

RCSLT GUIDANCE

Guidance on voice and upper airway disorders in the context of COVID-19 in adult and paediatric services



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1. INTRODUCTION

The coronavirus pandemic has caused significant restriction to the delivery of healthcare, especially for those patient populations whose management is dependent on endoscopic evaluation of the larynx (EEL). This document has been developed in response to the growing number of speech and language therapists (SLTs) working in voice and upper airway disorders seeking guidance on how to safely and effectively deliver care. It references both adult and paediatric caseloads. For the purpose of this paper, the term 'paediatrics' is used to refer to neonates, children and young people.

This is a working document that will be reviewed and revised as further evidence and information becomes available and as the COVID-19 situation develops. The RCSLT expert advisory group responsible for this document will:

- Undertake a further review and update of this document by end of September 2020.

2. EXECUTIVE SUMMARY

At the present time, SLT-led endoscopy for the management of voice and upper airway disorders remains suspended; however, [RCSLT guidance](#) is currently under review. Similarly, ear, nose and throat (ENT) and respiratory services are limiting the use of endoscopic evaluations for these populations. This document provides interim guidance to support the delivery of SLT care in the absence of routine access to laryngoscopic procedures. This is particularly relevant for clinicians who are being asked by ENT and respiratory colleagues to deliver assessment and therapy to patients without any endoscopic analysis to support and inform intervention. In the absence of EEL, a formal diagnosis is not possible and any management that occurs is based on clinical impression.

There are general concerns around resuming outpatient face-to-face (F2F) service delivery in particular personal-protective-equipment (PPE) requirements and aerosol generation within therapy sessions (see RCSLT [Restoring services and keeping everyone safe: Framework to support decision making](#)). National and Trust level procedures should be followed, however, in the absence of any current robust evidence or data we would support continuing telehealth wherever possible. (See section 4 of [RCSLT guidance on reducing risk of transmission, use of personal protective equipment \(PPE\) in the context of COVID-19](#) for more details) This guidance will be reviewed and updated as further evidence emerges and impacts practice.

3. BACKGROUND

3.1. Context

SLT services have faced significant challenge and disruption in light of the COVID-19 pandemic and the delivery of every aspect of NHS healthcare has been fundamentally affected (Willams, 2020). Specifically, those services treating voice and upper airway disorders have limited access to laryngoscopy (Bolton et al, 2020, ENT-UK, 2020). Existing national guidance (Jones et al, RCSLT, 2020) mandates *all* patients referred for SLT treatment of laryngeal disorders should have endoscopic evaluation of the larynx. In these extraordinary times, such guidance cannot be followed routinely. Interim guidance for the SLT management of laryngeal disorders is important to support service recovery plans and to ensure risk minimisation for patients and the SLT workforce.

3.2. Approach to guidance

It is well recognised that laryngeal dysfunction may manifest in several overlapping ways (Hull 2016, Vertigan 2007) with the coexistence of voice disturbance, inducible laryngeal obstruction (ILO), chronic cough (CC) and globus pharyngeus. Therefore, this interim guidance provides a holistic approach to the core themes SLTs may contemplate when treating patients with laryngeal disorders. To support individual condition nuances, specific population considerations are also addressed.

3.3. Specific considerations in light of COVID-19

- Existing protocols and guidelines ([RCSLT, 2019](#) & [RCSLT, 2015](#)) remain relevant to the delivery of care for voice and upper airway disorders. However, there is a significant necessary change in usual management approaches due to the COVID-19 pandemic and subsequent restrictions. **In the absence of access to usual instrumental assessment tools and the fact referrals will be based on clinical impression, it is important to reiterate that the medical/surgical consultant remains responsible for a patient's overarching care.**
- Without the routine use of EEL to direct therapy it is important to acknowledge SLT outcomes may be slower and less complete; the overall quality of provision may differ. It is therefore crucial to manage patient and multidisciplinary team (MDT) colleague expectations accordingly.
- There is a significant reduction in the number of people being referred under two week wait rules for adults at present. Many UK centres are now using a head and neck cancer risk calculator as part of a telephone triage clinic, grading people into risk categories (Paleri et al 2020, in press). With voice changes being part of the evaluation process, it may be that patients in the low risk category are referred for a course of speech and language therapy in the absence of an endoscopic evaluation.

- There are enforced restrictions limiting face-to-face (F2F) consultations, as well as procedural and environmental adaptations for restricted endoscopic procedures
- There are lengthy delays in elective surgery for benign laryngeal lesions and delays in referrals (ENT-UK, 2020).
- With the increase in virtual living habits (eg home-working, gaming), comes an increase in demands on the voice.

These specific considerations highlight the need for clarity on how best to optimise triage and patient prioritisation for:

- a) multidisciplinary care decision-making
- b) therapy intervention
- c) accessing endoscopy assessment in times of reduced availability

3.4. Impact of COVID-19 infection

Voice and chronic upper airway respiratory difficulties in adults are identified as a likely need in the COVID-19 SLT rehabilitation pathway (Wallace et al, 2020). Therefore, it is highly likely voice and upper airway services will see an increased demand from the COVID-19 survivor population.

Survivors of the virus in intensive care who have experienced prolonged intubation and/or tracheostomy placement are at increased risk of sustaining damage to the larynx (Brodsky et al, 2020; McGrath et al, 2020). This leads to the potential for dysphonia and laryngeal hyperresponsiveness conditions to develop. This may also be true for patients who have not been intubated or required hospital treatment. Existing voice and upper airway disorders patients may experience exacerbation or deterioration of their symptoms if they have contracted COVID-19. However, the full extent of demand on services is as yet unknown.

Further, although there is as yet no conclusive evidence on the potential psychological impact of COVID-19, it is likely that a proportion of survivors may be significantly affected (BPS, 2020). They may suffer cognitive and functional impairments which may or may not be detected in the early stages of recovery (Pandharipande et al, 2013). This may lead to the development or exacerbation of mental health issues and associated dysfunctional breathing patterns and/or vocal behaviours.

Paediatric cases of COVID-19 represent a small proportion of the total number of confirmed cases ([Royal College of Paediatrics and Child Health, 2020](#)) and few require hospitalisation. Adolescent cases may present similarly to adults. Patients with

Paediatric Inflammatory Multi-System Syndrome (PIMS-TS), an emerging condition related to COVID-19, have been reported to require prolonged intubation (Riphagen et al 2020) and neurological sequelae is a possibility.

Compliance with the requirements of EEL in paediatrics is already a recognised challenge in young children and those with anxiety or behavioural difficulties. This will be compounded further by current personal protective equipment (PPE) requirements. Particular concerns in paediatrics are the secondary implications caused by COVID-19 (eg the impact of social isolation and heightened anxiety).

4. ROLE OF SPEECH AND LANGUAGE THERAPY AND SCOPE OF PRACTICE

SLTs continue to have a central role in identifying, diagnosing, managing and treating laryngeal disorders. Further, SLTs are the primary source of non-pharmacological interventions, and have a key role in maximising the effectiveness of surgical and pharmacological recommendations prescribed by medical colleagues. Optimising how this role continues in the current COVID-19 climate is vital and presents an opportunity for SLTs to further demonstrate their breadth of skills.

SLTs working in voice and upper airway disorders will deliver services in a range of environments including specialist tertiary centres, community / educational settings, and independent practitioner clinics. Referrals should continue to come from ENT clinics, multidisciplinary team (MDT) clinics and respiratory services. While SLTs may be integrated as part of well-formed MDTs, it is acknowledged that many referrals will be made directly to community-based therapists where enhanced support and supervision may be limited.

SLTs working with voice and upper airway disorders also have the role of triaging patients back to ENT/respiratory colleagues if they are not responding to therapy techniques or if there are changes to their clinical presentation. This is especially true for patients who have not had EEL or a full diagnostic medical work-up. In addition to RCSLT recommendations/position papers, clinicians should consult local trust policies and procedures to ensure that they are continuing to work within their job roles and without increased personal or professional risk. This is particularly important for clinicians working in isolated settings without easy access to ENT and/or respiratory physicians.

5. SUPERVISION AND SUPPORT STRUCTURES

Existing support structures will benefit from being actively encouraged during this time. Re-deployment of experienced staff may lead to issues around skill mix and the need to support less experienced staff effectively. Further information on types of supervision can be found [here](#).

