## Clinical Pathway: Total Laryngectomy

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<thead>
<tr>
<th>TIME</th>
<th>TEACHING POINTS</th>
<th>INTERDISCIPLINARY RESPONSIBILITIES</th>
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</table>
| **Pre-Op** | • Address any pain issues  
• Review anatomic and physiologic changes after total laryngectomy (TL) and give diagram pre and post-operative  
• Review all forms of alaryngeal voice restoration  
• Discuss projected rehabilitation course  
• Determine safest means of nutritional intake (i.e. tube feedings, PO, diet modifications, compensatory swallowing strategies)  
• Give patient, "Life as a Laryngectomy" to review prior to surgery  
• Give Atos CareTip, "How You Can Help Your Loved One Before and After Total Laryngectomy" to the caregiver to review prior to surgery | Patient to make informed decision about best treatment option. If undergoing TL, SLP and MD to determine if candidate for tracheoesophageal puncture (TEP) and timing of TEP (primary or secondary)  
MD  
• History and Physical  
• Order Nutrition and SLP consult  
• Present at tumor board  
SLP  
• Pre and post-operative anatomic and physiologic changes and functional deficits  
• Stoma care  
• Determine responsibility of support system available  
• Alaryngeal speech options  
• If able, introduce patient to another total laryngectomy  
• Initiate artificial larynx training if unable to communicate verbally |
| **Post Op** | **Day 0**  
• Pain Control:  
  o Inform about pain control options: Medication options, timing, routes of administration  
• Incision care:  
  o Per MD orders, usually clean and apply ointment to avoid crusting  
• Stoma care:  
  o Reinforce importance of stoma care  
  o Suctioning and saline bullets (as needed)  
• Heat and Moisture Exchangers (HME):  
  o Educate on how HME cassette works and importance of removing it in anticipation or when beginning to cough  
  o Encourage 24 hour use of HME cassette  
  o Teach patient how to remove and replace Provox® XtraFlow™ HME cassette  
  o Monitor breathing resistance w/ Provox® XtraFlow™ HME cassette and if patient notes resistance, discard old and replace with new cassette  
• Orient Patient to Room:  
  o Nurse call button  
  o Pain control pump if applicable  
  o Urinal if applicable  
• Initiate Routine post-operative care:  
  o DVT prophylaxis, NGT cares, etc.  
• Provide supplies for the patient at bedside:  
  o Laryngectomy Care kit  
  o HME Bedside Instruction Sheet  
  o Suction supplies  
  o Dry erase board  
  o Communication board  
  o Handheld mirror  | RN  
• Post and review “Bedside Instruction for Use of Provox® Laryngectomy Pulmonary Kits” for proper use of HME cassette  
• Post Provox® HME Change Log at bedside  
• Encourage 24 hour use of HME cassette  
• Change HME cassette at least once every 24 hours and record change on Provox® HME Change Log at bedside  
• Routinely assess breathing resistance through HME cassette  
• Determine how the patient will communicate with RNs and MDs (i.e. writing tablet, gestures, communication board, smartphone)  
• Place note on the chart and advise unit clerk about communication deficits  
• Maximize anti-nausea medications  
• Follow-up on routine post operative labs and CXR  
• Ensure appropriate position of feeding tube (if applicable)  
• Post-operative check (hematoma, stoma patency, JP drain function, etc)  
• Make sure Provox® Voice Prosthesis is in place within the TEP, if indicated  
MD  
• Place Provox® XtraFlow™ HME cassette onto the Provox® LaryTube™ upon exiting the OR  
• Enter post-operative orders (meds, consults, nutrition, post-operative nausea and pain management)  
• Order appropriate consults: nutrition, speech pathology (ST), physical therapy (PT)  
• F/u on routine post op labs and CXR  
• Ensure position of feeding tube as necessary  
• Post op check and note |

