RCSLT webinar:
Covid-19: Critical Care for SLTs
Friday 24th April

Q&A

Chair: Kamini Gadhok MBE, CEO RCSLT

Speakers:
Sarah Wallace, Consultant SLT, Manchester University NHS Foundation Trust
Sue McGowan, Clinical Specialist SLT, National Hospital for Neurology and Neurosurgery
Christina Iezzi, Clinical Lead SLT, Guys and St Thomas' NHS Foundation Trust

1. **What are your thoughts on training needed to use ultrasound assessment, Sarah?**

Sarah	This is being discussed by the working group. There is a need to balance pragmatism with the recognition that we don't currently have any competencies in this area. It is recommended that you work alongside physios who have lung ultrasound skills or ICU medical colleagues and ENT as interpretation if ultrasound images is not currently defined and is an emerging area. The working group are looking at developing guidance.

2. **Has anyone come across single use nasendoscopes?**

Sarah	Yes, ambuscopes - used commonly in ICU. They have a very good image quality
Sue	Yes, there are disposable nasendoscopes often used in ITU. ENT are using them now for scoping difficult airways in trache weans.

3. **What are people's thoughts on ACV on COVID positive pts?**

Sarah	Extremely high risk due to laryngeal complications with COVID disease, intubation trauma, laryngeal oedema and aerosol generation. To be avoided.
Christina	In the absence of nasendoscope and in most cases cuff deflation on the ventilator, airway patency will be difficult to confirm plus given significant airway

	patency issues known, ACV is contraindicated. Of course, it may be appropriate on case by case basis for palliative communication if ENT can confirm airway patency prior to trialling.
Sue	The high risk with ACV is that it will generate aerosols, so not currently advocated. An exception to this may be a pt who needs to communicate verbally for EoL/palliative reasons..

4. **Hi, I'm a SLP practising in a multi-speciality hospital in Mumbai, India. I'm a Type 1 Diabetic and hence have certain reservations about going to work. Since my hospital has covid patients being treated, I've chosen to stay at home. My team is functioning at 50% capacity and is only treating non covid patients. Considering the situation and my health condition, is it essential for me to step out to treat non covid patients?**

Sarah	Seek medical advice as to whether you should be shielding, management and employee health and wellbeing guidance. Diabetes is a risk factor in COVID as far as I am aware.
Christina	I would seek medical advice around this as diabetes is a known risk factor in COVID. There may be other ways you can support your team remotely such as literature reviews, new guidelines, service provision planning, developing rehab pathways etc.
Sue	I think you would need medical advice for this - this is what I would do in the UK. However, we have some SLTs in a similar position who are assessing and treating some patients over the phone. Admittedly this is mainly for Out-patients, but they also have been treating in-patient aphasics over zoom.

5. **Christina, is it possible that the extreme delirium is related to the high amounts of sedation the patients have needed?**

Sarah	The cocktail of sedation medications, use of benzodiazapines and high levels of sedation required for proning are particularly problematic.
Christina	Yes of course as per our normal ICU population plus ongoing shortages of propofol in the UK mean other combinations of drugs are used and for longer periods too and increased volumes to facilitate proning etc. Also, there are no family at bedspace to help with orientation and everyone is dressed in PPE which would also contribute, cuff down/verbal communication is delayed etc. But in addition to this, my understanding is that the virus itself also contributes to delirium (we are seeing delirium in non-ICU pts too) and therefore underlying

	causes of increased delirium is multifactorial.

