Atos
Breathing–Speaking–Living

Clinical Pathway: Total Laryngectomy

Froedtert & the Medical College of Wisconsin developed the medical management guidelines in the Clinical Pathway while Atos Medical adapted it to provide specific guidelines in accordance with the Instructions for Use for Atos Medical products.

TIME	PATIENT AND LOVED ONE EDUCATION	INTERDISCIPLINARY RESPONSIBILITIES
Pre-Operative	• Review anatomic and physiologic changes using pre- and post-laryngectomy diagrams • Review alaryngeal voice restoration options • Discuss anticipated rehabilitation recovery course • Determine least-restrictive diet and safest means of nutritional intake (i.e., post- operative diet advancement, resuming P.O. diet intake, diet modifications, compensatory swallow strategies, alternative nutrition and hydration, tube feedings) • Give patient Getting Started Packet* • Give CareTip, **How You Can Help A Loved One Before and After a Laryngectomy**** to patient's loved one(s) to review prior to surgery	**MD** • Order nutrition, speech-language pathologist (SLP), social worker, etc. consults for assessments and ongoing management. **SLP WITH PATIENT AND LOVED ONES** • Pre- and post-operative anatomic, functional, and physiological changes • Pulmonary rehab education ◦ Review Laryngectomy Pulmonary Kit (LPK) and Coming Home Kit (CHK) • Discuss available support systems for patient • Discuss alaryngeal speech options • Initiate artificial larynx training • Arrange patient TL mentor to meet with patient, if patient is agreeable and TL mentor is available
Post-Operative Day 0	• Provide supplies for the patient at bedside: ◦ Laryngectomy Pulmonary Kit (LPK): Bedside Sign/Quick Reference, HMEs, dry erase board, e-writing tablet, Provox TubeBrushes ◦ Electrolarynx (if applicable) ◦ Suction supplies ◦ Handheld mirror • Stoma care: ◦ Reinforce importance of stoma care ◦ Suctioning and saline bullets (as needed) • Heat and Moisture Exchanger (HME): ◦ Research supports that the use of HMEs leads to optimization of pulmonary health with a significant reduction in forced expectorations, less coughing, and less mucus (Longobardi et al., 2022) ◦ Educate on the purpose of the HME, removing and replacing, when to replace, and the importance of removing it before coughing. Instruct patient to replace HME every 24 hours or more frequently when soiled ◦ Encourage 24/7 hour use of HME ◦ Teach patient how to remove and replace Provox Life Night or Home HME	**MD** • Place Provox Life LaryTube (36mm or 55mm) and HME immediately post-op Note: refer to **Clinical Guideline for Selecting Immediate Post-Operative HME Use** (below) for selection of In-Hospital HME Routine • Enter post-operative orders for allied health professional interventions – nutrition, SLP, and physical therapy (PT) **RN** • Post and review **Bedside Quick Reference: Provox Life LaryTube + Heat and Moisture Exchangers (HMEs)**** for proper use of HME • Post HME Change Log at bedside and encourage 24/7 HME use • Change HME at least once every 12-24 hours, or more frequently should it become soiled with secretions. Record change on HME Change Log • Routinely assess tolerance, adherence and breathability of HME and LaryTube • Initiate routine post-op care including incision and stoma care per MD order **SLP** • Routinely assess tolerance, adherence, and breathability of HME and LaryTube and encourage 24/7 HME use • Determine how the patient will communicate with RNs and MDs (i.e., e-writing tablet, gestures, dry erase board, smartphone) • Place note on the chart and advise unit clerk about communication deficits • Make sure Provox Voice Prosthesis (VP) is in place within the Tracheoesophageal Puncture (TEP), if applicable

CLINICAL GUIDELINE FOR SELECTING IMMEDIATE POST-OPERATIVE HME USE

(Head and Neck Cancer Multidisciplinary Team (HNC-MDT) members determine the preferred approach to post-operative pulmonary rehabilitation.)

SELECT IN-HOSPITAL HME ROUTINE:

❑ **OPTION 1**

Begin with Night HME post-op; patient will wear Night HME during Day and Night.

Prior to discharge, transition the patient to a Day/Night routine using Home and Night HMEs. Explain importance of using Home and Night HMEs 24/7.

