PAEDIATRIC NURSING PRACTICE MANUAL
SECTION 7

CARE OF THE CHILD WITH A RESPIRATORY CONDITION

7.4 CARE OF THE CHILD WITH A TRACHEOSTOMY

7.4.8 CLEANING A SHILEY®, PORTEX ® OR BIVONA® TRACHEOSTOMY TUBE

Aims

1. To replace, clean and store a patient's tracheostomy tube.
2. To provide all parents/carers with instructions on how to clean and store a tracheostomy tube prior to discharge.

Key Points

1. Shiley®, Portex® and any brand with the "Single Use" code displayed on packaging are **Single Use Only** and must not be reused. Refer to PNPM Preface Standard Protocol for All Care/Procedures for information relating to Single use Devices.
2. Never discard a tracheostomy tube if a new replacement is not *immediately* available. Clean the tube until a new tube is available.
3. Bivona® silicone tracheostomy tubes and Bivona Custom Made tubes are **Single Patient Use** (rather than Single Use items). Clean (or re-sterilise) Bivona tubes as per manufacturers guidelines.[1]
4. Do not *soak* the tube or introducer in disinfectants, detergents or hydrogen peroxide. Chemicals can be absorbed by the plastic leading to irritation of the trachea.

Equipment

Gloves

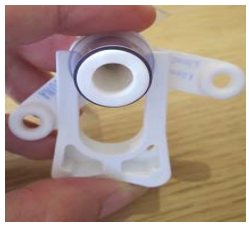
Paper towel

Brush [1, 2] (**ONLY** if provided with the tracheostomy tube by the manufacturer) [2, 3]

Sealable plastic container or clean plastic bag

Small amount of mild, fragrance free detergent ie. hospital provided detergent (advise parents to use a mild, fragrance free detergent at home) diluted with cool/warm tap water. [1-3]

PROCEDURE	ADDITIONAL INFORMATION
Cleaning Process: If there will be a delay before the tube can be cleaned, place the tube in a dish of cool/warm tap water to prevent secretions from drying out.[2] **Do not use hot water**	Dried secretions are more difficult to remove. Heat affects the structure of the PVC/silicone the tubes are made from. It will "cook" the secretions making them more difficult to remove.

PROCEDURE	ADDITIONAL INFORMATION
Clean the tube and introducer with tap water and a *small* amount of detergent (mild and fragrance free). [1-3]	Handle gently and avoid distorting the shape of the tube.
Pass the introducer in and out of the tube to remove secretions.	If secretions remain in the tube, thread gauze into the tube using the introducer and pull through.
Assess the amount of secretions removed from the tube.[1]	If plugs or dried secretions are present this should be taken into consideration when deciding how frequently to change the child's tracheostomy tube as per PNPM 7.4.5.
Using **only** the soft bristled brush provided by the manufacturer, remove any crusts on the outside of the tube or to clean the inner cannula.[2, 3]	Excessive scrubbing, scraping or stretching will damage the tube.[1] Pipe cleaners or other brushes not provided by the manufacturer **should not** be used as this can result in scratches that harbour bacteria.[1]
BIVONA TUBES: Removing swivel connector Older style Bivona tubes have a swivel connector that requires removal to clean. 1. Insert the wedge from the packet between connector and where it meets the tube. 2. Push the wedge half way. Ensure it remains in position.	1  2. 
3. Squeeze top of tube to allow it to pass through the connector. 4. Grasp grey connector firmly and pull/twist to remove it from tube completely. Once separated wash and dry as per instructions above.	3  4 
5. Squeeze top of tube again to feed into grey connector to replace. **Ensure the edge with the lip is placed on facing the neck plate as in Fig. A** **If the connector is replaced upside down the ventilator, Swedish Nose, Laerdal etc will not be able to connect to the tracheostomy tube.** Check the spare Bivona tubes at bedside to ensure the connector is correctly placed.	**5.**   **Fig A √** **Fig B χ**

PROCEDURE	ADDITIONAL INFORMATION
Rinsing Rinse the tube and introducer with tap water to remove residual detergent.[1, 2]	
Checking for Damage/Discarding Check the integrity of the tube by inspecting the shape and condition of the tube. Discard the tube if there is evidence of: • obvious damage ie. cuts, splits • wearing around the connectors • peeling pieces of plastic on the tube or around the fenestration • an oily/sticky feeling which indicates leaching out of the chemical components or that the plastic is aging.	**Bivona™** tubes can often be used for 6-12 months.
Drying Shake and dry the tube and introducer. Allow the tube to dry naturally by evaporation. Cover with a clean paper towel until air dried.	Heat must not be used as it will cause distortion of the tube.
Storage Store the tube and introducer in a rigid container or clean plastic bag until required.	If there is any evidence of moisture condensing during storage, repeat the entire cleaning procedure.

References:

1. Smith's Medical. Bivona uncuffed neonatal/pediatric tracheostomy tube product information booklet. [Manufacturer's instructions]. Indiana: Portex; 2005.
2. Sims Portex Ltd. Portex blue line siliconised PVC tracheostomy tube product information booklet. [Manufacturer's instructions]. Hyth Kent: Sims Portex; 1999.
3. Covidien. Shiley™ Neonatal and Pediatric Trachesotomy Tubes. 2013. Available from: http://www.covidien.com/rms/pages.aspx?page=ProductClass/Neonatal-and-Pediatric-Tracheostomy

Resources:

Smiths-Medical. Tracheostomy Tubes and Kits. 2013.