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Irish Head and Neck Society Considerations on H&N during COVID-19
April 17, 2020 Update

This document is intended as general guidance for clinicians in Ireland dealing with Head and Neck Cancer during the current COVID-19 outbreak, as at the date above. Schools and universities in Ireland have been closed since March 12, and all non-essential businesses closed and “lockdown” in place since March 27. This status is planned to remain in place until May 5. This guidance reflects the current situation in Ireland and is subject to change with the evolving situation.

1. Referrals and outpatient clinics

As much as possible, patients referred with new diagnoses of Head and Neck Cancer, or considered likely to have Head and Neck Cancer based on “red flag symptoms”, should be seen. Where it is not possible or feasible to see such patients, these may be telephoned and the urgency of the referral re-triaged according to outcome of same. Patients with recent cough or fever (>38 C) or respiratory symptoms or contact with known case of Covid-19 should defer attendance at outpatient clinic until they are symptom free, or according to Public Health advice.

As many patients with treated Head and Neck Cancer fall into vulnerable groups, and are recommended for “cocooning” during the COVID-19 emergency, consider deferring routine review appointments, or conducting these where feasible by telephone.

2. Flexible laryngoscopy

Nasal endoscopy and flexible laryngoscopy have emerged as particular concerns with regard to transmission of COVID-19 from patient to clinician. Evidence of this is provided by reports of infection of operating theatre personal during the performance of endoscopic pituitary surgery in China, reports of high incidence of infection and hospitalization of ENT surgeons in China and Iran [1], and more recently, by reports of infection requiring critical care and ventilation of ENT surgeons in the United Kingdom [2]. Levels of novel coronavirus (SARS-CoV-2) are highest in the nose and nasopharynx soon after the onset of symptoms [3]. Asymptomatic patients appear to have similar viral load to symptomatic patients [3]. Coughing or sneezing during the performance of flexible laryngoscopy may lead to aerosolization of virus particles [4], and the proximity of the clinician to the patient may increase the risk of infection, even if the amount of aerosolization is small. The possibility of aerosol generation by laryngoscopy is acknowledged as plausible by HPSC, and a precautionary approach to recommended, in view of the proximity to the patient [5]. Based on the available information, we advise considering flexible laryngoscopy and nasal endoscopy as procedures which may be associated with risk of virus transmission from



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patient to clinician, and which may happen even in the presymptomatic / asymptomatic phase of infection. Furthermore, as long as there continues to be significant community transmission of COVID-19 in Ireland, we recommend considering all patients presenting to the clinician as possibly having SARS-CoV-2 in nasopharynx.

To minimize the risk of disease transmission to the clinician, we therefore recommend the following during flexible laryngoscopy or nasal endoscopy:

- Perform these procedures only where there is good clinical indication to do so.
- Procedures around performing these procedures should be agreed with local infection control.
- Full personal protective equipment (PPE) should be worn by the clinician performing the procedure, including FFP2/3 mask, and eye protection. Clinicians performing the procedure must be trained in donning and removing PPE.
- Perform meticulous hand hygiene before and after the procedure.
- Perform procedures using a camera attached to laryngoscope and monitor, so that the operator's head is as far as possible from the patient's head, and not facing the patient. We recommend that procedures not be performed with the clinician looking through the eyepiece.
- No other person should be within 2m of the patient undergoing laryngoscopy.
- The laryngoscope should be sterilized according to hospital protocol.
- Surfaces within the vicinity of the procedure should be wiped down with alcohol prior to seeing next patient.

These guidelines may change as further information comes to light regarding risk of coronavirus transmission during flexible laryngoscopy.

3. MDT meeting

Every effort should be made to continue with MDT meetings.

As far as practicable, physical attendance at MDT meetings should be kept to bare minimum of essential personnel only, with social distancing of all attendees.

Videoconferencing, dialling-in, and /or use of teleconferencing platforms should be facilitated.