❑ **OPTION 2**

Begin with a Day/Night routine using Night and Home HMEs immediately post-op; patient will wear Home HME during the Day and Night HME at Night.

Prior to discharge, reinforce the importance of continuing 24/7 use of the Home and Night HMEs.

*Available by request from your Atos Medical Territory Sales Manager

**found in the Getting Started Packet

Atos
Breathing–Speaking–Living

Clinical Pathway: Total Laryngectomy

TIME	PATIENT AND LOVED ONE EDUCATION	INTERDISCIPLINARY RESPONSIBILITIES

Post-Operative Day 1	• Patient to observe stoma and incision using a handheld mirror
	  ◦ Begin the process of making the patient comfortable with their new anatomy
	  ◦ Explain the use and importance of wearing HME 24/7
	  ◦ Instruct patient on how to instill saline; suction airway
	  ◦ Reinforce need to remove HME prior to coughing
	  ◦ Re-instruct on removing and replacing the HME
	  ◦ Instruct patient on how to monitor stomal patency
	• Teach signs and symptoms of infection (erythema, warmth, edema, fever, chills increased pain) and importance of notifying RN and/or MD
	• Involve family and/or support system in all of above
	• Establish temporary means of communication (electrolarynx, nurse call button, TTY, text messaging, dry erase board, e-writing tablet, other)
	• Electrolarynx training
	  ◦ Have patient review the two electrolarynx CareTips*
	  ◦ Educate patient on rationale for using electrolarynx
	  ◦ Describe the various device features
	  ◦ Explain care/use/maintenance of device
	  ◦ Determine best placement of the oral tubing to maximize intelligibility
	  ◦ Demonstrate how to best teach patient's family/loved ones to understand the patient's communication with the electrolarynx
		MD
		• Reassess patient's suctioning needs and modify orders as appropriate
		SLP
		• Initiate electrolarynx training and explore other functional communication options such as gestures, writing, etc. as supplemental methods
		• Begin electrolarynx training
		• Reinforce importance of patent stoma and 24/7 HME use
		• Continue to reinforce why and when to remove and replace the HME
		• Engage loved one in education process
		• Explain and demonstrate stoma care
		• Visualize VP
		RN
		• Encourage 24/7 HME adherence (as indicated in selection of In-Hospital HME Routine) to optimize humidification
		• Change HME at least once every 12-24 hours or more frequently if soiled with mucus and record change on HME Change Log
		• Ensure stoma patency patency; stoma should remain clean and clear of secretions
		• Assess neck for fullness, edema, erythema (signs of hematoma and/or fistula)

*Available by request from your Atos Medical Territory Sales Manager

**found in the Getting Started Packet

Atos
Breathing–Speaking–Living

Clinical Pathway: Total Laryngectomy

TIME	PATIENT AND LOVED ONE EDUCATION	INTERDISCIPLINARY RESPONSIBILITIES

Post-Operative Day 2	• Gradually shift patient care responsibility to the patient and their loved ones
	  ◦ Encourage independent removal and replacement of HME
	  ◦ Assist with stomal care and suction as needed
	  ◦ Assist with tube feedings following instruction
	  ◦ Assist with changing HME every 24 hours
	  ◦ Assist with dressing changes if indicated
	• Continue to assess communication needs
	• Reinforce communication options
	• Use electrolarynx to communicate medical wants and needs
	• Give patient and loved one CareTip, **How to use Provox Life HMEs**** to review
		MD
		• Assess: neck, stoma, drains, suctioning needs, pain control
		SLP
		• Continue with electrolarynx training
		• Reinforce purpose of 24/7 use of HME
		• Work with patient and loved one on listening skills and speech intelligibility with the electrolarynx.
		• Gradually shift stoma care to patient for independent care
		• Schedule laryngectomee mentor visitation if patient and loved one are ready, and if not completed pre-operatively
		• Have patient watch "The positive impact of wearing a Heat and Moisture Exchanger (HME)" video on Atos Medical website:
		www.atosmedical.us/laryngectomy-home-page/breathing/heat-and-moisture-exchanger
		RN
		• Encourage patient to participate in own wound and stoma care
		• Encourage patient and loved ones to ask questions or express any concerns
		• Assess functionality of communication method

