### BLA & ENT UK GUIDELINES (ENDORSED BY RCSLT): A GRADUATED RETURN TO ELECTIVE ACTIVITIES FOR LARYNGOLOGY WITHIN THE COVID-19 PANDEMIC

**SURGICAL PRIORITY : UPDATED FROM ENT UK GUIDANCE RELEASED 17 APRIL 2020**

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
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<tbody>
<tr>
<td>Level 1a</td>
<td>Airway emergencies (obstruction with cancer, foreign body, papillomas, sepsis and bleed)</td>
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<td>Neck trauma (airway / vascular / visceral injury)</td>
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<td>Level 1b</td>
<td>Neck sepsis / abscess (not responding to conservative treatment)</td>
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<td>Level 2</td>
<td>Diagnostic endoscopy &amp; biopsy larynx/pharynx</td>
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<td>Endoscopic / open treatment of airway lesion / pharyngo-oesophageal stricture / vocal cord medialization for severe aspiration</td>
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<tr>
<td>Level 3</td>
<td>Microlaryngoscopy / endoscopic / transcutaneous management of some benign laryngeal pathologies</td>
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<td>Endoscopic treatment of pharyngeal pouch with severe dysphagia</td>
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<tr>
<td>Level 4</td>
<td>Microlaryngoscopy / endoscopic management of other benign vocal fold conditions and paralysis</td>
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<tr>
<td></td>
<td>Laryngeal framework surgery (thyroplasty) unless significant aspiration</td>
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<td></td>
<td>Routine procedures for pharyngeal pouch (no severe dysphagia)</td>
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<tr>
<td></td>
<td>Routine Trans-Nasal Oesophagoscopy (TNO)</td>
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Much of laryngology diagnostic and therapeutic practice requires evaluation and manipulation of upper aerodigestive tract mucosa, extending to trachea and oesophagus. Sub-specialist practice overlaps the clinical work of Head and Neck (H&N) surgeons managing Upper Aero-Digestive Tract (UADT) cancer diagnostics and therapy through H&N cancer multidisciplinary teams (MDTs). In addition, speech, voice and swallowing assessments and rehabilitation interventions are provided by appropriate specialist speech and language therapists (SLT).

Prior to Covid-19, endoscopic assessment was routinely delivered as part of elective outpatient consultations (general, cancer 2 week wait and sub-specialist voice and swallow clinics), emergency and urgent care assessment of patients (Emergency Department [ED] /semi- acute care environment), and ward-based care (admitted cancer, neck sepsis and trauma emergencies, serial observations and monitoring).

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perioperative management). Team members performed tracheostomies, were involved in ward-based aftercare of such patients, and management of any complications.

Following guidance issued by ENT-UK\(^1\) and Public Health England (PHE)\(^2\) in relation to theoretical risk of Covid-19 virus transmission through aerosol generating procedures (AGPs), endoscopic procedures have been heavily limited, almost exclusively occurring in the context of emergency presentations through ED, and in the context of outpatient assessment of urgent cancer cases. Enhanced PPE requirements (full-length waterproof gown, FFP3 face masks, visors or goggles to cover eyes and double gloving) have been recommended for endoscopic assessments with appropriate protocols for face mask fitting and donning / doffing.

Following initial ENT UK \(^1\) and Royal College of Speech and Language Therapists (RCSLT)\(^3\) guidance on endoscopy, all SLT-led endoscopy procedures of patients with voice and swallow problems had ceased pending update to national guidelines. The RCSLT now recommend a staged re-introduction of therapist-led endoscopic procedures focusing initially on MDT endorsed, essential care for patients requiring evaluation of the airway and swallowing\(^4\).

All elective surgery (except a minority of time-sensitive and urgent H&N cancer operations) has been avoided during the first wave. Likewise, emergency surgical procedures have been few, and predominantly relating to acute ED presentations for foreign body inhalation / ingestion, or airway compromise due to local inflammation or infection. Many departments have redeployed junior team members to frontline support (e.g. Intensive Care Unit [ICU], emergency medicine). A combination of senior and junior staff have performed tracheostomies on Covid-19 patients. Such activity has varied by geography, local team and preference, supported (where possible) by ICU and anaesthetic staff directing ventilatory support. They have also performed related aftercare (e.g. managing complications, successful decannulation).

The numbers needing care and support on both ICU and wards remains high.