6. **I have read about the use of dexamethasone prophylactically prior to extubation - are your ICUs using this? Has this reduced laryngeal oedema?**

Sarah	No, the risks of dex are high in terms of steroids increasing weakness and AKI. Dex can be very helpful in reducing laryngeal oedema if it is localised but if part of another issue then less useful. Agree with Sue re PPI if Laryngopharyngeal reflux might be a concern ie in obese patients
Christina	Our ICU team have been in discussions about this for all patients. We do use it very often and have been using it more frequently in this group. It is still early days but so far we are successfully extubation and decannulating our patients without ENT/ FEES input. Agree that management of Laryngopharyngeal reflux (PPI + Gaviscon advance) also need to be considered. We tend to do a triple approach with all 3. Again, Sarah's point about impact of steriods on weakness/ kidney function also needs to be weighed up. Case by case risk vs benefits discussions as always.
Sue	We do not use Dex prophylactically - and I am not aware of the evidence for its use prophylactically. It is certainly considered once airway oedema has been identified, but on a case-by-case basis. Yes, in some cases laryngeal oedema has reduced, whether this is due to dex and/or time and/or other variables I'm not sure. Some patients may also be recommended to commence PPIs if there are signs of reflux as a causative factor for oedema.

7. **I think I missed something. 6% of patients.. 6% of what? All patients with Covid-19 in hospital?**

Sarah	Require prolonged intubation

8. **As a speech language therapist we cannot afford to wear masks during the session. How do we protect ourselves then?**

Sarah	Don't proceed without PPE, follow government and SLT advice to protect staff.
Christina	I would not see any COVID positive patients without the adequate PPE
Sue	The wearing of masks is Public Health England advice. In my service if a mask is not available, then the SLT cannot do a face-to-face interaction with the pt.

9. **Are departments using medical management for laryngeal odema e.g Dexamethosone without the ability to complete nasendoscopy?**

Sarah	Yes see above
Christina	Yes

10. **In light of high silent aspiration risks, can FEES take place as high risk and AGP? And if we don't have access to FEES what are the options ?**

Sarah	New RCSLT guidance is about to be published. There are considerable risks and precautions of performing nasendoscopy for reasons of AGP, infection prevention and decontamination of equipment and for risks in COVID patients such as coagulopathy. Please await RCSLT/ENT/BLA guidance. Risk assessment is key. Any nasendoscopy assessment will be abbreviated and urgent essential only but I urge you to await the clear guidance document to protect staff and patients

11. **Is there any advice around using intraventilator speaking valves?**

Christina	Case by case risk, benefit discussions. We are curently not using them due to multiple new unfamiliar ventilators being used and surge nurses who are not familiar with process managing these patients and MDT upskilled with limited experience in this so felt too high risk. Plus AGP risk. Also, these patients have significant laryngeal oedema at this stage and without FEES, I would be nervous about inserting valve inline in this patient cohort without access to scoping to confirm airway patency. It will depend on your ICU, skill mix of the team, whether these patients are cohorted away from other pt's etc.
Sue	Currently, we are advocating v cautious consideration of using in-line valves due to the high risk of aerosols from the break in circuit of cuff deflation and the actual placement of the Passy Muir Valve. It's difficult to say a blanket "NO", but these high risks should be transparently discussed with the treating multi-disciplinary team and weighed against the benefits to the patient and team of fitting a valve in-line. IF this is done, a mask placed over the trache and patient's mouth is advocated.

12. **What kind of dysphagia therapy would you advise Sarah?**

Sarah	Dependent upon the presentation - maskao, effortful swallow, chin tuck against resistance, oromotor exercises, modified shaker.

13. In your experience are sedatives being used as cough suppressant?

Sarah	Not sure
Christina	I'm not aware of this

14. Which swallow exercises are suitable with patient with trach cuff up?

Sarah	Any, cuff status is not a factor unless the patient reports discomfort when carrying them out

15. Please can we ask what treatments there are for airway/laryngeal swelling specifically in Covid?

Sarah	We don't know what works, dexamemthasone has been trialled but this would be used judiciously and be a medical/ENT decision
Sue	As a specific cohort, none. See question 8. Please liaise carefully with ENT and Head & Neck surgeons.

16. If the patient is not palliative, would it be best to wait until they are on Cpap or even trachy mask - so not BiPAP, before considering cuff down and OWV trials?

Sarah	Yes, to reduce AGP risks
Christina	Yes
Sue	Yes, to minimise risk of AGPs best to wait until on trache mask with low flow, and if the delay is not too prolonged.