Access to RCSLT professional advisers should be advocated for clinicians, as there may be occurrences locally of clinicians' roles changing during this period and being asked to work within different clinical specialisms. While this presents opportunities, it is felt that clinicians with less experience of working in the fields of voice and upper airway disorders should have access to clinical supervision from an experienced professional within locally agreed pathways. Therapy beyond education, voice care and upper airway health should be guided by a specialist SLT. Information on how to contact an RCSLT adviser can be found [here](#).

It is recognised that clinicians working in secondary care may be asked to provide input to patients under the care of a tertiary level centre. In this instance, the RCSLT suggests that the clinician makes contact with the tertiary centre to discuss a model of best shared safe care for the patient.

During this time, RCSLT Clinical Excellence Networks (CENs) are looking at alternative methods of delivering content. A list of CENs can be found [here](#).

As the current situation is fast-changing, clinicians are encouraged to visit relevant professional body sources of information for the most up to date guidance, such as the [RCSLT](#), [ENT-UK](#), the [BLA](#), [BVA](#), [BTS](#), [European Respiratory Society](#), [BAPO](#) and the [RCPPCH](#).

6. MULTIDISCIPLINARY WORKING

SLTs providing input for patients with voice and upper airway symptoms who have not undergone EEL should only do so as part of an MDT. Membership of the MDT may differ depending upon clinical setting but, as a minimum requirement, it is expected to consist of at least one ENT surgeon or respiratory physician and SLT.

MDT working is central to effective service delivery and optimises outcomes for patients with voice and upper airway disorders. Some F2F MDT clinics are likely to resume over the coming weeks but there will be a significant reduction in services; patients attending will be those identified as high-risk during telephone triage (ENT-UK Statement, May

2020, BTS 2020). Consideration locally should be given to the impact of possible delays in return to pre-COVID-19 MDT service levels.

MDT clinics in respiratory medicine are unlikely to resume in their usual format for some time due to the levels of risk posed by respiratory function tests and bronchoscopy/laryngoscopy (BTS, 2020). Many respiratory patients may not be able to attend in person for non-emergency appointments due to the government shielding process advice. These patients will require regular MDT discussion and coordinated decision-making in relation to their clinical management.

In paediatrics, close working with the family, school and other relevant professionals is particularly important to ensure effective management of the patient across a range of contexts. Existing triage protocols for paediatric MDT clinics will need to be amended to take into account sneezing/coughing susceptibility, tolerance of PPE, social distancing compliance and restrictions about bringing comfort toys/distractors (BAPO Statement, May 2020). SLTs in specialist paediatric voice services may be required to contribute to MDT discussion about the need for other diagnostic investigations, eg microlaryngobronchoscopy, ultrasonography (Sayyid 2019, Ongkasuwan 2017).

Where SLTs are working in local settings, for example community teams with restricted access to instrumental assessments and diagnostics, it is recommended that clinicians make links with colleagues in acute settings as needed..

7. RISKS AND CONSIDERATIONS

The risks to both clinicians and patients are dependent on the different work settings. The guidance provided in this document should allow all SLTs to feel reassured in their management of patients. In addition to RCSLT and HCPC guidance, clinicians should also consult local trust policies and procedures to ensure that they are continuing to work within their job roles and without increased personal or professional risk.

There are a number of risks which need to be considered:

Risks
Service-related risks
<ul style="list-style-type: none">Reduced staffing owing to redeployment, shielding and the need to isolate due to COVID-19 in line with current government guidance (Public Health England 2020)

- Insufficient resources to cope with demand for outpatient services in de-escalation phase
- Backlog of high-risk patients (including HSC205) requiring urgent intervention and the subsequent effects on treatment availability for routine patients
- Inability to provide differential diagnosis in the absence of endoscopy leading to inappropriate and/or prolonged treatment
- Lack of clear pathways of care (GP/ENT/Respiratory/SLT) in current COVID-19 climate
- Inadequate telehealth resources
- Increased number of sessions required for treatment owing to lack of endoscopic evaluation
- Increased number of patients experiencing voice/respiratory symptoms related to COVID-19

Patient-related risks

- Lack of differential diagnosis in the absence of endoscopy leading to inappropriate treatment
- Inability to access/reluctance to engage with telehealth facilities impacting on therapy delivery
- Not presenting for medical attention due to anxiety (Lazzerini et al 2020)
- Altered psychological, social and educational experiences (Wange et al 2020)
- Reduced levels of emotional and behavioural wellbeing (Jiao et al 2020)
- No access to interventions for patients who usually receive regular treatments (eg botulinum toxin injections)
- Engaging in unsafe use of home remedies during COVID-19, eg steam inhalation burns (Brewster et al 2020)

SLT-related risks

- Emotional demand of knowledge of increasing waiting times for patients due to CCG/local trust/directorate response to COVID-19 planning

- Working with patients with no confirmed endoscopic differential diagnosis
- Reduced access to usual therapy techniques (eg laryngeal palpation)
- Safety of environment where SLT is working jointly with ENT or respiratory performing urgent diagnostic endoscopic procedures
- Perceived pressure to work out of official job plan/role in extended clinical practice not acknowledged (or insured) by local employer
- Increased caseload in COVID-19 rehabilitation phase
- Stress of working in isolation without access to support

To minimise these risks the following should be put into place:

Suggested action:

- Agreement that the medical/surgical consultant remains responsible for the patient's overarching care
- Agreed pathways of care between ENT/SLT/respiratory medicine so patients can move freely between services without the need for further GP referrals
- Agreed pathways of care between SLT centres including support and advice networks
- Identification of high-risk patients with prioritisation systems in place
- Adequate telehealth equipment (see Section 10)
- Clear guidance (see Sections 8 and 9) on therapy regimens and indications for referral back to ENT/respiratory medicine where patients do not make expected progress during SLT therapy
- On discharge from services, provide guidance to GPs on re-referral criteria
- Audit data on patients who have not undergone endoscopy with follow-up in due course for all patients whether or not they attend therapy
- Safe environment with adequate PPE for SLTs involved in urgent diagnostic endoscopic procedures (see [RCSLT PPE guidance](#) and [RCSLT COVID-19 guidance for SLT-led endoscopic procedures](#))

8. SPECIFIC POPULATION CONSIDERATIONS; VOICE

8.1. Management of caseload

MDT voice clinics ceased to operate in mid-March with some resuming as unidisciplinary clinics via telehealth in April 2020. Theatre lists have been restricted to urgent cases, thus affecting investigation by microlaryngoscopy (Frauenfelder et al 2020). Many services are now in the process of planning to resume MDT clinics in a limited way from June 2020. Clinicians may have been redeployed and returning to work with a caseload that has been on hold or limited. As therapy services resume, the use of a prioritisation system may reduce the burden of returning to a large caseload and waiting list.

In paediatrics, care may be jointly managed by clinicians across multiple services, or solely by a community or locally based SLT following ENT assessment. The role of the community SLT remains important in both scenarios. Locally based paediatric services are advised to prioritise and manage new voice referrals according to locally agreed criteria. Additional factors to consider will be: suitability for telehealth, patient age, educational transition times, the effectiveness of voice therapy and co-existing speech and language therapy, developmental or cognitive needs.

Application of the prioritisation matrix below should be done in conjunction with local prioritisation guidelines. **Differences in local service models and patient demographics may also mean it requires adaptation.**

Patient prioritisation for SLT management: Voice	
Level	Patient selection criteria
Level 1: High priority patients	<ul style="list-style-type: none">● Aphonic/severely dysphonic patients due to the impact on their ability to function● Post-operative patients who may not have completed treatment.● Diagnosis of an existing or likely vocal fold palsy with moderate/severe dysphonia + aspiration risk (including palliative oncology patients)● Where airway patency is a concern● Professional voice users who are expected to function within their role, which may currently involve increased use of video-conferencing/telephone use● Laryngeal dystonia (where medical treatment/therapy has been on hold)

Patient prioritisation for SLT management: Voice	
Level	Patient selection criteria
	<ul style="list-style-type: none"> • Diagnosis of anxiety, depression or other mental health illness which also significantly impacts on their voice disorder • The voice disorder results in significant social avoidance, social isolation or negative social interactions • Paediatric patients with voice needs identified on their educational statutory support plan (or nation equivalent)
Level 2: Medium priority patients	<ul style="list-style-type: none"> • Therapy suspended owing to COVID-19 • Received endoscopic examination and differential diagnosis but are yet to commence therapy • Pre-existing voice issues exacerbated by recent COVID-19 infection • Completed an initial episode of treatment, on waiting list for surgery which is likely to be delayed by several months
Level 3: Low priority patients	<ul style="list-style-type: none"> • Completed an initial course of treatment, have responded well and may need a review consultation to plan for further treatment • Lost to follow-up/cancellations etc who have not yet contacted department

8.2. Referral pathways and criteria

Prior to, or as part of [referral](#) to, speech and language therapy, the individual should undergo thorough assessment by an otolaryngologist (or GP who has completed appropriate ENT training) (Acharya et al. 2018)). This may take place in a uniprofessional ENT clinic or in an MDT voice clinic. Paediatric patients on an existing caseload for other SLT needs who present with a new voice disorder should be referred for an ENT assessment as usual.