MDT meetings may be used to make decisions regarding performance of diagnostic or operative procedures, that would normally be performed prior to MDT discussion.

4. Surgical treatment

The unique issues regarding surgery for resection of H&N mucosal cancer include:

- The time-sensitive nature of the H&N cancer surgery, and risks that undue delay in surgical treatment may lead to more extensive surgery with attendant increased morbidity, worse functional outcome, and compromised oncological outcome.



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- The risk to operating room staff if the patient transpires to have COVID-19, due to: (i) high levels of virus that may be present in the pharynx and airway, even in presymptomatic/asymptomatic individuals; (ii) the unavoidable use of aerosol generating instruments (including bone saws, electrocautery and other energy devices) during primary tumour resection [5]; (iii) the often prolonged time it takes to remove the primary tumour; and (iv) the close proximity of the operating surgeons to aerosol during this time.
- The requirement for tracheostomy in many patients, so that if patients develop COVID-19 in the postoperative period, this would be a source of significant aerosol generation to staff both in the acute and longer term care.
- The significant disruption to breathing, swallowing, and other functions, as a consequence of the surgery, as well as need for tracheostomy, which makes these patients very reliant on specialist nurses and allied health professionals to optimise functional recovery and minimize complications (particularly pneumonia) in the postoperative period, which may be compromised if such staff are unavailable / redeployed.
- Optimal functional and cosmetic outcome in H&N cancer mucosal resection is often dependent on complex reconstruction, often requiring microvascular anastomosis, which may not be feasible in all cases due to difficulty with microsurgery with appropriate PPE [6].

Considerations regarding open surgery on mucosal H&N cancers during the Covid crisis should thus take into account the goals and likely outcomes of surgery; the likelihood of curing the cancer; the realistic reconstructive options available and likely functional outcomes; safety considerations for theatre personnel and those delivering postoperative care; the consequences of delaying surgery; and alternative non-surgical modalities of treatment.

For patients who are undergoing surgery, we recommend

- As much as feasible, patients should “cocoon” for 2 weeks prior to procedure
- Preoperative COVID-19 testing should be considered essential on all patients undergoing mucosal surgery involving entry to oral cavity, nasal cavity, pharynx, or larynx.
- If feasible, and depending on local laboratory capacity, preoperative COVID-19 testing should be considered also in patients undergoing non-mucosal surgery without airway entry (neck dissection, thyroidectomy, parotidectomy), due to patients not being paralyzed and movement of neck during surgery, which may cause unrecognized movement of the endotracheal tube.
- For patients undergoing very high risk surgery (e.g. laryngectomy, open pharyngectomy, mandibulectomy), consideration should be given, where feasible, to perform 2 tests, separated by an interval [7], and /or combining results of COVID-19 testing with chest CT scan, performed within 24/48 hours of proposed surgery [8].
- Surgery should not be performed on COVID-19 positive patients, due to risk of critical decompensation in patients, and risk of infection to staff intraoperative and postoperatively.



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-Clinicians should be strongly aware of the potential for false negative COVID-19 tests, and thus operations should still proceed with full PPE precautions, including well-fitting FFP3 masks, and eye protection, and in accordance with local infection control protocols. Surgeons performing operations must be happy with available PPE, for themselves and all of theatre staff.

-Consideration may be given in some circumstances to reduce the complexity of the surgery, in order to reduce length of the operation, hospital stay, need for tracheostomy, and need for postoperative ICU/HDU. For example, primary closure or pedicled flaps may be performed instead of free flap reconstruction. As much as possible, the proposed surgery and reconstruction, and implications for functional or cosmetic outcome, should be discussed with patients preoperatively.

-Patients undergoing laryngectomy should not undergo primary puncture.