17. There has been talk of possible over inflation of cuffs of both ETT and trache to minimize aerosolization on vent. Are you seeing this practice, and therefore the risk of subglottic/tracheal injury?

Sarah	No, cuff pressures are being monitored using manometers and kept withing safe levels as per usual practice
Christina	No, not aware as cuff pressures are measured with continuous manometry
Sue	No, not aware. Our anaesthetists/ENT are saying they may chose to use larger tubes to minimise cuff leak risk but this is also likely to pose additional problems down the line as you come to wean people from traches.

18. Is anyone aware of any knowledge about long term neurological function post-Covid?

Sarah	Yes, it is emerging. Stroke is a concern with multiple infarcts, especially mid-brain and bulbar. Trigeminal and Cranial nerve issues are presenting too.
Christina	Yes, strokes (especially midbrain), bulbar weakness in absence of CVA, unilateral CN impairments. Our Neurology team have also reported these patients are presenting with a ' Unilateral Miller Fisher Syndrome'. We have seen some unilateral XII and VII in absence of brainstem pathology. And of course the standard post ICU weakness, cognitive impairments, delirium. Very difficult to tease out what is true neuro, what is impact of proning, impact of NM blockers etc
Sue	We have started to collect this data. I am not aware of anything published yet. However, we are seeing the post ITU neuro effects e.g. cognitive issues, delirium, global weakness, upper limb weakness, bulbar issues (v poor swallowing). How much is COVID, how much is effects of nm blockers, how much is prolonged intubation, how much is proning - all these are as yet unknown.

19. Can we do FEES in COVID -ve?

Sarah	Not yet, await guidance which is being written in collaboration with ENT UK/BLA. There are significant risks
Sue	See answer to question 12 - the situation is for all patients, regardless of COVID status.

20. Thanks so much for such a great presentation- you mentioned starting dysphagia rehab with pts who are intubated - could you explain a bit more how you would assess for this and what therapy you would commonly use?

Christina	To clarify, not when intubated as they will very likely be sedated plus I wold be concerned re: impact of endotracheal tube but you certainly can commence once patient has trache, even if cuff is still up.
Sue	Dysphagia rehab is always based on problems you identify on assessment. I guess your question may allude to the problem that if your instrumental and recordable assessment is absent (i.e. no FEES or VFS) then how can you identify exercises? I think you'd be able to suggest lingual/labial/facial exs from a good "look" at the patient. As to other in pharyngeal/laryngeal area, identifying exercises may have to depend on what you've seen in similar trache patient's cohorts, or you may hypothesise based on your knowledge of patient's pathway. I think as a teaching panel, we were trying to make the point not to rule out providing therapy just because someone's tracheostomised. See also above questions for dysphagia rehab.

21. How are people managing to balance the needs of COVID patients with the needs of our usual caseloads?

Sarah	It is a concern as caseloads have reduced due to fewer admissions of other patients. RCSLT is doing a large piece of work on this and departments need to look at how to resume safe practice - community levels of COVID are high, so risk assess all patient contacts and adapt ways of working to telehealth etc where possible
Sue	This is a daily discussion with my team to ensure that other in-patients continue to receive the SLT that they need to help with patients rehab needs and flow through the hospital.

22. Christina - are you seeing a relationship between the H and L phenotypes and fast/slow type of respiratory wean?

Christina	We haven't looked into this specifically yet but we are certainly seeing a standard 'straight forward' weaning group who move very quickly towards decannulation once liberated from the ventilator and now we are starting to meet the more complex/slower weaning stream. Not sure if there is a correlation at this stage. Positives to weaning with this cohort include: 10 years younger than our usual ICU cohort (45-55 years) plus most have normal pre-mobid function/baseline so this might be why they are straightforward weans. I predict the following challenges with the more complex group to include: ICU global weakness esp ECMO cohort due to prolonged ICU stay, increase in obesity with impacts on rehabilitation plus many may have known or unknown pre-morbid obstructive sleep apnoea (OSA) and with new ICU weakness and potential diaphragmatic weakness, this group may be challenging to liberate from nocturnal ventilation

	and may require long term nocturnal NIV post decannulation. Plus there may be a complex airway group who will need ENT input to facilitate decannulation. I don't think my colleagues and I have met this group yet but this is what we are predicting.