RCSLT members are reporting they are not receiving sufficient referral information when asked to see patients for voice therapy. SLTs should make their ENT colleagues aware of the referral information they require in order to proceed with therapy by providing them with an appropriate checklist. Annex 1 outlines the minimum dataset

referral details that are required prior to accepting a patient for treatment. This will safeguard both the SLT and the patient.

Referrals made from unidisciplinary ENT clinics without the information in Annex 1 may not meet the sufficient standard for acceptance where endoscopy was not possible and there has been no differential diagnosis. In these cases, it is suggested that the referral is not accepted and contact is made with the referrer to gain further information.

Prior to referring to SLT for voice input, the following criteria should be established:

- The patient is appropriate for and likely to benefit from voice therapy
- The patient is aware of their provisional diagnosis/condition, including the limitations attached to such a diagnosis if it has been established without endoscopy
- The role of the SLT in assessing and treating the individual's voice has been briefly explained, sufficiently for the individual to understand why they have been referred and to engage with services
- The patient or guardian consents to referral to an SLT

In the absence of EEL for differential diagnosis, all patients should have a minimum of one ENT follow up appointment. In addition, there should be a clearly established route for referring back to the consultant ENT surgeon/MDT clinic without the need to go via the GP. It is suggested that this route is agreed locally before agreeing to accept new referrals who have not had EEL (see example of new referral algorithm from unidisciplinary ENT clinic in Annex 2).

In paediatrics, the referral source varies (eg education staff, health visitor or parent). An ENT assessment prior to treatment is a continued requirement. Prolonged waiting times for ENT are expected and therefore services may consider new ways of working that are in the best interest of the patient. This can include accepting a referral whilst an ENT assessment is pending for initial assessment and advice. Assessment findings subsequently shared with ENT may support their assessment of the patient. Referrals to specialist voice services should continue in line with locally agreed pathways.

8.3. Therapy

Many patients with pre-existing comorbidities (eg respiratory/neurological/musculo-skeletal conditions, undiagnosed benign vocal fold lesions) will require individualised management and likely prioritisation for endoscopic assessment.

Patients presenting with non-resolving intermittent or persistent dysphonia must be treated as an undiagnosed structural or organic pathology until confirmed otherwise;

non-resolution of dysphonia will act as a low threshold trigger for endoscopy prioritisation in line with locally agreed pathways between SLT and ENT. In these cases, shifting therapeutic focus to management of symptoms prior to endoscopy would be sensible. As per usual management of patients prior to microlaryngoscopy for identified benign vocal fold lesions, this should include voice rest and reducing intensity of vocalisations.

In paediatrics, SLTs home/education-based programmes are routinely used for younger patients and for those who do not meet criteria for F2F therapy. In some situations (eg where telehealth is a challenge) SLTs in both adult and paediatric services may need to revise how therapy is delivered and consider using home/education-based programmes.

Prioritisation of patients into the MDT voice clinic or multidisciplinary ENT clinic will need to be agreed locally with ENT during the early stages of reintroduction of clinics. Where possible, this will likely need to be in conjunction with careful joint triage of clinic referrals.

Indications for referral back to ENT may include the following:	
Level	Criteria
Level 1: high priority for MD Voice Clinic review including EEL	<ul style="list-style-type: none"> • Aphonic/severely dysphonic patients where EEL has not been carried out • Existing or likely vocal fold palsy with moderate/severe dysphonia where aspiration risk may be an issue (including palliative oncology patient cohort) • Where airway patency is a concern • Post-operative patients who were not seen for their first review due to COVID-19 • Patients who report deterioration in voice or throat symptoms during treatment inconsistent with an expected course of improvement in light of confirmed or suspected diagnosis • Patients who need EEL to inform decisions regarding surgery
Level 2: moderate priority for MD Voice Clinic review including	<ul style="list-style-type: none"> • Where a provisional diagnosis has been given and SLT is questioning an incorrect diagnosis • Poor response to therapy where EEL has not been carried out

Indications for referral back to ENT may include the following:	
Level	Criteria
EEL	<ul style="list-style-type: none"> Patients who have plateaued in therapy and who are likely to require surgical intervention
Level 3: routine review for MD Voice Clinic including EEL	<ul style="list-style-type: none"> All other patients with a voice disorder were referred to SLT without having EEL To inform selection of SLT therapeutic techniques for further therapeutic intervention Awaiting laryngeal review following SLT +/- medical treatment for allergy/LPR etc

9. SPECIFIC POPULATION CONSIDERATIONS; UPPER AIRWAY DISORDERS

9.1. Caseload

The primary medical issue with COVID-19 infection is viral pneumonia and therefore a large proportion of patients have been managed by respiratory teams. Most respiratory elective activity was suspended in early March 2020 as the pandemic hit the UK. This has led to a substantial backlog of clinical reviews, need for diagnostics and respiratory rehabilitation ([BTS, 2020](#)). Respiratory healthcare professionals will have to continue to respond to ongoing management of new COVID-19 cases, provide respiratory care for COVID-19 survivors (of which the long-term needs are as yet unknown) as well as support the resumption of elective respiratory services.

The BTS has identified specific symptoms of cough and breathlessness, alongside severe asthma, as respiratory conditions requiring urgent care ([BTS, 2020 here](#)). Therefore, the further demand on SLT input in respiratory services is expected to escalate imminently.

9.2. Pulmonary physiology considerations and impacts for speech and language therapy

For most respiratory services, restoration of usual activity is not possible without respiratory function testing facilities being available. Pulmonary physiology tests, such

as spirometry, are essential for assessment of obstructive lung diseases, and thus differential diagnosis of cough and breathlessness. There is a huge backlog of patients waiting for respiratory physiology services (an estimated 20,000 spirometry tests; 15,000 full respiratory function tests performed per month in England (BTS, 2020)). Even where pulmonary physiology diagnostics can be performed safely, the quantity of testing will be markedly reduced by the need to decontaminate working environments between patients. This is likely to place ongoing service pressures on severe asthma and airways services and therefore impact SLTs working within respiratory settings.

Further information on respiratory function testing during COVID-19 can be found [here](#).

9.3. Inducible laryngeal obstruction

9.3.1. Management of caseload

The majority of ILO patients are managed in specialist secondary/tertiary MDT centres, and therefore resumption of service delivery mandates an MDT approach.

SLT remains an essential part of respiratory differential diagnosis, even in the absence of endoscopic evaluation. A recommended care pathway for SLT management of ILO can be found in *Annex 4*.