5. Radiotherapy

Where patients are undergoing radical non-surgical treatment, consideration may be given to reducing treatment times (e.g. with hypofractionation), and/or withholding of chemotherapy in favour of radiotherapy alone, where appropriate. Examples of SIB IMRT hypofractionation schemes as alternative to 70/63/56 in 35 fractions include 65/60/54 Gy in 30 fractions, or, where volume is not large 60/50 Gy in 25 fractions. Certain head neck cancer patients are high risk for treatment such as patients with tracheostomies and laryngectomy patients who have secretions and cough, and patients having mouthbites inserted for radiotherapy such as oral cavity cancer patients. Full PPE should be used in caring for these patients. Use of mouth bites should be limited where possible. Full PPE should be worn by staff caring for these patients. Where radiotherapy capacity is limited patients receiving definitive radiotherapy will be prioritised over adjuvant radiotherapy. Oral care of patients with mucositis by staff should be performed with full PPE.

6. Tracheo-oesophageal prosthesis (TEP)

TEP change, inspection and care may cause aerosolization of viral fragments if patients are COVID-19 positive and if the procedure precipitates coughing, gagging, or requires suctioning.

Where possible, review requests for leaking or dislodged voice prostheses should be dealt with initially by telephone consultation to avoid patient attendance at hospital.

Initial telephone advice may be given to eliminate leakage and avoid the need for hospital attendance, including thickening of fluids, plug device insertion, occlusion of prosthesis with pipette / flushing device, TEP removal and catheter insertion, or use of alternative feeding route, depending on the severity of leakage and the patient's dexterity.

If it is deemed that the patient should attend the hospital, but this can be deferred a few days, then, where possible, COVID-19 testing may be considered prior to attendance.



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Where it is deemed essential to attend hospital immediately, the patient should be evaluated in a designated room. Persons attending the patient must have full PPE including FFP2/3 mask and eye protection. Full PPE precautions should also be taken in patients with negative COVID-19 swabs.

Lengthy procedures with the patient should be avoided. If changing of the TEP is difficult, or it is considered that the patient will likely require short interval further review, consideration should be given to removal of TEP, with insertion of occluder valve or catheter, or insertion of laryngectomy tube into the stoma and allowing the fistula to close, with intent of performing secondary re-puncture after the COVID-19 crisis has passed. The examination room should be deep cleaned after the change in accordance with local infection control protocols.

SLT Head and Neck Forum Guidance document (23.03.20) is appended at end of this document

7. Tracheostomy

Tracheostomy is consistently recognized as an aerosol generating procedure [5]. It should be thus considered both a high risk procedure for staff performing the tracheostomy, as well as presenting an ongoing risk to those nursing and caring for the patient afterwards due to the frequent expectoration of droplets and aerosolized particles. This risk may be even higher due to frequent need to suction through the tracheostomy; need for cleaning and changing of inner tube; and risk of displacement of tracheostomy tube with forceful coughing or positional changes.

Emergency tracheostomy may be required in as a life saving measure in patients with upper airway obstruction who are not known to have COVID-19. The decision to intervene should be rapidly evaluated by the most Senior Clinician available in close consultation with Anaesthetic/ICU staff with due regard for resources available at that time. In all cases, patients should be regarded as having COVID-19 and managed using full PPE.

Need for elective tracheostomy in patients who are being considered for major head and neck resection during the COVID-19 outbreak should be a consideration in such patients, taking account of availability of resources (nursing, ICU, PPE) required for safe management of the patient in the postoperative period.

Decisions regarding elective tracheostomy in COVID-19 should be made in a multidisciplinary fashion including head and neck surgical and ICU/anaesthetic colleagues based on the individual unique sets of circumstances and resources available. Currently, there are no data showing evidence of benefit for elective tracheostomy in ventilated COVID-19 patients. Due to significant risks of infection to operating staff, we recommend that tracheostomy should only be considered in patients where this is likely to bring about a clear benefit to the patient, which outweighs the risks of performing the procedure.