Following the National Confidential Enquiry into Perioperative Deaths (NCEPOD) audit of hospital-based Tracheostomy care in England and Wales\(^5\), many hospitals set up and delivered ward-based tracheostomy care through local tracheostomy MDTs. During this first surge, many MDTs have been disbanded with associated reduction in allied healthcare professional (AHP) rehabilitation support. Following early consensus guidelines being issued by ENT UK on tracheostomy insertion and care

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\(^1\) [https://www.entuk.org/nasal-endoscopy-and-laryngoscopy-examination-ent-patients](https://www.entuk.org/nasal-endoscopy-and-laryngoscopy-examination-ent-patients) (updated 23/03/20)


\(^3\) [https://www.rcslt.org/learning/covid-19/rcslt-guidance](https://www.rcslt.org/learning/covid-19/rcslt-guidance)


amidst Covid-19\(^6\), all tracheostomy tubes inserted during this pandemic have been cuffed tubes with closed suction arrangements to reduce potential virus spread through aerosol release.

Safe tracheostomy decannulation requires multi-disciplinary consensus for decisions including tube cuff-deflation and capping, tube down-sizing and removal\(^7\). Appropriate expertise in endoscopic assessment of the upper airway and digestive tract (UADT) and trachea is a pre-requisite for this, as well as for allowing voicing and safe swallowing to resume.

On some ICUs, as patients have started to recover, tube cuffs have started to be deflated (usually after one or two negative Covid-19 swabs) with decisions being taken by ICU physicians to commence tube weaning ahead of discharge to ward-based care. Local tracheostomy MDTs incorporating the key added skills of SLT services either remain disbanded, or are only now considering re-establishment, as appropriate AHP personnel return to department posts from front-line roles or from home working.

In exiting this first wave of the Covid-19 pandemic, ENT UK (supported by the council of the British Laryngological Association [BLA] and RCSLT), provide the following consensus guidelines to assist local units in re-establishing a phased return to elective and supporting laryngological diagnostic, therapeutic and rehabilitative services. Consent should be taken additionally and specifically for added risk of Covid-19 infection whilst hospitalized for surgery.

**SURGICAL ACTIVITY**

- All Level 1a and 1b surgical procedures to proceed as patients present to acute care organisations (full PPE requirements to remain as per previous ENT UK and revised PHE guidance for assessment and surgical management). All presenting patients ideally to be Covid-19 tested and managed as if positive with necessary staff and patient safeguards.
- Emergency tracheostomy to be performed with full PPE provisions, assuming Covid-19 positivity (even if not proven) as per previous ENT UK guidance. Elective Covid-19 tracheostomy as per previous ENT UK guidance also.
- Level 2 diagnostic biopsies of the pharynx and larynx should be performed similarly with all PPE safeguards, as per regional agreed cancer pathways (in locally agreed Covid-clear NHS / Private hospital sites).
- Super-specialist activities (airway and high pharyngo-oesophageal strictures) should be performed only following due super-specialist MDT discussions and prioritization at tertiary care sites (with appropriate MDT expertise and support from complex airway anaesthetists /ICU).
- Cord medialisation for severe dysphagia should only follow a full and considered MDT discussion, having considered the pros and cons of alternative nutrition and feeding options i.e. gastrostomy tube insertion. In some cases the super-added risks of GA and AGP, amidst hospital Covid-19 risk

\(^6\) [https://www.entuk.org/sites/default/files/COVID%20tracheostomy%20guidance%20-%20April%202020%20update.pdf](https://www.entuk.org/sites/default/files/COVID%20tracheostomy%20guidance%20-%20April%202020%20update.pdf) (updated 06/04/20)

may outweigh any perceived benefits (particularly whilst SLT-supported FEES and VFS assessments remain restricted).

- Cord medialisation to help palliate cancer patients may be considered (with full PPE provisions) under GA / LA at designated clean local sites (negative pressure ventilation if outpatient procedure room utilised).

- Pharyngeal pouch surgery should only be considered in the context of severe dysphagia, following appropriate MDT dialogue between laryngologist, SLT, dietetics, respiratory and complex airway anaesthetic colleagues, supported by ICU. Patients presenting with aspiration associated pneumonia should be appropriately stabilized and where possible supported by gastrostomy to support enteral feeding and medical stabilization. Surgery should be performed ideally when Covid positive patient numbers have declined in the acute care setting to allow enhanced peri-operative care with necessary HDU provisions postop.

- Level 3 and 4: Endoscopic and open procedures related to benign laryngeal pathology (and non-urgent pharyngeal pouches) should be avoided until such time that hospital Covid positive numbers have dropped, or be performed with full PPE safeguards (for patients and staff) in local hospitals designated as clean Covid-19 sites. Such patients should ideally be Covid-19 tested and negative immediately prior to surgery. The risks associated with the use of powered instruments such as microdebriders, Coblation and CO2 LASER may be mitigated by plume suction units. There is limited evidence base to advocate the use of one technology or technique over another for safety.

**OUTPATIENT SERVICES**

- Telehealth consultations (software choice and information governance to be followed as per local guidelines) should be supported to allow community care and remote triage of patients for Face to Face (F2F) clinic consults i.e. those necessitating flexible nasendoscopy (FNE).