For caseload management, application of this prioritisation matrix should be applied in conjunction with local guidelines. **Differences in local service models and patient demographics may mean adaptation is required.**

Patient prioritisation for SLT management: ILO	
Level	Patient selection criteria
Level 1: High priority	<ul style="list-style-type: none"> ● Recurrent Emergency Department visits, attributed to a high suspicion of ILO ● At high risk of inappropriate intubation ● Escalating respiratory symptoms ● Escalating or high pharmacological burden with no relief from respiratory symptoms ● An inpatient with a confirmed/suspected ILO component to presentation ● Awaiting ILO assessment to inform MDT decisions on biological therapy ● ILO symptoms significantly impacting on quality of life

Patient prioritisation for SLT management: ILO	
Level	Patient selection criteria
	<ul style="list-style-type: none"> • Known severe ILO with no access to usual treatments, which may lead to acute and emergency admissions with escalating interventions • ILO with severe asthma comorbidity who may be shielding (BTS 2020). • Experiencing exacerbation of mental health issues, which is significantly impacting on quality of life • Post-COVID-19 rehabilitation prolonged due to laryngeal hyper-responsiveness
Level 2: Moderate priority	<ul style="list-style-type: none"> • Therapy suspended owing to COVID-19 • Received endoscopic examination and ILO differential diagnosis but are yet to commence therapy • Medical and respiratory work-up completed and are awaiting endoscopic examination for ILO • Require joint MDT therapy interventions (eg speech and language therapy for ILO and physiotherapy for breathing pattern disorder)
Level 3: Low priority	<ul style="list-style-type: none"> • Referred with mild symptoms • Suspected exercise-induced ILO • Awaiting end therapy endoscopic review; symptoms are controlled • Lost to follow-up, not contacted the department for review, but review remains clinically (non-urgent) indicated • Declined telehealth consultations but consented to SLT intervention

9.3.2. Referrals

Despite reduced access to respiratory instrumental assessments (eg pulmonary physiology, bronchoscopy), MDT diagnostic work up should continue for ILO patients. This will ensure differentiation and appropriate treatment of other comorbid respiratory symptoms is considered pragmatically as an MDT. As respiratory services begin to resume, SLTs will continue to play a key role in upper airway dysfunction assessment to inform the overall respiratory management of patients.

The gold standard diagnostic test for ILO is laryngoscopy whilst an individual is symptomatic (Halvorsen, 2017). Following endoscopic confirmation of ILO, speech and language therapy is the mainstay of treatment. In the absence of routine access to endoscopic procedures it is **essential MDT decision making** (comprising at least a respiratory physician and SLT) establishes the appropriateness of SLT therapy.

Prior to accepting a referral for SLT ILO therapy, the following criteria must be met:

- No red flag respiratory/thoracic/ENT
- MDT consensus for SLT therapy
- Patient has received a respiratory review in the last 12 months
- Relevant investigations/correspondence transferred from the referrer
- In the absence of endoscopic confirmation, the patient is aware the diagnosis of ILO is provisional
- Patient consents to SLT intervention and empirical treatment

For an example of extended considerations of pre-clinic assessment criteria see *Annex 5*.

9.3.3. Therapy

In the absence of routine access to laryngoscopy, therapy will be delivered based on a high suspicion of ILO rather than endoscopic confirmation. Therefore, a low threshold for referral back for respiratory MDT review is essential for those patients who:

- do not respond to SLT therapy as expected;
- have deteriorating respiratory symptoms (eg increased mucus burden, increased use of inhaled corticosteroid and/or reliever inhaler, courses of oral corticosteroids);
- have increasing healthcare utilisation relating to respiratory issues;
- develop new red flag symptoms (eg haemoptysis).

It is recommended that outcome measures are taken sessionally; for example the VCDQ (Fowler 2015) or a visual analog scale, to guide and support referral back. Therapeutic approaches for ILO continue as per current professional [recommendations](#). The extent and combination of therapy strategies may be reliant upon information available. Therapeutic interaction is likely to be affected by the use of telehealth.

9.4. Chronic cough

9.4.1. Management of caseload

The diagnostic anatomic protocol assessment for CC (Irwin et al, 2000) is based on the exclusion of causation of cough. SLT intervention typically occurs towards the end of the diagnostic pathway for CC. In light of COVID-19, and the reduced access to standard respiratory instrumental assessments, SLT referral pathways may change. Further, there is a significant backlog in referrals for SLT CC management.

MDT discussion and decision making with regard to managing risk to delivering SLT CC therapy is essential and should be considered on a strictly individual basis. A recommended care pathway for SLT management of CC can be found in *Annex 4*.

For caseload management, application of this prioritisation matrix should be applied in conjunction with local guidelines. **Differences in local service models and patient demographics may mean adaptation is required.**

Patient prioritisation for SLT management: CC	
Level	Patient selection criteria
Level 1: High priority	<ul style="list-style-type: none">• All relevant investigations complete• Cough syncope assessed to be of non-medical origin (ie not cardiac/neurological)• Significant patient concern that their cough is perceived as a COVID-19 symptom to those around them• CC symptoms significantly impacting on quality of life and affecting psychological wellbeing• Post-COVID-19 rehabilitation prolonged due to laryngeal hyper-responsiveness
Level 2: Moderate priority	<ul style="list-style-type: none">• Therapy suspended due to COVID-19• Received endoscopic examination but are yet to commence therapy• Medical and respiratory work-up complete and are awaiting endoscopic examination• Require joint MDT therapy interventions (eg speech and language therapy for CC and physiotherapy for management of mucus hypersecretion/airway clearance)

Patient prioritisation for SLT management: CC	
Level	Patient selection criteria
	<ul style="list-style-type: none"> • Known severe CC who have not responded to neuromodulator treatment trials
Level 3: Low priority	<ul style="list-style-type: none"> • Referred with mild symptoms of CC (eg chronic throat clearing) • Awaiting end therapy endoscopic review; symptoms are controlled • Lost to follow-up, not contacted the department for review, but review remains clinically (non-urgent) indicated • Declined telehealth consultations but consented to SLT intervention

9.4.2. Referrals

MDT diagnostic work up should continue, despite reduced access to instrumental assessments (eg pulmonary physiology, bronchoscopy).

Prior to accepting a referral for SLT CC therapy, the following criteria must be met:

- No red flag respiratory/thoracic/ENT symptoms
- Presenting symptoms typical of cough hypersensitivity syndrome
- MDT consensus for SLT therapy
- Patient has received a respiratory review in the last 12 months
- Relevant investigations/correspondence
- Optimised mucus clearance where there is a known respiratory diagnosis (ie bronchiectasis)
- Patient consents to SLT intervention without benefit of endoscopic evaluation

9.4.3. Therapy

A low threshold for referral back for respiratory MDT review is essential for those patients who:

- do not respond to SLT therapy as expected;
- present with newly developed respiratory symptoms;

- display new or exacerbated mental health issues associated with the effects of perceived public perception of cough symptoms, which may be a barrier to therapy progression.

It is recommended that outcome measures are taken sessionally, for example the LCQ (Birring, 2003) or a visual analog scale, to guide and support referral back. Therapeutic approaches for CC continue as per current professional [recommendations](#). However, therapeutic interaction is likely to be altered by the use of telehealth.

9.5. Respiratory/upper airway instrumental assessment, including EEL

Prioritisation of patients into MDT clinics that include respiratory instrumental assessment will need to be agreed locally during the early stages of reintroduction of clinics. Signalling a rating of priority may help enable patients to be seen in priority order when services are beginning to resume, with likely much reduced capacity. Adherence to national, local and professional guidelines should occur.

Patient prioritisation for reintroduction of respiratory/upper airway assessments	
Level	Patient selection criteria
Level 1: High priority	<ul style="list-style-type: none"> • Previous intubation(s) • Previous ITU admissions • Frequent inpatient stays with suspected ILO • High secondary and primary care medical utilisation • Pre surgical upper airway assessment
Level 2: Moderate priority	<ul style="list-style-type: none"> • Symptoms have significant impact on QoL • Frequent/severe episodes of ILO/CC • Undergoing assessment for biological therapy for Severe asthma, with high suspicion of diagnosis of ILO • ILO/CC with sequelae (presyncope, vomiting, high respiratory medication burden, previous inpatient stay with suspected ILO, frequent urinary incontinence)

Patient prioritisation for reintroduction of respiratory/upper airway assessments	
Level	Patient selection criteria
Level 3: Low priority	<ul style="list-style-type: none"> Routine ILO/CC (no sequelae)

10. TELEHEALTH

Telehealth provides a solution for SLT services to resume therapy provision remotely. In the absence of palpation and direct visualisation, adjustments to practice are required to ensure that information gathering, perceptual analysis and monitoring of symptoms is effective. This ensures remote treatment appropriately highlights those patients requiring prioritisation for EEL. It is however acknowledged that the voice signal using telehealth has an impact on perceptual voice analysis when compared to F2F consultations. This has implications for both medical/ surgical colleagues and SLTs in generating clinical impressions and to inform management.

Current [RCSLT](#) and [NHS](#) resources on telehealth cover:

- National guidance and policy
- Safeguarding and procedural considerations for remote working
- Software options
- General guides for practice

The decision to provide SLT remote service delivery will be made locally. Procedural, environmental and technological adaptations need to be considered to mitigate associated risks.