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Tracheostomies are thus not recommended in patients with poor prognosis or with anticipated continued need for ventilation. Where tracheostomy is performed, this should be delayed as long as possible, allowing reduction in viral load. Tracheostomy should be avoided during periods of respiratory or haemodynamic decompensation. As far as practicable, percutaneous tracheostomies, without bronchoscopic control, should be performed over open tracheostomies.

Where open tracheostomy is performed on patients who are known to be COVID-19 positive, it is essential that this is performed using full PPE, including fitted FFP3 masks. Surgeons performing the procedure should ideally have undergone fit-testing of the masks being used during the case, and passing of this fit-test documented. If fit-testing has not been done, or surgeons have not passed the fit test, or there are otherwise concerns re fit of mask, consideration should be given to performing procedures using PAPR.

For patients with existing tracheostomies or laryngectomies presenting with signs or symptoms of COVID-19, microbiological advice should be obtained and consideration given to sending swabs from the stoma +/- expectorated mucus. All aerosol generating procedures with these patients should be carried out with full PPE regardless of Covid-19 status.

For management of existing tracheostomy, please find appended St. James Hospital protocol.

These guidelines will be reviewed periodically and are subject to change with the evolving situation



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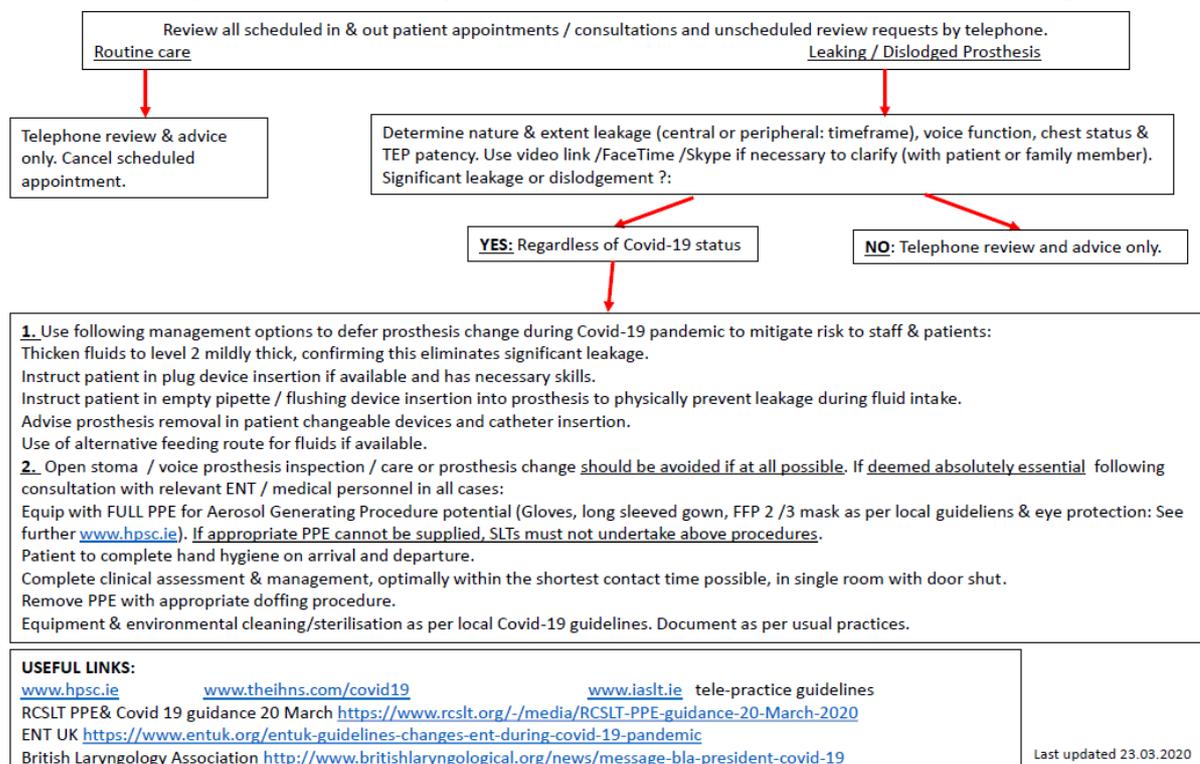
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Appendix 1