- Recomence an initial limited patient clinic template for urgent F2F appointments where higher risk is identified upon telephone triage, requiring FNE (full PPE provisions with appropriate clinic safeguards for ventilation, cleaning, donning/doffing, social distancing measures etc).

- All attending MDT and nursing staff to don appropriate PPE for consultations and AGPs.

- Ideal clinic arrangements (negative pressure ventilated treatment rooms, nurse-supported) may permit leaner and cost-effective therapies under LA, as well as overall reduced risk compared to GA (full PPE is a necessity).

- Previously performed out-patient office procedures (e.g. cord medialisation, botox injections, pharyngeal balloon dilatation post laryngectomy etc) should be performed in an appropriately ventilated environment following assessment of aerosol generation risks with the local infection control team. Risk should be minimised with the patient wearing a surgical mask and attending staff in agreed PPE. Timing of the procedure should take into account RCS prioritisation criteria.

- Where transcutaneous botox injections are performed without endoscopy, and the probability for entering the respiratory tract mucosa and so triggering a cough is minimal, such outpatient procedures may be re-instigated. Aerosol generation risks should be assessed locally with infection control and minimised with the patient wearing a surgical mask and attending staff in agreed PPE.

- Joint ENT-SLT Voice and / or Swallow clinics - AGP risks associated with stroboscopy, FNE and TNO diagnostic procedures are likely compounded further still with therapeutic procedures (increased aerosol with trigger of reflex coughing and choking). The above steps are required as clinics restart.

- Tracheostomy tube changes and trouble-shooting of developing complications for community patients require similar considerations for the OPD environment and reduction of AGP risk (often these patients are in wheelchairs or on trolleys which further impact on available space for safety).
- Management of Laryngectomy patients should be risk assessed on a case by case basis. If at all possible F2F contact should be avoided or minimized given possible higher vulnerability and increased risk for virus transmission. If a voice prosthesis change is likely to reduce later complications with regards to respiratory compromise, and voice prosthesis leakage cannot be managed by cleaning, use of thickened liquids or use of a voice prosthesis plug, then a valve change may be undertaken. Given that these patients are at high risk of social isolation in particular during lockdown, a tracheosesophageal (TEP) occluder (dummy valve), which would preclude the use of verbal speech, should not be used routinely. However, a TEP occluder should be considered on a case by case basis following a risk assessment. As voice prosthesis care is considered an AGP, full PPE will be required with post procedure cleaning / decontamination procedures in line with PHE guidance and local infection prevention control.

**INPATIENT SERVICES**

- Evaluation of urgent referrals from other services (dysphonia, dysphagia, neck lumps etc) will need ward-based FNE with full PPE.
- Postop tracheostomy patients should be cohort (MDT agreed Covid-19 negative / positive bays or wards), supported by appropriately trained and tracheostomy competent nursing staff. The same standards should apply to ICU tracheostomy care where normal ratios of ICU nurses / intensivists are lost.
- Tracheostomy MDTs should be re-established with priority, incorporating endoscopy to facilitate airway assessment during tracheostomy wean, FNE prior to decannulation, bedside swallow / SLT-led endoscopy where deemed essential by the MDT following the new RCSLT guidance.
- Tracheostomy MDT ward rounds should ideally be ENT (Laryngologist) and consultant-led where possible, including input from SLTs, respiratory physios, critical care outreach nurses and tracheostomy nurse specialists as available. Case by case decision making with recorded documentation of MDT consensus and outcomes, should ideally be done through established Tracheostomy care bundles. With larger numbers of cohorted tracheostomy patients, MDT ward rounds may be required up to 3 times in the week.
- Full PPE provisions are recommended for staff until at least two weeks have passed since initial positive test and ideally one or two negative Covid-19 tracheal aspirates are returned (liaise with local ID / Micro services on this). PHE recommend sputum from the lower respiratory tract be preferentially tested over upper respiratory tract samples as the virus may be present in the lower respiratory tract despite being undetectable in the UADT. Tracheostomy suctioning and decannulation steps (cuff deflation, tube down-sizing, capping, HMEs and speaking valves) during weaning are AGPs. The earliest wean step requires cuff deflation and as such all tracheostomy suctioning and weaning should be performed with full PPE until Covid negative is confirmed by the ID and microbiology teams.