10.1. Technological considerations for telehealth provision

Additional audio equipment, beyond microphones and speakers built into laptops and headsets, can significantly improve what the SLT is able to hear and transmit to the patient. *Annex 6* outlines a list of the additional audio equipment available and provides advice on selection, depending on local environmental limitations.

10.2. Adaptations of practice for SLT telehealth delivery

While there are numerous documented advantages of telehealth, limitations include restricting SLTs from performing physical examination and rapport building. Key pre-

consultation (see *Annex 7*) and initial consultation (see *Annex 8*) actions should be considered.

Using objective voice analysis apps to facilitate remote sharing of audio recordings between clinicians and patients will help to mitigate the lack of F2F contacts. Many software options are available; SLTs should ensure the apps selected meet local trust policy for encryption and patient confidentiality. RCSLT have been informed that members are trialling voice apps with their patients; this information will be integrated into future iterations of this document.

Additionally, given that it is not possible to provide laryngeal manual therapy, adaptations to therapy practice may be required. For example, directing patients to self-palpate/apply structured self-massage where appropriate, and delivered by an appropriately skilled clinician. Careful consideration should be made when selecting therapy techniques, to ensure patient safety.

Telehealth requires practice to increase efficiency. To support this learning curve the following should be considered:

Telehealth environmental and procedural considerations

- Ensure adequate lighting and minimise ambient noise/visual distractions
- Allow additional set-up time, compared to F2F sessions
- Prepare any sessional equipment in advance of session (eg sending equipment to patients for therapy)
- Be aware of potential restrictions on addressing psychological and emotional components
- Have a process to manage consent, confidentiality and any safeguarding concerns that may arise
- Assign additional time to support patients with cognitive, visual, hearing and manual dexterity impairments
- To mitigate the lack of direct visualisation assessment via EEL, consider requirement for amended/extended assessment protocols

11. EXIT STRATEGIES AND FUTURE DIRECTIONS

At the time of publication, the number of confirmed UK COVID-19 cases is reducing. Therefore, many services have begun recovery planning and limited resumption of pre-COVID-19 caseloads. However, there remains significant healthcare risk and burden as a result of the pandemic and the potential for further future peaks of cases ([Moran et al 2020](#)). To protect staff and patients, voice and upper airway disorders services will not currently be able to return to pre-pandemic ways of working. National and local trust policy should be adhered to regarding infection control, PPE and F2F consultations as services begin to resume.

Although challenging, these changes offer an opportunity for SLTs to develop new and improved ways of working.

11.1. Telehealth

Once established, telehealth clinics offer a valuable ongoing alternative for F2F therapy. This is particularly true for tertiary services, to minimise travel burden on patients (Ambroggi et al 2015), and it has cost-benefits to organisations (Burns et al, 2017). Post-pandemic services will continue to benefit from this resource.

11.2. SLT-led clinics and MDT working

As a result of the pandemic backlog of patients, SLTs may be asked to assist with triage alongside their ENT/respiratory colleagues. This presents an opportunity for extended scope of practice where SLTs can demonstrate their specialist skills as per the [RCSLT position paper on EEL](#).

Many existing MDT clinics rely on close joint working between SLT and ENT/respiratory colleagues. In the post-pandemic context, this foundation will provide further opportunity to maximise the best use of MDT time and resources during telehealth and F2F consultations. 'One-stop shop' models of care will reduce risk to patients required to attend for F2F consultation and will maximise assessment and treatment utilisation. Embedding these practices will be a long-term benefit for clinicians and patients.

11.3. Communication and supervision

Navigating the assessment and treatment of patients with voice and upper airway disorders during the COVID-19 era has required services to strengthen pathways of care and communication between acute and community services. In many cases supervision structures and lines of support have been strengthened. The advantage of such changes will hopefully facilitate services to maintain improved communication and supervision post-pandemic.

11.4. Research, audit, service evaluation and data collection

COVID-19 is a novel virus, and its full impact on laryngeal structures and function will not be known for some time. Research into how and why it affects voice and upper airway disorders is a key aspect to learning more about COVID-19. This presents opportunities for SLTs working in these areas to be at the forefront of novel scientific discoveries.

Systematic data collection on COVID-19 will enable thorough review. The national [RCSLT COVID-19 Data Collection Project](#) facilitates this; SLTs working with COVID-19 patients are encouraged to input into this resource.

Further, services are encouraged to evaluate and review changes that have been established as a result of the pandemic. This may include:

- formal service evaluation;
- quality improvement initiatives;
- experience based co-design projects.

This will support voice and upper airway services developments to occur effectively and in a sustainable way.

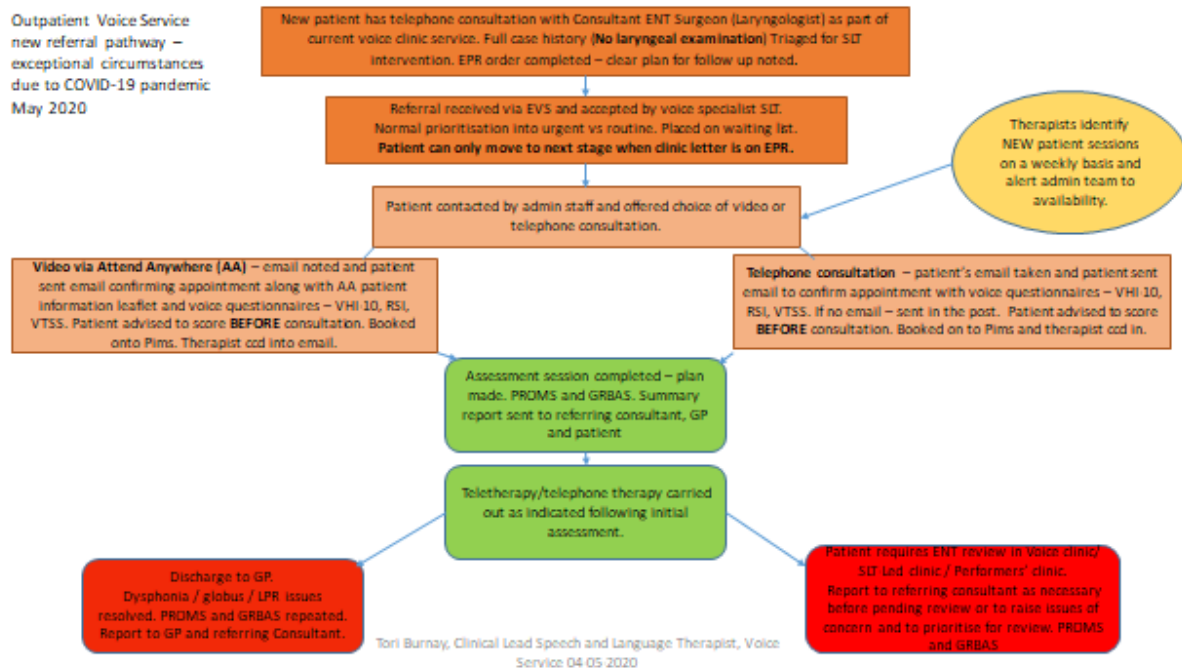
ANNEX 1: SUGGESTED REFERRAL CRITERIA CHECKLIST FOR VOICE REFERRALS

During the telehealth consultation, the consultant ENT surgeon, and in some clinics the SLT, will take a complete case history and document all findings in a clinic letter. In order to support risk mitigation it is suggested that a referral criteria checklist *MUST* be completed prior to a patient referral being accepted. This should include details of:

- History of present complaint with timeline
- Medical history including any previous laryngeal/airway surgery or previous therapeutic interventions
- Any further investigations ordered (such as chest/neck CT scan in patients with suspected unexplained vocal cord palsy, hearing test)
- Any onward referral made to other departments, eg neurology, gastroenterology, respiratory
- Any treatment where medicines have been prescribed (such as medication for laryngopharyngeal reflux or allergies) including dosage and length of treatment; identification of who will be reviewing the treatment outcome and the timeframe for this
- Auditory-perceptual assessment (if SLT present)
- The appropriacy of voice therapy and early referral to SLT
- An agreement from the patient that they wish to receive therapy
- A clear plan for follow-up, with timescale