23. SLP in the US. We are being asked to ramp up the outpatient clinic caseload again. How do you suggest progressing back into doing endoscopy / stroboscopy / MBSS and therapy outpatient "safely"?

Sarah	We- RCSLT - are writing endoscopy guidance at the moment to look at an abbreviated urgent/essential nasendoscopy only in the first instance
Christina	We are seeing patients in vfs/MBSS in full PPE
Sue	We will take Covid negative patients to MBSS/VFS and wear aprons, masks and gloves.

24. This is a question for Susan. You mentioned that we won't be doing oral trials with trache patients. Do you mean we don't have to or are you recommending that we don't assess swallow with diet it fluids until they have been decannulated?

Sue	Let me clarify! What I meant is there should be a case by case assessment of the timing of commencing oral trials with trache patients. I'm not recommending being dogmatic either way. In some cases it's best to wait until decannulation (to reduce variables/risks which may contribute to weaning failure), but in others it may be best all round to commence oral intake with trache still in.

25. What does the exit strategy for FEES moratarium look like - very frustrating no to be able to use with Covid negative patients?

Sarah	There are significant risks attached to FEES in this situation. RCSLT are writing guidance as we speak with ENT UK /BLA on an abbreviated urgent/essential assessment protocol. Resuming business as usual is not currently deemed safe across all aspects of nasendoscopy and care needs to be taken to mitigate risks going forward.

26. How do you balance providing best practice whilst being aware of preserving PPE? Are you finding that you need to compromise the usual care you would provide?

Sue	Hiding behind a mask is v difficult especially when assessing/treating patients with communication problems who would benefit from seeing your full facial expression to help their understanding. I haven't found the PPE in itself however to be a major compromise, it's just inconvenient. We have worn a full facial hood for apraxics and aphasics. The compromise I think mainly comes from other contraindications and limitations imposed on our practice e.g. reducing hands-on contact, no FEES etc..

27. Are you using full PPE (FFP3 mask, gown, gloves, visor) for swallow assessments in non-covid patients in line with PHE guidance on regulations for areas of high transmission risk?

Sarah	Yes
Christina	Yes
Sue	Yes

28. What would you suggest for voice advice and voice slt role in icu?

Sarah	Agree
Christina	Yes. We complete a very basic voice screen using the GRBAS and max phonation time /i/ /s/ /z/ s:z ratio and basic vocal hygiene advice. We also provide a looking after your voice post intubation leaflet to patients and all patients with dysphonia are being followed up 2 weeks post d/c with our voice team with links to our ICU follow up clinic also. If you have capacity to do more, then I would encourage it but we are keeping things very basic at GSTT as we have a very large ICU with over 50 COVID trache patients so far so we have to be realistic with what we can deliver in this current climate
Sue	This is a bit difficult in the absence of ENT scope for assessment of vocal cord function. However, we have advised not straining voice. Need to have some voice therapist input here I think.

29. What swallow exercises would you recommend to complete with this patient population in absence of instrumental assessment? Particularly interested for trache patients with cuff inflated

Sarah	Weakness and myopathy issues require the usual tailored approach to bulbar and swallowing rehabilitation. Absence of instrumental is not a barrier in the current climate with a need to be pragmatic.

30. Is it advisable to intervene with active rehab exercise for dysphagia in patients being treated for CoviD/After their treatment?

Sarah	Yes but bearing in mind fatigue levels in patients who have profound weakness
Christina	Yes but treatment provision may be a challenge as patients do not have family at bedside to complete exercises regularly with and it is not possible to have nurses at present to complete these with patient as already very stretched. If patient able to do them themselves, brilliant!
Sue	If they can participate and you can manage footfall issues on the ward (i.e. can you get another member of staff to help you, someone who would be on the ward anyway) and you can minimize risk to yourself, and if they're not too fatigued, yes.

