drain the tubing of extra water if present (usually necessary once per night in the young child). Direct administration of humidity by tracheal collar may be required 1 to 2 times daily or more often. The time required to prepare the equipment is on average 15 to 20 minutes/day.

Depending upon this child's underlying conditions, we estimate:

- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 to 2 people (a 2<sup>nd</sup> person may be needed if the child is young and/or unable to stay still during care)

**Troubleshooting:** The parents have been taught how to evaluate and solve common problems associated with tracheostomy care.

### Preparation and administration of medications

**Medications by mouth or by feeding tube:** The time required for medication preparation depends on the number and type of medications.

Depending upon this child's underlying conditions, we estimate:

- Number of medications:
- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 person

The time required for medication administration also depends upon the child's age and ability to cooperate with the care. If the medications are given via a feeding tube, the parent must flush the tube before and after each medication administration. The time required depends upon the number of medications required. On average, medication administration via a feeding tube takes 5 to 10 minutes/administration.

Depending upon this child's underlying conditions, we estimate:

- Number of medications:
- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 to 2 people (a 2<sup>nd</sup> person may be needed if the child is young and/or unable to stay still during care)
- Recommended method of care:

**Inhaled medications:** Some children may require inhaled medications for example to treat airway inflammation. Medications may be administered by metered dose inhaler or via a small volume nebulizer.

**Administration of medication via metered dose inhaler:** The medication in the metered dose inhaler (eg, Ventolin) is administered with a spacer device (eg, AeroChamber®) placed on the connector of the tracheal cannula. The medication is released by pumping the metered dose inhaler. On average, administration of medication via metered dose inhaler takes 5 to 10 minutes/administration.

Depending upon this child's underlying conditions, we estimate:

- Number of medications:
- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 to 2 people (a 2<sup>nd</sup> person may be needed if the child is young and/or unable to stay still during care)
- Recommended method of care: [https://complexcareathomeforchildren.com/respiratory-support/tracheostomy-care/administration-of-medication-via-tracheostomy/#m\\_2\\_1](https://complexcareathomeforchildren.com/respiratory-support/tracheostomy-care/administration-of-medication-via-tracheostomy/#m_2_1)

**Administration via small volume nebulizer (medication or saline solution):** The parent must measure and prepare the medication or saline solution and add it to the nebulizer. The nebulizer is attached to the tracheal collar connected by tubing to the air compressor. Each nebulization takes approximately 25 minutes/administration.

Depending upon this child's underlying conditions, we estimate:

- Number of medications:
- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 to 2 people (a 2<sup>nd</sup> person may be needed if the child is young and/or unable to stay still during care)
- Recommended method of care: [https://complexcareathomeforchildren.com/respiratory-support/tracheostomy-care/administration-of-medication-via-tracheostomy/#m\\_1\\_1](https://complexcareathomeforchildren.com/respiratory-support/tracheostomy-care/administration-of-medication-via-tracheostomy/#m_1_1)

### Enteral nutrition

**Direct child surveillance:** The parent must supervise the child (especially young children or those with neurological impairment) to ensure that the child does not dislodge the feeding tube. During enteral feeds, the child should be under direct supervision.

**Care of the feeding tube.** The integrity of the skin around the feeding tube must be assessed daily. The skin should be clean, dry and not irritated. The site should be cleaned, on average 1 to 2 times per day and more often if required. To keep the skin dry, a compress may be placed around the tube; this should be changed if wet or soiled. If the child has a nasal tube, the parent should ensure that the dressing that secures the tube in place is intact and changed as needed. Care of the skin takes, on average, 5 to 15 minutes per day.

Depending upon this child's underlying conditions, we estimate:

- Type of feeding tube:
- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 person (a 2<sup>nd</sup> person may be needed if the child is young and/or unable to stay still during care)
- Recommended method of care:

The placement of the feeding tube should be verified after inserting the tube, before each use and as needed.

The feeding tube should be irrigated at least twice per day if not in use, before and after each feed, before and after each medication administration and at least once every 4 hours for continuous feeds.

If the feeding tube is a button, the parent must connect an extension tubing for administration. If the button has an internal balloon, the volume of water must be verified at least once weekly, as per the attending healthcare team.

**Preparation of the enteral feed:** There are many different types of nutritional formulas. Some are "ready to feed" and others require preparation. Some children require special additives or medications, which increase the complexity of the preparation and the time required. On average, preparation of enteral feeds takes 20 to 30 minutes/day.

Depending upon this child's underlying conditions, we estimate:

- Frequency of care:
- Total time/day:
- Number of caregivers required: 1 person

**Feeding administration:** Enteral feeds may be continuous, intermittent or a combination of continuous and intermittent via syringe (manual delivery), by gravity or by pump. The time required for preparing the feeding administration depends upon the method used. The feeding tube must be irrigated before and after each feed and at least every 4 hours for continuous feeds. Most often, enteral feeds are given intermittently during the day over a one hour period and continuously at night.

Depending upon this child's underlying conditions, we estimate:

- Frequency of care:
- Total time/day:

- Number of caregivers required: 1 person (a 2<sup>nd</sup> person may be needed if the child is young and/or unable to stay still during care)
- Recommended method of care:

**Respond to the child's needs at night:** If the child is receiving continuous feeds overnight, the parent must refill the feeding bag every 4 hours, flush the feeding tube every 4 hours, and respond to pump alarms. In the event of a pump alarm, the parent must determine the cause and solve the issue.

**Troubleshooting:** The parents have been taught how to evaluate and solve common problems with enteral feeding administration at home.

#### Other care

Preparation of daily solutions (eg, boiled water). Average time required: 15 minutes/day

Additional surveillance during use of speaking valve, according to the child's tolerance:

Close supervision during meals:

Language stimulation:

Oral stimulation program during mealtimes:

Respiratory physiotherapy:

Equipment maintenance and cleaning. Total time/day:

Cleaning of gavage tubing. On average: 30 minutes/jour

Inventory of supplies, re-ordering as required. On average: 30 minutes/month

**Signature:**

**Date:**





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Name

Care Planning Schedule – To be completed by the professional

	Tracheostomy care	Preparation and administration of medications	Enteral nutrition	Other care
00:00 06:00				
06:00 12:00				
12:00 18:00				
18:00 24:00				