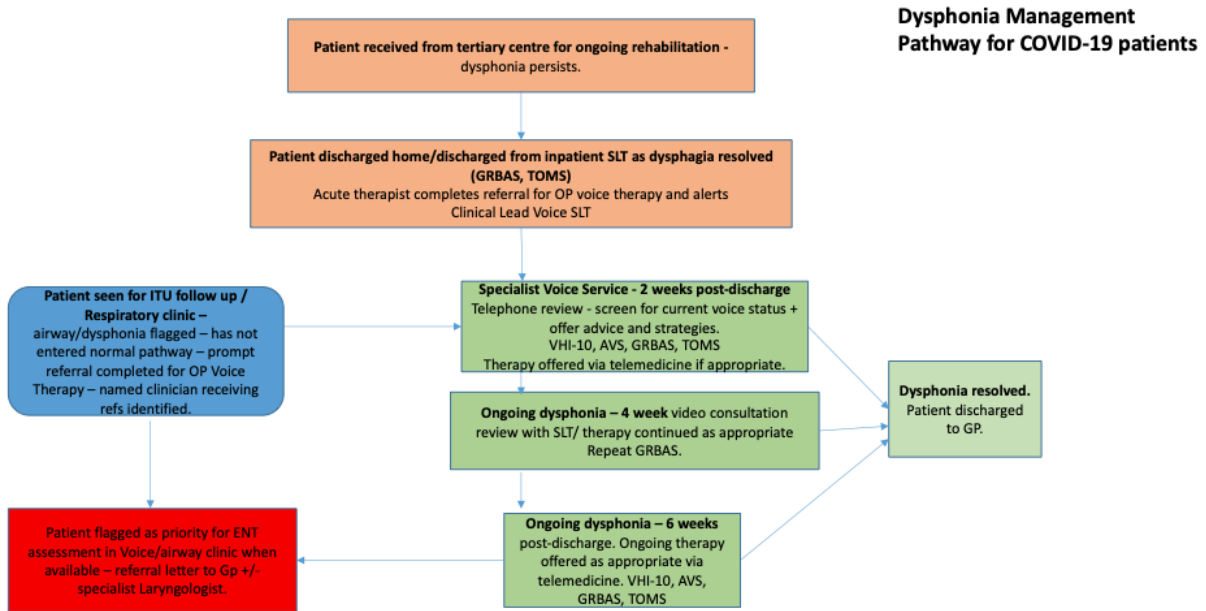
ANNEX 2: EXAMPLE OF AN ALGORITHM FOR NEW REFERRALS AND MANAGEMENT OF PATIENTS

An example of an algorithm for new referrals and management of patients in exceptional circumstances in the absence of endoscopic assessment of the larynx, Guy's and St. Thomas' NHS Foundation Trust, May 2020.



ANNEX 3: SUGGESTED ALGORITHM FOR COVID-19 PATIENTS WITH DYSPHONIA

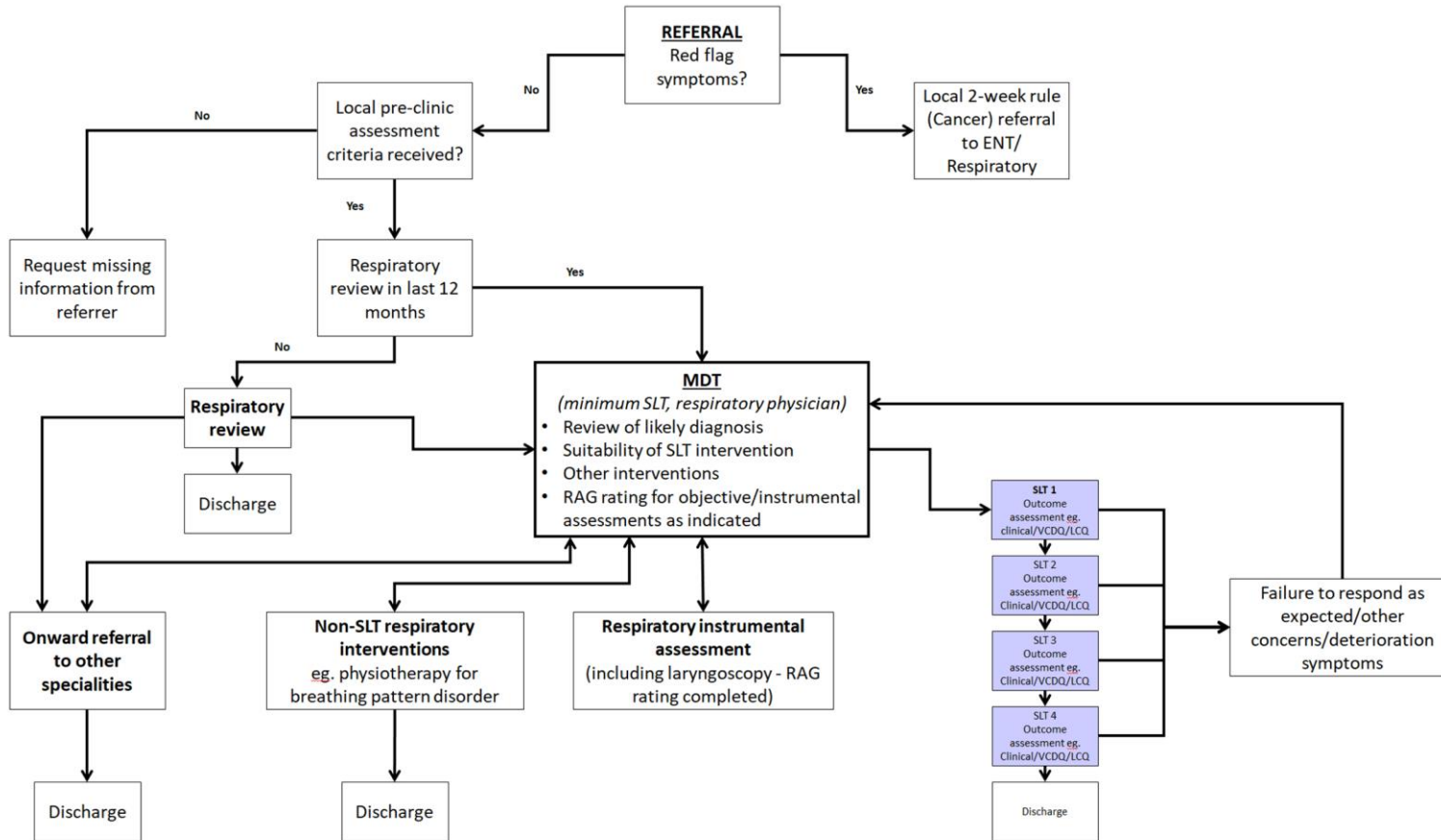
An example of an algorithm for new COVID-19 patients with dysphonia from acute setting into community and back to ENT. Guy's and St. Thomas' NHS Foundation Trust, May 2020.



07/05/2020

Tori Burnay, Clinical Lead Speech and Language Therapist - Voice

ANNEX 4: SUGGESTED CARE PATHWAY FOR SLT MANAGEMENT OF UPPER AIRWAY DISORDERS IN LIGHT OF COVID-19



**ANNEX 5: AN EXAMPLE OF PRECLINICAL MDT ASSESSMENT CRITERIA,
MANCHESTER AIRWAYS SERVICE**

Criteria	Minimum data provided (YES/NO?)	Extra information required
Evidence of ILO/BPD		
Evidence of co-morbidities (e.g. reflux, nasal disease, asthma, voice disorder, cough, other)		
Current drug medications		
Investigations		
Physiology (e.g. flow volume loops, full lung function if available/indicated)		
FENO (if available/indicated)		
Eosinophils (if available/indicated)		
Bloods (FBC, IGE, RAST if available)		
Imaging (CT scans, chest x-rays)		
Endoscopy (bronchoscopy, laryngoscopy)		
Questionnaire data if available (e.g. Nijmegen score, VCDQ, AQLQ, ACQ, D-12, HADS, PHQ9, GAD7)		
Copies of relevant correspondence (e.g. ENT, respiratory, gastro, allergy)		
Other comments:		

ANNEX 6: Audio equipment considerations for telehealth

Telehealth services aim to replicate F2F interactions as much as possible, primarily requiring basic audio and visual input and output to provide a remote connection between the clinician and the patient.

For SLTs working within voice and upper airway disorders populations, adaptations beyond a basic configuration may be preferable to provide higher quality auditory monitoring to assist with perceptual analysis and monitoring dysphonia presentations. Investing in this equipment also provides the means for capturing highly accurate voice recordings for objective analysis purposes when on site F2F sessions do resume.