SLT Head and Neck Forum Guidance on Tracheoesophageal Voice Prosthesis Management During COVID-19 Pandemic

SLT HEAD & NECK FORUM GUIDANCE ON TRACHEOSOPHAGEAL VOICE PROSTHESIS MANAGEMENT DURING COVID-19 PANDEMIC

(Please note this is guidance only with current knowledge by consensus of HNC SLTs in acute care only and will be revised as situation & knowledge evolves)



Last updated 23.03.2020

Appendix 2 (overleaf)

St. James Hospital Tracheostomy management protocol

TRACHEOSTOMY 1



Practical management for ward non-ventilated tracheostomy patients during COVID 19 outbreak.

PATIENTS WITH TRACHEOSTOMIES/LARYNGECTOMIES SHOULD BE CONSIDERED HIGH RISK

COVID 19 Negative/or not suspected COVID 19 Tracheostomy ward patient.

- Face mask and eye shield, FFP2/3, gown and gloves advised when carrying out mucoid stimulating procedures such as suctioning/ inner cannula checks/changes.
- Reduce frequency of checking and changing the inner cannula unless clinically indicated with decreased saturation and or thick secretions.
- Suction only as needed.
- If nursed in open bay with other patients it is recommended not to use the AIRVO for humidification due to the potential aerosol effect. Please instead use Swedish nose HME. Up to 5L O2 can be administered via the attached oxygen port.



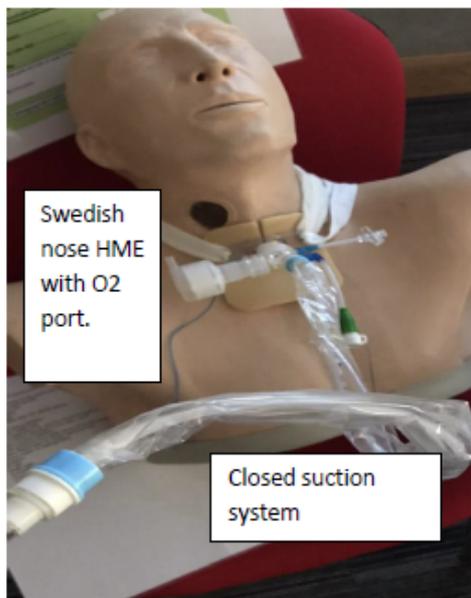
- If higher concentrates of O2 required administer Oxygen via tracheostomy mask placed over Swedish nose HME.
- If the patient is tolerating a PMV (Passy Muir Speaking Valve), sofshield humidification bib must be worn fully covering the tracheostomy tube. Consider reducing duration of PMV placement and apply HME.
- If the patient is not wearing a PMV it is recommended to use a Swedish nose instead of Sofshield bib for humidification.
- It is advised to reduce and or eliminate if possible the use of saline nebulisers during the COVID 19 outbreak.
- Patient can continue to use AIRVO via tracheostomy interface if in a negative pressure room/side room, again it is recommended for staff to wear face mask with eye shield if carrying out tracheostomy care in the room.
- Speaking valve use for patients requiring AIRVO will be indicated on case to case basis by SLT in consultation with MDT.
- Routine tube changes will not be carried out during the outbreak period.
- Tracheostomy CNS/SLT/ENT/Anaesthetics team to wear PPE- FFP3- eye protection and gown if carrying out any high risk skilled /airway procedures such as emergency tube change/decannulation/swallow assessments.

TRACHEOSTOMY 2



COVID 19 Positive or suspected positive Tracheostomy ward patient.

