

Aerosol generating procedures, dysphagia assessment and COVID-19

Lee Bolton,^{1*} Claire Mills,^{2,3*} Sarah Wallace,^{4,5,6, 7*} and Marian C. Brady^{8*} on behalf of the Royal College of Speech and Language Therapists COVID-19 Advisory Group.

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**Denoted authors contributed equally to the drafting of the report*

In response to the Royal College of Speech and Language Therapists (RCSLT) members' concerns and requests for the RCSLT to examine the debate surrounding oropharyngeal dysphagia assessment and aerosol generating procedures (AGPs), a COVID-19 advisory group was established to review the research evidence and report on their findings. Oropharyngeal dysphagia assessment is highly complex and may comprise a wide spectrum of interventions including; clinical (bedside) swallowing assessment, provision of therapeutic oral care, fiberoptic endoscopic evaluation of swallowing, videofluoroscopy swallowing study and cough reflex testing. Our review has focused on clinical (bedside) swallowing assessment only and aimed to review the risk of COVID-19 transmission through aerosol emissions, the likelihood of aerosol emissions during dysphagia assessment and the evidence supporting the identification of the aerosol generating procedures identified in COVID-19 healthcare recommendations.

COVID-19 and routes of transmission

The World Health Organisation (WHO) recently concluded that, based on the current evidence, transmission of COVID-19 is primarily through respiratory droplets and contact

routes (or fomites).¹ COVID-19 is a novel virus, distinct in several ways from other viral respiratory infections such as Severe Acute Respiratory Syndrome (SARS) or Middle East Respiratory Syndrome (MERS).² A high viral load has been detected in the saliva of patients with COVID-19 with viral shedding observed in one study up to 11 days after hospitalisation³ and in another study for up to 25 days after symptom onset.⁴ Viral shedding from throat swabs has been reported for as long as 37 days post-symptom onset.⁵ Research suggests that patients with severe COVID-19 such as those who are critically ill, have a significantly higher viral load and shed the virus for longer.⁶ Respiratory droplet emissions when coughing or sneezing have been widely acknowledged as important routes of COVID-19 transmission.^{4,7} Aerosols generated by speech are also proposed to be a potential source for transmission.^{8,9}

COVID-19 transmission and aerosols

International and national COVID-19 policy and practice recommendations consistently highlight the emission of aerosols (very small droplets) from COVID-19 positive patients as increasing the risk of the airborne transmission.^{17,26,30} Aerosols may remain suspended in the air for a period of time, travel over a distance and may cause infection if inhaled.¹⁰

Aerosol emissions and coughing

The dichotomous definition of aerosols and droplets is an arbitrary one, based on droplet size rather than a formal measure of infection risk or transmission rate.^{11,12} The boundary of distinction varies across the literature.¹³ In realistic contexts emissions from a cough or sneeze form a complex cluster of droplets across a range of sizes and from different levels of the respiratory system, within a turbulent gas cloud, under forward momentum.¹⁴ In contrast to laboratory-based investigations of isolated droplets, the distance travelled by droplets emitted on a cough varies depending on a range of contextual factors; the patient's physiology, air flow currents, humidity, temperature.^{14,15} Other droplets may evaporate and remain suspended in the air for hours.¹⁴ Coughing is a widely acknowledged source of aerosol droplet emissions^{7,10,13,16,17} and saliva droplets emitted during coughing have been highlighted as an important route for virus transmission.¹⁵ The infective potential of aerosols depends on the anatomical origin of the fluids, the viral load, and the force of aerosol generation.

Swallowing (dysphagia) assessment and coughing

Coughing is commonly generated during dysphagia assessment which comprises several components, of which voluntary cough and swallowing trials with samples of fluid and food are of particular relevance to this discussion. Reflexive coughing, secondary to aspiration, is

a common occurrence during the assessment procedure and may be forceful, prolonged and not easily suppressed. Coughing is an unpredictable risk, inherent to specialist dysphagia evaluations. Typically undertaken by SLTs <1 metre of the patient, dysphagia assessments last at least 10 minutes. Ear, nose and throat (ENT) surgeons are reported to be at high risk of exposure and infection from COVID-19 due to close proximity to the patients' upper respiratory mucosa and interventional procedures that induce cough.^{18,19} Given the nature of dysphagia assessment SLTs are likely to be at a similarly high level of risk of COVID-19 infection.

Dysphagia induced coughing and patients with COVID-19

Clinically, many patients presenting with (suspected) COVID-19 and dysphagia are predisposed to coughing during dysphagia assessments as a result of their concomitant respiratory conditions; upper respiratory tract symptoms of the COVID-19 infection, respiratory support requirements, post-acute respiratory distress syndrome or other comorbidities (e.g. chronic obstructive pulmonary disorder). Dysphagia itself may have resulted in an aspiration pneumonia while oral, pharyngeal and laryngeal weakness (secondary to intubation, intensive care unit (ICU) acquired weakness or neurological conditions) reduces the patients' ability to manage oral secretions and protect the airway.^{20,21} Thus, patients presenting with (suspected) COVID-19 and dysphagia are predisposed to a heightened and more frequent cough reflex through aspiration of saliva, food or liquids. Appropriately timed and planned dysphagia assessments are essential for all patients but particularly those with (suspected) COVID-19 in avoiding complications of aspiration, contributing to the differential diagnosis of pneumonia, guiding palliative eating or drinking decisions and facilitating patient flow.