With many audio equipment options available, certain configurations will be more appropriate than others depending on the local requirements of the SLT. Managing environmental limitations whilst aiming to maximise audio quality is a challenge, especially given that the majority of SLTs will not be providing therapy interventions in soundproofed rooms designed for audio recording.

It must be stressed that many services may be working with different budgets and local requirements, and that a wide variety of audio setup options will likely facilitate the successful delivery of telehealth. SLT services that acquire additional audio equipment should note that there may be functional advantages and disadvantages depending on the specific equipment selected.

The following table outlines the available options for additional audio input and output equipment. Additionally, some SLT specific implications relative to each option to assist selection are also included below to explain the terminology included.

Audio Input (Microphone)	Input options	Requirement of external audio interface	Requirement of DAW software interface	Noise Cancellation Technology
Laptop (in-built microphone)	N/A (in-built)	No	No	Software dependent
Headset (built in microphone and headphones)	USB	No	No	Optional (depending on headset)
External Dynamic Microphone	USB / XLR	Yes (if using XLR input)	Yes (if using XLR input)	No
External Condenser Microphone	USB / XLR	Yes (if using XLR input)	Yes (if using XLR input)	No

Audio Output (Speakers / Headphones)	Input options	Noise Cancellation Technology	Single / Dual ear piece
Laptop (in-built speakers)	N/A (in-built)	—	—
Headset (built in microphone and headphones)	USB	Optional (depending on headset)	Single / Dual ear available
External Headphones	Auxiliary input / USB via adapter	Optional ('Closed back' headphones)	Single / Dual ear available
External Speakers	Auxiliary input / USB via adapter	—	—

Considerations when selecting additional audio equipment for telehealth delivery

Audio input - Microphone

The use of soundproofed rooms for therapy delivery is uncommon. Sensitive microphones may consequently pick up sounds from outside the room of use, highlighting a potential risk of compromising patient confidentiality. Optimal selection of an appropriate audio input device aims to mitigate this issue. Dynamic microphones, generally more robust than condenser microphones and often less sensitive to noise in the wider environment, may therefore be preferable, especially when used in therapy environments that have not been treated with soundproofing or isolation panelling.

Microphones using the industry standard 3-pin XLR cable input will generally require an external audio interface unit as well as 'Digital Audio Workstation' (DAW) software for use. The requirement of this additional hardware and software increases the cost and complexity of the system. 'Plug and play' USB input microphones may therefore be preferable to many SLTs given they are generally compatible with laptops and desktop computers, often requiring no additional audio hardware or software for use.

SLTs working with voice and upper airway disorders patient populations commonly use exercises such as semi-occluded vocal tract (SOVT) exercises and pitch and vocal flexibility work involving prolonged phonation. Modern noise cancellation technology present in many hands-free headsets with earpieces and built-in microphones, such as those commonly used in call centres, will remove apparent mechanical or background noise from the audio signal. The prolonged phonation present in these exercises is frequently mistaken for background noise by noise cancellation technology and subsequently the phonatory sound is removed from the audio signal after around 2-3 seconds of duration, after which the SLT will hear nothing. This issue will likely render the equipment unfit for purpose for many SLTs working within these specific patient populations and so should be avoided. If using headsets such as these for teletherapy service provision, as opposed to independent external microphones, SLTs would be advised to seek support from their IT departments to ensure that headsets purchased do not feature built-in noise cancellation technology which will lead to the aforementioned issues.

Audio output - headphones

Many headphones designed primarily for music listening feature frequency boost technologies which alter the auditory signal in some way, such as 'bass boost' etc. For the SLT assessing subtle changes in voice quality during perceptual analysis, an unaltered signal may be preferable. If so, reference quality 'monitoring' headphones provide this.

'Closed back' headphones are designed to sit over the ear and primarily aim to reduce auditory interference from the environment. Although ideal for audio monitoring purposes, they will significantly reduce the wearers ability to monitor their own voice production, which may impact on the accurate modelling of exercises when delivering therapy interventions. To mitigate this issue, single ear closed back headphones are an option that provides the benefits of monitoring

studio quality headphones in one ear, whilst leaving the other ear free for the SLT to self-monitor.

ANNEX 7: Telehealth pre-consultation recommended actions

- Ensure referral from ENT is detailed with full medical history and current treatment plan with provisional diagnosis (see ANNEX 1).
- Consider barriers which may impact the patient ability to benefit from telehealth, including impairments of hearing, visual or cognitive function, as well as any developmental/cultural/linguistic variables and the availability of interpreter services where appropriate.
- Send patient information about the telehealth session to help them prepare in advance, with guidance on how to contact you if difficulties arise with accessing. This should also advise the patient on selecting an optimal environment, for example a quiet and well-lit room.
- Send patient reported outcome measures prior to consultation, requesting completion prior to session to ensure efficient use of time. Outcome measures may include, but are not limited to: Voice Handicap Index 10 (VHI-10), Reflux Symptom Index (RSI), Vocal Tract Discomfort Scale (VTDS), Singers Voice Handicap Index 10 (SVHI-10).
- Confirm patient ability to access the system prior to the initial session. This may be appropriate to do via telephone contact prior to the initial consultation to reassure patients using this technology for the first time by answering any queries they may have.

ANNEX 8: Telehealth initial consultation recommended actions

- Confirm patient identity
- Confirm informed consent regarding the risk and benefits of teletherapy
- Advise the patient on use of telehealth software, messaging/chat options and screen sharing use
- Review of case history
- Perceptual voice evaluation - GRBAS / CAPE-V
- High quality voice recordings via appropriate software app
- Completion of comprehensive functional voice assessment
- Usual therapy probes as appropriate
- Provide patient with clear advice of therapy plan verbally, then in written format following session
- Report back to referring consultant advising of initial findings and plan for SLT intervention

REFERENCES

Acharya V, Haywood M, Kokkinos N, Raithatha A, Francis S, Sharma R. (2018) Does focused and dedicated teaching improve the confidence of GP trainees to diagnose and manage common acute ENT pathologies in primary care? *Adv Med Educ Pract.* 9:335-343. doi: 10.2147/AMEP.S155424.

Ambroggi, M. Biasini, C., Del Giovane, C., Fornari, F. & Cavanna, L. (2015) Distance as a Barrier to Cancer Diagnosis and Treatment: Review of the Literature. *The Oncologist.* 20(12):1378-85. doi: 10.1634/theoncologist.2015-0110.

Birring, S.S., Prudon, B., Carr, A.J., Singh, S.J., Morgan, M.D.L. and Pavord, I.D., 2003. Development of a symptom specific health status measure for patients with chronic cough: Leicester Cough Questionnaire (LCQ). *Thorax*, 58(4), pp.339-343.

Bolton, L., Mills, C., Wallace, S. and Brady, M.C. Aerosol generating procedures, dysphagia assessment and COVID-19: A rapid review. RCSLT COVID-19 Advisory Group. *IJLCD*, 55(4), 629-636. <https://doi.org/10.1111/1460-6984.12544>

Brewster C, Choong J, Thomas C, Wilson D, Moiemmen N (2020) Steam inhalation and paediatric burns during the COVID-19 pandemic. *The Lancet online*

British Association for Paediatric Otolaryngology, A Graduated Return to Elective Paediatric ENT within the COVID-19 Pandemic.

<https://www.entuk.org/sites/default/files/A%20Graduated%20Return%20to%20Elective%20Paediatric%20ENT%20within%20the%20COVID-19%20Pandemic.pdf>

British Thoracic Society. May 2020. Guidance for the Resumption and Continuation of Urgent and Elective Outpatient Respiratory Services.

file:///C:/Users/gc518/Downloads/Resumption%20services%20Part%201.pdf

Brodsky, M.B., Pandian, V. & Needham, D.M. Post-extubation dysphagia: a problem needing multidisciplinary efforts. *Intensive Care Med* 46, 93–96 (2020). <https://doi.org/10.1007/s00134-019-05865-x>

Burns, C., Ward, E.C, Gray, A., Baker, L., Cowie, B., Winter, N., Rusch, R., Saxon, R., Barnes, S. & Turvey, J. (2019) Implementation of Speech Pathology Telepractice Services for Clinical Swallowing Assessment: An Evaluation of Service Outcomes, Costs and Consumer Satisfaction. *Journal of Telemedicine and Telehealth.* 25(9):545-551. doi: 10.1177/1357633X19873248.