Froedtert and 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. This text does not replace nor does it set forth the complete contents of the User Manual and/or Prescriber Information for the products in this text, and is not a substitute for reviewing and understanding that important information. Therefore, before prescribing and/or using any of the products included in this text, please review the entire contents of the respective User Manual and/or Prescriber Information.
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<td>Post Op Day 1</td>
<td>• Review patient’s level of pain and discuss control options</td>
<td>RN&lt;br&gt;• JP drain output and function - assure patency and appropriate Functioning</td>
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<td>• Use mirror and have them assess their incisions and stoma</td>
<td>• Ensure patient is utilizing HME cassette 24/7 without significant breathing resistance</td>
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<td>• Begin the process of making the patient comfortable with their new anatomy</td>
<td>• Change HME cassette at least once every 24 hours and record change on Provox® HME Change Log at bedside</td>
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<td>• Patient to observe stoma and incision care via handheld mirror</td>
<td>• Ensure stoma is clean and patent</td>
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<td>• Explain the use and importance of wearing HME cassette 24/7, suction and saline bullets</td>
<td>• Assess neck for fullness, edema, erythema (signs of hemato ma and/or fistula)</td>
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<td>• Reinforce need to remove HME cassette when coughing</td>
<td>• Ensure adequate pain control</td>
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<td>• Reinstruct on removal and replacement of HME cassette</td>
<td>• Incentive Spirometry or Cough and deep breath 10x/hour while awake</td>
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<td>• Instruct patient on how to monitor stomal patency</td>
<td>• Make sure Provox® Voice Prosthesis is in place within the TEP, if indicated</td>
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<td>• Explain the purpose of feeding tube and initiate tube feedings if ordered by MDs</td>
<td>MD&lt;br&gt;• Assess for active bowel sounds and consider starting tube feeds slowly</td>
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<td>• Teach signs and symptoms of infection (erythema, warmth, edema, fever, chills increased pain) and importance of notifying RN and/or MD if noted</td>
<td>• Reassess patient’s suctioning needs and modify orders as appropriate</td>
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<td>• Involve family and/or support system in all of above</td>
<td>• As tube feeds are being started, keep total fluids at 100-125 ml/hour</td>
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<td>• Establish temporary means of communication (artificial larynx, nurse call button, TTY, text messaging, communication device, other)</td>
<td>• Once switched to bolus, make sure adequate free water boluses have been ordered and are being tolerated prior to discontinuing IV fluids</td>
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<td>• Initiate artificial larynx training</td>
<td>SLP&lt;br&gt;• Establish functional means of communication</td>
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<td>• Have patient review the following Atos CareTips, “Artificial Larynx: Basic Training” and “What is an Artificial Larynx”</td>
<td>• Determine the most appropriate artificial larynx for the patient</td>
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<td>• Educate patient on rationale for using artificial larynx</td>
<td>• Begin artificial larynx training</td>
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<td>• Describe the various features of the device</td>
<td>• Reinforce importance of patent stoma and 24 hour use of HME cassette</td>
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<td>• Explain care/use/maintenance of device</td>
<td>• Continue to reinforce adequate removal and replacement of HME cassette</td>
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<td>• Determine best placement of the device</td>
<td>• Engage caregiver in education process</td>
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<td>• Demonstrate how to best train the patient’s family/caregivers</td>
<td>• Explain and demonstrate stoma care</td>
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<td>• Education re: tracheoesophageal (TE) voice prosthesis (VP), if indicated</td>
<td>• Initiate how to identify adequate placement of voice prosthesis</td>
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<td>• How to locate VP and determine adequate position</td>
<td>• Show how to clean the voice prosthesis with Provox® Brush</td>
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<td></td>
<td>• What to do in case VP dislodges and give Care Tip, “What To Do if Your Voice Prosthesis falls out of the Tracheoesophageal Puncture”</td>
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| Post Op    | • Gradually shift patient care responsibility to the patient and their Caregivers  
  ○ Encourage independent removal and replacement of HME cassette  
  ○ Assist with stomal cleaning and suction as needed  
  ○ Assist with tube feedings  
  ○ Assist with changing of HME cassette every 24 hours  
  ○ Assist with dressing changes, if indicated  
  • Use artificial larynx to communicate medical wants/needs  
  • Have patient and caregivers observe how to do tube feedings  
  • Continue to encourage independent identification and cleaning of VP and review Atos CareTip, “Daily Care of Your Voice Prosthesis”  
  • Give patient and caregiver Caretip, “Provox® XtraHME - Let’s Get Started” to review | MD                                |
| Day 2      | • Ambulate at least TID or per PT recommendations  
  • Assess patient’s tolerance of tube feedings and adjust accordingly  
  • Assess neck, stoma, drains, bowel sounds, suctioning needs, pain control  
  • Foley removal order or document acceptable indication | RN                                |
|            | • Encourage patient to participate in own wound and stoma care  
  • Encourage patient and family to ask any questions or concerns  
  • Progressive activity:  
  • Patient should be ambulating by POD #2, advanced as they become “free” of tubes/lines  
  • Assess functionality of communication method | SLP                               |
|            | • Continue with artificial larynx training  
  • Continue to educate on identification and cleaning of VP  
  • Reinforce need for 24/7 use of HME cassette  
  • Patient to review HME video  
  • Work with patient and caregiver on ear training with artificial larynx  
  • Gradually shift stomal care responsibilities to patient for independent care  
  • Have patient watch Benefits of Using a HME video on Atos Medical Website  
  • Schedule Laryngectomee Visitation if patient and caregiver are ready |
# Clinical Pathway: Total Laryngectomy