Aerosol generating procedures

Aerosol generating procedures (AGP) are defined as *“any medical and patient care procedure that results in the production of airborne particles (aerosols)”*.²² There is no current consensus on a definitive list of healthcare procedures that are AGPs with variations in medical and care procedures considered to be AGPs by several national bodies (Table 1).^{12,23–25} Where possible, research evidence relating to acute respiratory infection transmission from patients to healthcare professionals in the context of specific healthcare procedures is used to identify AGP considered to be at high risk.²⁶ The evidence base is limited however and biased in the selection of procedures investigated as sources of transmission,²⁷ later synthesised in reviews and meta-analyses and in turn, underpinning clinical recommendations.

Recent WHO guidelines on infection prevention and control²⁶ for example, refer to a systematic review in support of their classification of AGP and increased risk of SARS infection transmission.²⁷ The systematic review however utilised an earlier WHO generated list of AGPs to inform the inclusion criteria used in the review. The reviewers highlight the lack of information available on procedures known to induce coughing and associated aerosols and the possible risk of infection transmission associated with those procedures²⁷. Thus, as stated by the Centers for Disease Control and Prevention:

*“there is neither expert consensus, nor sufficient supporting data, to create a definitive and comprehensive list of AGPs for healthcare settings”.*²⁸

New AGPs continue to be identified through literature review of conflicting studies, a theoretical risk of aerosol generation and expert consensus; non-invasive ventilation and high flow nasal oxygen being recent inclusions in UK health protection policy documents.¹⁰

Similarly, the research evidence on risk of infection and transmission rate has focused on pre-defined AGPs. Within the systematic review of AGPs and risk of SARS transmission²⁷ all 10 included studies focused on medical and/or nursing staff conducting intubation and ventilation procedures. Only half (5/10) reported an “other” staff category which may have included SLTs. Three of those studies recorded healthcare professionals’ contact with patient sputum and/or respiratory secretions and each reported a significantly increased risk of infection but the individual study quality was poor and the review syntheses were rated as low quality.²⁷ As another example, a recent cluster randomised controlled trial evaluated the effectiveness of N95 respirators versus medical masks in reducing the risk of influenza transmission to healthcare professionals.²⁹ The large trial took place across several US outpatient settings where dysphagia assessment is likely to be rare with speech and language therapists unlisted amongst the 16 specific professional identities recorded in the trial participant record form. The AGP recorded as undertaken by the staff included; intubation, respiratory/airway suctioning, nebulizer treatments and nasopharyngeal aspiration. While some research on AGP and risk of transmission exists the evidence of risk in the context of dysphagia assessment is absent, though this does not reflect an absence of risk. A procedure resulting in exposure or contact by close proximity to respiratory, oral or aerodigestive tract secretions could be considered an AGP.

Procedures which induce forceful coughing

Induction of sputum following the administration of saline into the lungs, moistening and loosening respiratory secretions shares an infection risk profile similar to the dysphagia induced forceful coughing that follows aspiration of food or fluid into the lungs. The induction

of sputum is currently considered an AGP.¹⁰ The recent European Centre for Disease Prevention and Control recommendations¹⁷ highlighted the risk of coughing or sneezing induced while collecting nasopharyngeal diagnostic respiratory samples, and the associated risk of aerosol production. Thus, there is consensus across the healthcare and infection control community that procedures known to induce forceful coughing result in the production of aerosols which in turn place the healthcare professional at greater risk of infection. There is general agreement across the literature and guidelines that in such cases precautionary steps should be taken to reduce the risk of infection for healthcare professionals.

Table 1. List of aerosol generating procedures by policy document

Procedure	UK Public Health England ³⁰ and Health Protection Scotland (2019) ¹⁰	New Zealand Ministry of Health ³¹	Australian Government Department of Health ³²	Centre for Disease Control and Prevention ²⁸	WHO IPC precaution recommendations ¹
Intubation and extubation	Y	Intubation only	Intubation only	Y	Intubation only
Manual ventilation	Y	Y	Y	Y	Y
Open suctioning	Y			Y	Y
Tracheostomy and tracheostomy procedures	Y	Y	Y		Y
Bronchoscopy	Y	Y	Y	Y	Y
Upper ENT airway procedures that involve suctioning	Y				
Upper gastro-intestinal endoscopy where there is open suctioning of the upper respiratory tract	Y				
Cardiopulmonary resuscitation		Y	Y	Y	Y
Surgery and post-mortem procedures involving high-speed devices	Y				
Some dental procedures (e.g. drilling)	Y				
Non-invasive ventilation e.g. Bi-level Positive Airway Pressure (BiPAP) and Continuous Positive Airway Pressure (CPAP)	Y	Y	Y	Y	Y
Disconnecting the patient from the ventilator					Y
High-Frequency Oscillating Ventilation (HFOV)	Y				
Induction of sputum	Y	Y		Y	
High Flow Nasal Oxygen	<i>Added in 2020</i>	Y	Y	State uncertain	
Turning the patient to prone position					Y
Nebuliser treatment		Y		State uncertain	Y