31. What resources are available for SLT services who may not have had previous high profile on CC but are currently beginning to develop relationships with CC as well as a service to these pts?"

Sue	The critical care pages on RCSLT website.

32. Why is the risk of AGP so much greater with trache patients on ventilation than with intubated patients.? I.e. why don't they just insert a trache straight away instead of intubating

Christina	It is not known in the early days whether a patient would actually survive illness or not so often it is a 'wait and see' approach before decision for trache is made. Remember, trache is not a risk free procedure and the procedure itself is high AGP and difficult for staff in full PPE.
Sue	Intubating staff never know how long someone's going to need ventilation for - if they can be extubated and not need a trache that is far better for the patient all round.

33. Has anyone encountered situations of speaking valves being fitted without SLT consultation or input after tracheostomy? Have seen this in a post ICU COVID patient and as a relatively new starter I found this quite surprising. Apparently this is somewhat routine in this hospital.

Christina	Depends where you work and level of experience of physio colleagues.
Sue	Yes, this may be some institutions' practice where there is little/no SLT

	involvement on ITU (for a variety of reasons), so other professions e.g. Physio may step in here. Whilst it is understandable how that may have happened, SLTs bring a unique contribution to cuff deflation assessments in terms of our expertise in assessing bulbar function and voice problems at least. SLTs have also introduced instrumental assessments such a FEES into this scenario which has undoubtedly improved diagnostic clarity and treatment options. Much of the evidence we bring to our practice is from SLTs and their MDT colleagues, and SLTs have a long track record of nuancing cuff deflation/trache wean protocols and policies according to the evidence. The best practice by far is a true MDT where the SLT, Physio, nurse and maybe other practitioners all contribute their expertise - this provides by far the best outcome for patient management.

34. Our MDT feel that the viral load is lower by the time we consider speaking valve trials. Please could the team clarify as IT would be a shame to delay trials, especially with PTSD

Sarah	This is always going to be a bit of an unknown but you just need to risk assess each patient and have MDT agreement on viral shedding and safe practice
Sue	This is certainly a consideration, and will contribute to the risks/benefits that need to be weighed.

35. When is a patient judged as cured from Covid ?

Sarah	2 negative swabs but there is new evidence that patients can relapse
Sue	In our facility they need to have two negative covid swabs

36. On Sarah's response- are trusts routinely re-swabbing even after confirmed serial negative swabs? Our criteria 2x negative swabs and if a patient remains asymptomatic for respiratory symptoms they are treated as negative and all airborne/droplet precautions removed. Is the practice in the UK to re-swab?

Sarah	Varies between different hospitals . Stil lwear full PPE
Christina	We still wear PPE regardless
Sue	Even if negative, we still wear surgical masks, apron and gloves for communication ax, and FFP3 masks, visor, apron and gloves for dysphagia. See RCSLT guidelines.

37. Regarding rehab - use of RMST/EMST ?

Sarah	EMST would be an AGP so be aware of the risks

38. What can be offered to these patients in an SLT dept without any competent trache trained therapists. What can we offer from a generalist perspective that might still maintain the patients safety? Can we play a role? Typically we get one trache patient per year and wait till they're weaned or extubated before getting involved. We need help as we're getting a big influx of referrals!

Sue	If not trache competent, you can do SLT assessments of communication, and provide advice for this. However, even in observing a trache patient, you can comment on swallow function of own secretions by what you see/hear. Once the cuff is down and the valve is on, the swallow can be assessed as for any other patient, and you can comment on their ability to manage the valve using your assessment skills of their voice, swallow and speech.

39. Are you using heated humidified circuits such as an AIRVO despite AGP risks if you do not have access to closed suction/viral filters?

Sarah	Then keep your distance
Sue	Currently, we do have access to closed suction and viral filters, so we are using

	AIRVO.

40. What would you suggest for taste changes alongside significant dysphagia and fatigue as the treatment plan?

Sarah	Not thought about taste, it is a good point. Fatigue needs managing carefully
Christina	I haven't really given this much thought yet but it is a great point to raise.