- Full PPE as per SJH guidelines to include face mask (FFP3) and eye/face protection.
- If the patient has a cuffed tube, it is recommended to keep the cuff inflated until the patient is free from COVID 19. *Please remember that the patient will not be suitable for PMV (Passy Muir speaking valve) placement whilst cuff is inflated.
- If the patient has a non-cuffed tube this will increase aerosol generation so the patient should either be in a side room or in cohort area with other COVID-19 patients. Staff must ensure full PPE (FFP3).
- Speaking valve use for patients with uncuffed tubes will be indicated on case to case basis by SLT in consultation with MDT.
- Patient should be nursed in a side room ideally negative pressure room if requiring AIRVO.
- AIRVO to be avoided when possible due to the potential aerosol effect. Please instead use Swedish nose HME. Up to 5L O2 can be administered via the attached oxygen port.
- If higher concentrates of O2 required administer Oxygen via tracheostomy mask placed over Swedish nose HME.
- Closed suction system is advised if the patient is requiring suctioning. Pending availability of stock closed system to be renewed weekly. Swedish nose HME with O2 port can be attached to side of suction system. See Picture below.



- Consider reducing the frequency of checking and changing inner cannula to avoid disconnecting the closed system unless clinically indicated with decreased saturation and or thick secretions.
- While carrying out tracheostomy care a simple face mask may be applied over the patients face if they have a non-cuffed tube to minimize droplet spread from the patient.

LARYNGECTOMY 1



Practical management for ward non-ventilated laryngectomy patients during COVID 19 outbreak.

COVID 19 Negative/or not suspected COVID 19 laryngectomy ward patient.

- Face mask and eye shield FFP2/3, gown and gloves advised when carrying out mucoid stimulating procedures such as removing and cleaning lary Provox tube/suctioning via stoma
- Ask the patient to manage as much of their stoma care and voice prosthesis care as possible using recommended hand hygiene guidelines.
- If nursed in open bay with other patients it is recommended not to use the AIRVO for humidification due to the potential aerosol effect. Please instead use Provox HME disc filter that is attached to either a lary tube or a base plate. If Oxygen is required apply dry O2 via tracheostomy mask and position over cassette HME filer.



Provox lary tube
with HME
cassette filer



Base plate with HME cassette filter

- Sofshield humidification bib if worn must be positioned fully covering the patient's stoma.
- It is advised to reduce and or eliminate if possible the use of saline nebulisers during the COVID 19 outbreak.
- Patient can continue to use AIRVO for humidification if in a negative pressure room/side room, again it is recommended for staff to wear face mask FFP2/3 and eye protection/apron/gloves when carrying out laryngectomy care in the room.
- Surgical Voice Restoration (SVR) including voice prosthesis insertions & changes are to be avoided where possible as per ENT Consultants. SLT will triage these cases and liaise wit ENT.
- If SVR task deemed essential & urgent, and consent obtained from ENT Consultant/Registrar, SLT to wear full PPE (including FFP3 & gown).

LARYNGECTOMY 2



COVID 19 Positive or suspected positive Laryngectomy ward patient.

- Full PPE as per SJH guidelines to include face mask (FFP3) and eye/face protection.
- Cuffed tracheostomy tube inserted into stoma and cuff inflated to better manage infective secretions.
- Patient should be nursed in a side room ideally negative pressure room if requiring AIRVO.
- AIRVO to be avoided when possible due to the potential aerosol effect. Please instead use Swedish nose HME. Up to 5L O2 can be administered via the attached oxygen port.
- If higher concentrates of O2 required administer Oxygen via tracheostomy mask placed over Swedish nose HME.
- Closed suction system is advised if the patient is requiring frequent suctioning. Pending availability of stock closed system to be renewed weekly. Swedish nose HME with o2 port can be attached to side of suction system. See Picture below.



- Consider reducing the frequency of checking and changing inner cannulas to avoid disconnecting the closed system unless clinically indicated with decreased saturation and or thick secretions.

Please not this information is subject to change as new information becomes available