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ENDOSCOPY CONSIDERATIONS

- Local arrangements for FNE and airway assessment before and during the Covid-19 pandemic have varied across units, including both re-use and novel single-use video endoscopy solutions.
- MDT guidelines have recommended selected use of topical nasal decongestant and local anaesthetic solution (particularly as sprays) to reduce the chances of coughing and sneezing causing increased aerosol generation risk. Covering the patient’s mouth with a surgical mask, if tolerated, may add further protection.
- Wherever possible, diagnostic outpatient and inpatient endoscopy should be carried out by an experienced person and be photo / video recorded to minimize the need for repeat procedures.
- Ideally, digital photo/video documentation should be facilitated by local IT support through secure centralized image archiving arrangements for information governance. This standard provides medicolegal safeguard.
- Digital photo/video capture allows serial airway assessment with Dicom data capture to facilitate airway audit and research in Covid-19 infection (proposed audit link with CovidTrach).
- Single-use endoscopes (e.g. Ambu, Storz) have been increasingly used for emergency and ward-based activity, where requirements for high resolution image quality are less compared to cancer and laryngology outpatient clinics.

Pros: No upfront CapEx or recurring maintenance / replacement costs; no issues around cleaning and disinfection through cross-contamination as seen potentially with re-use scopes; digital capture on portable monitor permits remote support and expert assistance in decision making; safety as no eye-piece viewing and all MDT members can see assessment in real-time (i.e. on tracheostomy MDT ward rounds etc); allows teaching of junior and AHP/nursing staff; allows trouble-shooting of blocked and displaced Tracheostomy tubes; can be used in theatres and ICU to help perform minimally invasive percutaneous tracheostomies etc.

Cons: Potential cost per endoscope (although if procured jointly with ICU / Anaesthetics / Theatre and SLT, significantly discounted).

TRAINING

- It is imperative that the right balance is maintained for service delivery, training opportunities and audit / research, the quality and result of each (and therefore the combined) are interdependent. All are equal and important pillars for clinical governance.
- Duty of care delivery for patients is matched by duty to collect outcome data, teach and train, as well as participate in appropriately governed audit and ethical research.
- It is the supervising consultant’s responsibility to support, safeguard and train their trainees through whichever scenario they face locally.
- When considering operations, the shortest procedure time may not necessarily equate with the best outcomes or safety for patient and attending theatre staff.
- Each trainee and trainer interaction should be considered on its merits, as should other local factors in team-working. Covid-19 has disrupted established teams and usual systems of practice as individuals have self-isolated or been redeployed to other roles. The grade, experience, complexity of case and previous trainer / trainee interactions all interplay when considering risks.
- If trainees may be considered competent and “safe enough” to manage first and second on call emergency rotas, it too may be argued that trainees may be considered competent and safe to perform suitable supervised laryngological procedures (particularly where they have achieved significant experience during laryngological placements, or have simulated appropriately for and signed-off necessary competencies in advance of the procedure).
- Training should be delivered in a more systematic manner, the component steps of a surgical procedure clearly demarcated and support given for a trainee to at least perform a part, if not the whole procedure where possible.
- All trainees should be supported appropriately by experienced and competent Consultants who maintain adult airway competencies for emergency care and regular laryngological practice for elective procedures.
- Appropriate consultant supervision through rota considerations should extend to the supervision of inpatient admissions (admitting only those that are necessary amidst high Covid inpatient populations) and prompt early discharges when safe and appropriate.
- Outpatient activity patterns shall be determined by infection and number controls imposed for F2F encounters, available space for appropriately equipped rooms, endoscopes, PPE, ventilation etc. The workload and approach should mirror that for inpatient, emergency and elective surgical activity i.e. trainees follow the same restrictions and controls as stipulated for consultants. Where they have the necessary experience and skill sets, as determined by assigned educational / clinical supervisors, these should be utilized fully.
- Trainees in general have higher digital literacy compared to their trainers and so may more readily adopt locally supported technological solutions for telemedicine, audit, tele-training etc. This should be encouraged and facilitated where possible with seniors’ support and due information governance considerations. Digital tools such as portable monitors for single-use endoscopy allow visual communication with supervising consultants in a way that cannot be surpassed. As well as forming an essential part of the clinical record, the data provides for ready teaching and training material when appropriately anonymized and non-patient identifiable.
- Investment and support for appropriate wet lab, cadaveric, simulation and digital training facilities with multidisciplinary team focus should be a priority consideration, to address current limitations for learning exposed by Covid.
- The delayed introduction of the new higher surgical training curriculum by at least 12 months allows Laryngology, as a key inter-facing sub-specialty, to reassess and redefine necessary sub-specialist trainee knowledge-base and competencies suited for the post-Covid era.

AUDIT / RESEARCH

- It is important to record and audit surgical outcomes, delays to treatment start dates and deviation from previous ‘standard of care’.
- Participation in National audits and initiatives is to be encouraged ie COVIDSurg (https://globalsurg.org/covidsurg), COVIDTrach, other MDT audits and research for airway, swallow, voice and endoscopic / radiological imaging.
- This should be coordinated between inter-disciplinary groups (at a national and local level) so that data collection is integrated and devoid of duplication in effort and costs for databases etc.