41. What is your opinion on giving awareness talk about communication disorders to nurses? for identification and for future follow ups?

Sarah	Brilliant, do it
Christina	Excellent idea
Sue	Great idea!

42. In ESSD webinar, the Italian SLT advocated not seeing patients if they needed feeding due to the need for staff to have to expose themselves more to complete this? Have you come across this particularly those in London who are ahead of the rest of us to a certain extent?

Sarah	Follow PPE guidance as per RCSLT
Sue	No, see RCSLT guidelines for PPE when doing dysphagia assessment

43. PPE - I know this has been addressed in part today, I have read some of the paper on our website today, but please may we have a clear statement that fluid

resistant gowns as well as FFP3 and Facial shields are needed for Dysphagia assessments with possible COVID and COVID positive patients?

Sarah	See RCSLT AGP scientific paper on the website

44. If there is no previous SLT input on ICU how do we know what to focus on and where to start, I know these are novel patients.

Sue	You need a good advocate on ITU (nurse/physio) to help you identify what is the need vs what is your SLT skill mix.

45.

- **What are the short and long term effects of Covid 19 and ventilation on laryngeal function and structures and can you provide advice about SLT in patient and out patient interventions for vocal recovery?**
- **What is the etiology of vocal cord palsy with this patient group**?

Sarah	Laryngeal oedema, laryngomalacia, laryngotracheal stenosis are concerns. RCSLT are working with ICS on a rehab pathway document incorporating this issue. VC palsy is possibility due to intubation trauma and laryngeal injury
Christina	We can anticipate what we might see/expect to see based on what we already know but too early to have specific data yet
Sue	1 We're seeing laryngeal ulceration and oedema post extubation. Not enough time has gone by yet to determine "long-term" effects. See questions above re: voice 2 vocal cord palsy is a known complication post intubation (see Brodsky et al 2020)

46. **If a patients trache set change is due how many days after a positive Covid swab test do we wait before doing the set change?**

Is there any other specific guidance about routine trache weaning e.g cuff down trials for Covid positive patients?

Sue	Yes, it might be worth considering delaying the change until covid negative, but you'll still need full PPE and so should be case-by-case discussion. Cuff down trials for COVID - refer to things to weigh up in the webinar (slide number?) when considering trache weans

47. **My colleagues and I are just tuned into the webinar presently and had a question following on from Sarah Wallace's talk. She is encouraging dysphagia exercises with cuff up for tracheostomy patients. We were just wondering what exercises she is envisaging and the pros and cons of doing this with an inflated trache cuff?**

Sarah	Dependent upon the presentation- masako, effortful swallow, modified shaker, unless a patient reports discomfort with cuff up then proceed

48. **We are supporting initial cuff deflation and valve application when patients are ventilator free at present (to reduce AGP risk with positive pressure ventilation). In certain circumstances we are anticipating we may need to consider cuff deflation on vent (particularly if they are slow + weans e.g. COVID patient with GBS or just a complex extremely slow vent wean not likely to get to vent free for weeks with good cranial nerve function). In these exceptional cases would SLT be right to support / advocate (with a thorough MDT risk ax) for cuff deflation on the vent in these circumstances?**
- **In the context of COVID i.e. reduced cuff deflation on the ventilator due to AGP risk would least restrictive measures such as water (and other trials) swallow trials (with an inflated cuff on the ventilator) be right to consider from bedside SLT ax (of course only for app patients) to maintain swallow function , use , rehab and comfort?**

Christina	Yes and possibly yes on a case by case basis
Sue	To both questions, Yes!

49. . It may be too early to know and it may not be for this session, but I was wondering if there was any knowledge about the post-acute impact on swallowing and communication and what the impact may be on step down acute and community services in terms of SLT resources and our knowledge for managing this patient group.

Sarah	RCSLT are working on a rehab pathway with ICS and these issues are emerging. Many patients post ICU are presenting with neuro, weakness, respiratory and airway issues
Christina	Stay tuned!
Sue	See future webinar!