*Available by request from your Atos Medical Territory Sales Manager

**found in the Getting Started Packet

Atos

Breathing–Speaking–Living

Clinical Pathway: Total Laryngectomy

TIME	PATIENT AND LOVED ONE EDUCATION	INTERDISCIPLINARY RESPONSIBILITIES
Post-Operative Day 3-5	• Ensure that patient can explain the importance of stoma care, when to contact the MD or when and how to contact emergency response system • Reinforce the purpose and importance of wearing an HME 24/7 • Educate patient, loved ones, and medical team that adherence to the use of HMEs results in positive changes in social anxiety, depression, and quality of life (Parrilla et al., 2015) • Evaluate if the patient understands how to remove and replace the HME and when to change HME (i.e., at least every 24 hours or when soiled) • Patient able to clean VP independently, if indicated • Patient able to independently demonstrate ability the to remove, clean, and replace the LaryTube **VP MANAGEMENT EDUCATION** • Assess patient's readiness to receive education on VP management if indicated, or initiate VP management at the first post-operative out-patient visit • How to locate VP • How to clean VP with Provox Brush • Instruct patient on emergency and troubleshooting VP procedures: ◦ Provox Plug for central leakage ◦ What to do in case VP dislodges ◦ Give CareTip, **What To Do if Your Voice Prosthesis Falls Out***	**MD** • Discuss anticipated discharge plans (d/c date, anticipated facility to d/c, medical supply and equipment needs, and home health services needed) with patient, loved one, nursing staff, social worker, case manager, and discharge coordinator **SLP** • Continue with electrolarynx training to maximize communication • Educate patient and loved one on removal and replacement of the LaryTube • Educate patient on 24/7 Day/Night HME routine • Review Coming Home Kit • Educate patient on the basics of VP, if indicated and patient readiness. Basics: show patient how to clean the VP with Provox Brush. Otherwise initiate VP management at first post-operative visit • Ensure all paperwork is submitted **RN** • Review anatomical changes and daily care needs. • Continue instruction and ensure patient independence with management of the following: ◦ Stoma/airway: LaryTube removal, cleaning, and replacement, and HME removal and replacement, self-suctioning, wound care, stoma care ◦ Communicate with care team regarding patient's progress towards independence on the above skills and preparedness for discharge: ensure equipment and supplies needed are available or ordered, medications ordered, transition to home or skilled nursing facility, coping strategies, support system, and post-operative out-patient follow-up appointments scheduled
Day of Discharge	• Assess readiness for discharge • Reassess status of patient and support system • Educate patient and loved ones about importance of stoma care, including reducing stomal crusting, suctioning/coughing up of secretions, and the importance of 24/7 HME use for a positive effect on pulmonary health with less coughing, less sputum production and better sleep (Longobardi et al., 2022, Ward et al., 2023) • Patient able to independently remove and replace the HME as per instructions • Patient able to independently clean the VP and recognizes what to do in case it dislodges (if VP management was initiated), otherwise initiate VP management at first post-op out-patient session. • Educate patient and loved ones about stoma "protection" during activities of daily living, for example, using Provox Life Shower when showering and 24/7 HME adherence • Ensure patient's loved one contacts local EMS to notify them that patient has difficulty communicating, is a neck breather, and rescue breathing will be altered because patient has a permanent tracheostoma • Patient able to communicate medical and functional wants and needs with healthcare professionals and loved ones	**MD** (ideally done the day before discharge) • Ensure that prescriptions have been printed and are on the chart • Order all follow up outpatient visits (ENT, Speech, PT, Nutrition, etc) • Ensure that all medical supplies and equipment are ordered **SLP** • Make sure that patient has a functional means of communication prior to discharge • Confirm that a follow up outpatient visit is ordered • If needed, confirm home health SLP is ordered to work with electrolarynx training **RN** • Make sure that the patient and family has had all questions answered and verify that patient can verbalize discharge instructions to demonstrate adequate understanding • Confirm that medical supplies and equipment will be delivered before discharge

*Available by request from your Atos Medical Territory Sales Manager

**found in the Getting Started Packet