Department for Education. May 2020. Education, health and care needs assessments and plans: guidance on temporary legislative changes relating to coronavirus (COVID-19).

<https://www.gov.uk/government/publications/changes-to-the-law-on-education-health-and-care-needs-assessments-and-plans-due-to-coronavirus/education-health-and-care-needs->

[assessments-and-plans-guidance-on-temporary-legislative-changes-relating-to-coronavirus-covid-19](#)

ENT-UK BAPO Statement. May 2020. A Graduated Return to Elective Paediatric ENT within COVID-19 Pandemic. <https://www.entuk.org/graduated-return-elective-paediatric-ent-within-covid-19-pandemic>

ENT-UK BAPO Statement. May 2020. SARS COV2 and Paediatric Otolaryngology Provision. <https://www.entuk.org/bapo-statement-sars-cov2-and-paediatric-otolaryngology-provision>

ENT-UK Statement. May 2020. Exiting the pandemic: guidance for resuming ENT services. <https://www.entuk.org/sites/default/files/A%20Graduated%20Return%20to%20Elective%20ENT%20Within%20the%20COVID-19%20Pandemic.pdf>

Fowler, S.J., Thurston, A., Chesworth, B., Cheng, V., Constantinou, P., Vyas, A., Lillie, S. and Haines, J., 2015. The VCDQ—a Questionnaire for symptom monitoring in vocal cord dysfunction. *Clinical & Experimental Allergy*, 45(9), pp.1406-1411.

Frauenfelder C, Butler C, Hartley B, Cochrane L, Jephson C, Nash R, Hewitt R, Albert D, Wyatt M, Hall A (2020) Practical insights for paediatric otolaryngology surgical cases performing microlaryngobronchoscopy during the COVID-19 pandemic. *International Journal of Paediatric Otorhinolaryngology*. Jul;134: 110030

Public Health England. (2020) “COVID-19: guidance on shielding and protecting people defined on medical grounds as extremely vulnerable.” Available at <https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19>

Halvorsen, T., Walsted, E.S., Bucca, C., Bush, A., Cantarella, G., Friedrich, G., Herth, F.J., Hull, J.H., Jung, H., Maat, R. and Nordang, L., 2017. Inducible laryngeal obstruction: an official joint European Respiratory Society and European Laryngological Society statement. *European Respiratory Journal*, 50(3), p.1602221.

Hull, J.H., Backer, V., Gibson, P.G. and Fowler, S.J., 2016. Laryngeal dysfunction: assessment and management for the clinician. *American journal of respiratory and critical care medicine*, 194(9), pp.1062-1072.

Irwin, R.S. and Madison, J.M., 2000. Anatomical diagnostic protocol in evaluating chronic cough with specific reference to gastroesophageal reflux disease. *The American journal of medicine*, 108(4), pp.126-130.

Jiao W, Wang L, Liu J, Fang S, Jiao F, Pettoello- Mantovani and Somekh E (2020) Behavioural and Emotional Disorders in Children during the COVID-19 Epidemic. *European Paediatric Association*

Jones SM, Awad R, Esposito K, Shaw J, Slade S, Stewart C, Young K. Speech and Language Therapy Endoscopic Evaluation of the Larynx for Clinical Voice Disorders. London: Royal College of Speech and Language Therapists, position paper, 2020

Lazzerini M, Barbi E, Apicella A, Marchetti F, Cardinale F, Trobia G (2020) Delayed access of provision of care in Italy resulting from fear of COVID-19. *The Lancet.com. child-adolescent.* VOL 4.

Lyn R. Tindall, Ruth A. Huebner, Joseph C. Stemple, and Harold L. Kleinert (2009) Videophone-delivered voice therapy: A comparative analysis of outcomes to traditional delivery for adults with Parkinson's disease. *Telemedicine and E-Health*, vol 14, no.10.

<https://doi.org/10.1089/tmj.2008.0040>

Mashima PA, Brown JE. Remote management of voice and swallowing disorders. *Otolaryngol Clin North Am.* 2011 Dec;44(6):1305–1316. viii. [[PubMed](#)]

McGrath, B., Wallace, S. & Goswamy, J. (2020) Laryngeal oedema associated with COVID-19 complicating airway management. *Anaesthesia*, 75(7):972 <https://doi.org/10.1111/anae.15092>

Moran, R.J., Fagerholm, E.D., Cullen, M., Daunizeau, A., Richardson, M.P., Williams, S., Turkheimer, F., Leech, R. & Friston, K.J. (2020) Estimating required 'lockdown' cycles before immunity to SARS-CoV-2: Model-based analyses of susceptible population sizes, 'S0', in seven European countries including the UK and Ireland

Ongkasuwan J, Ocampo E, Tran B (2017) Laryngeal Ultrasound and Vocal Fold Movement in the Pediatric Cardiovascular Intensive Care Unit. *The Laryngoscope.* 127:167-172

Paediatric Multisystem Inflammatory Syndrome temporally associated with SARS-CoV-2 (PIMS-TS): What an ENT surgeon needs to know (19/05/2020) M de Kruijf & IA Bruce, E Willis
https://www.entuk.org/sites/default/files/PIMS-TS_What%20an%20ENT%20needs%20to%20know.pdf

Paleri, V., Hardman, J., Tikka, T., Bradley, P., Pracy, P. and Kerawala, C. (2020) Rapid implementation of an evidence-based remote triaging system for assessment of suspected head and neck cancer referrals and patients on follow up after treatment during the COVID-19 pandemic: A model for international collaboration *Head and Neck* (in press)

Pandharipande PP, Girard TD, Jackson JC, Morandi A, Thompson JL, Pun BT, Brummel NE, Hughes CG, Vasilevskis EE, Shintani AK, Moons KG, Geervarghese SK, Canonico A, Hopkins RO, Bernard GR, Dittus RS, Ely EW. (2013) Long-Term Cognitive Impairment after Critical Illness. *New England Journal of Medicine.* 369:1306- 1316. DOI: 10.1056/NEJMoa1301372.

Riphagen S, Gomez X, Gonazalez-Marinez, Wilkinson N, Theocharis P (2020) Hyperinflammatory shock in children during COVID-19 pandemic. *The Lancet.* Vol 395, issue 10237.

Royal College of Paediatrics and Child Health. COVID-19 Guidance on Community Settings, <https://www.rcpch.ac.uk/resources/covid-19-guidance-community-settings>

Royal College of Paediatrics and Child Health. COVID-19 Research Evidence Summaries, <https://www.rcpch.ac.uk/resources/covid-19-research-evidence-summaries>

Sayyid Z, Vendra V, Meister K, Krawczeski C, Speiser N, Sidell D (2019) Application-Based Application of Translaryngeal Ultrasound for the Assessment of Vocal Fold Mobility in Children. American Academy of Otolaryngology-Head and Neck Surgery. Vol 161 (6) 1031-1035

The British Psychological Society Guidance. April 2020. Meeting the psychological needs of people recovering from severe Covid-19.

Towey, M.P. (2012b) Speech therapy telepractice for vocal cord dysfunction(VCD): MainCare (Medicaid cost savings). *Int J Telerehabil.* 2012 Spring; 4(1): 33–36.

Vertigan, A.E., Theodoros, D.G., Gibson, P.G. and Winkworth, A.L., 2007. Voice and upper airway symptoms in people with chronic cough and paradoxical vocal fold movement. *Journal of Voice*, 21(3), pp.361-383.

Wallace, S., Behenna, K., Bolton, L., Clunie, G., Haines, J., McGowan, S., Pownall, S. & White, A. 2020 COVID-19 Speech and Language Rehabilitation Pathway. RCSLT online guidance. <https://www.rcslt.org/-/media/rcslt-covid-19-slt-rehab-pathway.pdf?la=en&hash=B59AD546C6E368A34D7AA63165DC568C65428B2C>

Wang G, Zhang Y, Zhao J, Zhang J, Jiang F (2020) Mitigate the effects of home confinement on children during the COVID-19 outbreak. *The Lancet online*

Williams R, Murray E, Neal A & Kemp V. (2020) Top Ten Messages for supporting healthcare staff during the COVID-19 pandemic. https://www.rcpsych.ac.uk/docs/default-source/about-us/covid-19/top-ten-messages-williams-et-al.pdf?sfvrsn=990e3861_0