## Time | Teaching Points | Interdisciplinary Responsibilities
--- | --- | ---
**Post Op Day 3-5**  
• Ensure that patient is able to explain the importance of stoma care, when to contact the MD or when to contact emergency response system and how.  
• Educate patient and caregivers on how to do tube feedings  
• Reinforce the function and importance of wearing a HME cassette 24/7  
• Evaluate if the patient understands how to removed and replace the HME cassette and when to change HME (i.e. at least every 24 hours or when an increase in breathing resistance)  
• Educate patient and caregiver on removal and replacement of the Provox® LaryTube™  
• Patient and caregiver understand what to do if the VP dislodges and explains the consequences if cannot replace it  
• Patient able to clean VP independently, if indicated  
• Patient able to independently demonstrate ability to remove, clean and replace the Provox® LaryTube™  
• Patient able to independently clean the VP in situ with brush  
• Continued assessment and modification (if needed) of: stoma, wounds, drains, feeding tolerance, suctioning needs, pain control  
• Ensure clear activity orders are written for each day as activity is advanced  
• Discuss anticipated discharge plans (d/c date, anticipated facility to d/c, medical supply and equipment needs and home health services needed) with patient, nursing staff, social worker, case manager and discharge coordinator  
• Insure that if any of the above home health needs are needed that they are set up prior to the weekend if the anticipated day of discharge is on the weekend  
- **MD**  
- **RN**  
- **SLP**

**Day of Discharge**  
• Progress towards readiness for discharge  
• Assessment and achievement of goals for patient and family/support system  
• Educate patient and family about importance of stoma care, including limiting crusting and the importance of using HME cassette 24/7, suctioning/coughing up of secretions  
• Patient able to independently manage, remove and replace the HME cassette appropriately  
• Patient able to independently clean the VP and recognizes what to do in case it dislodges  
• Educate patient and family about stoma “protection” during ADLs  
• Patient’s caregiver contacted local EMS to make them aware of neck breather and patient with difficulty communicating  
• Patient able to functionally communicate medical wants and needs with healthcare professionals and caregivers  
• Ensure that prescriptions have been printed and on the chart  
• Order all follow up outpatient visits (ENT, Speech, PT, Nutrition, etc)  
• Ensure that all medical supplies and equipment are ordered  
- **MD** (ideally done the day before discharge)  
- **RN**  
- **SLP**

**MD**  
• Notify discharge planner of anticipated discharge needs (i.e. equipment, supplies, assistance)  
• Work with physicians, case manager, social worker, and discharge planner regarding anticipated discharge needs (i.e. equipment, supplies, assistance)  
• Continue with artificial larynx training to maximize communication  
• Educate patient and caregiver on removal and replacement of the Provox® LaryTube™  
• Continuing to educate on independent management of VP, if indicated  
• Communicate with care team regarding patient’s progress towards independence on the following items for discharge planning: stoma care, wound care, VP care, understanding of own anatomy, tube feeding, coping strategies, and support system.  
• Work with physicians, case manager, social worker, and discharge planner regarding anticipated discharge needs (i.e. equipment, supplies, assistance)  
• Make sure that the patient/Family has had all questions answered and ensure teach back of d/c instructions  
• Confirm that medical supplies and equipment will be delivered prior to discharge  
• 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 ordered to work with artificial larynx training  
• Patient able to independently manage, remove and replace the HME cassette appropriately  
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