Dysphagia assessment as an aerosol generating procedure

We have presented evidence that a forceful cough generates aerosols and the emerging evidence indicating that COVID-19 is likely transmitted through aerosol (and other) routes. We described the close and prolonged contact with upper respiratory secretions and the characteristic induction of forceful coughing in the context of standard dysphagia assessment procedures and why patients with (suspected) COVID-19 are likely to be at greater risk of coughing. We examined the criteria used to establish the current list of AGP and found a lack of consensus and no definitive list.

The underpinning research appears to be at high risk of selection bias, focusing only on risk of infection based on previously identified AGPs, which in turn limits the procedures currently listed as AGP. Despite this, we found some evidence that suggests a greater risk of transmission and infection of healthcare professionals that experience frequent and repeated contact with patients' respiratory secretions or sputum in the context of a novel virus, non-immunity and high infectivity. There is an absence of definitive evidence linking dysphagia assessment to higher risk of COVID-19 infection but not evidence of an absence of risk.

We have presented strong theoretical reasons and underpinning empirical evidence which suggest that dysphagia assessment should be considered an AGP. In the context of the available evidence and expert consensus, healthcare providers and infection control policy makers should take precautionary steps to reduce speech and language therapists' risk of COVID-19 transmission and infection while undertaking dysphagia procedures.¹⁷ The safety of healthcare workers and expert consensus should prevail.

Contributions

This report was prepared on behalf of the Royal College of Speech and Language Therapists COVID-19 advisory group. The views expressed are those of the authors and do not necessarily reflect the views of the NHS, our employers or funding organisations.

Acknowledgements

With thanks to colleagues at the Royal College of Speech and Language Therapists for their support.

Appendix 1 – Letter of support from the Intensive Care Society



Kamini Gadhok
Chief Executive
Royal College of Speech and Language Therapists
2 White Hart Yard
London
SE1 1NX

13 April, 2020

Dear Kamini

The intensive Care Society is a multi-professional membership organisation and a charity and some of our members are Speech and Language Therapists. We have been informed that you are lobbying PHE to provide adequate personal protective equipment for speech and language therapists while they are conducting dysphagia assessments. We are writing to give you our support.

We recognise that there is currently a lack of research evidence directly looking at aerosol generation during dysphagia assessment. However, we know that these assessments often induce forceful and prolonged reflexive coughing. As such we support the SLT expert consensus that this is an aerosol generating procedure. This expert consensus should be sufficient for PHE to recognise and add dysphagia assessments to the list of AGPs.

Please contact us again if there is anything else we can do to support you and our SLT intensive care community.

A handwritten signature in black ink, appearing to read 'Ganesh Suntharalingam', with a horizontal line underneath.

Dr Ganesh Suntharalingam
President

A handwritten signature in black ink, appearing to read 'Sandra Mather', with a horizontal line underneath.

Dr Sandy Mather
Chief Executive

CC: Claire Mills
Sarah Wallace

Intensive Care Society | Churchill House | 35 Red Lion Square | London | WC1R 4SG
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Patron: [HRH The Princess Royal](#)

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Appendix 2 – Letter of support from the National Tracheostomy Safety Project



Acute ICU, Wythenshawe Hospital
Manchester University Hospital
Southmoor Road
Wythenshawe
Manchester, UK
M23 9LT

NTSP Ltd
National Tracheostomy Safety Project
www.tracheostomy.org.uk

Tel: 0161 291 6420
Fax: 0161 291 6421
Email: admin@tracheostomy.org.uk

Wednesday, 22 April 2020

Kamini Gadhok

Chief Executive Royal College of Speech and Language Therapists
2 White Hart Yard
London SE1 1NX

Letter in support of for the RCSLT position on dysphagia assessment with respect to the COVID-19 pandemic.

Dear Kamini

The National Tracheostomy Safety Project (NTSP) is a multi-professional organisation which collaborates with colleagues, patients and families around the world to improve tracheostomy care. As you are aware, Speech and Language Therapists (SLT) are closely involved in the front-line delivery of care to these patients as part of the multidisciplinary team and the importance of SLTs in managing these complex patients is emphasised by Mrs Sarah Wallace, RCSLT Tracheostomy lead, representing SLTs in the NTSP lead team.

We are aware that you are lobbying Public Health England to provide adequate personal protective equipment for speech and language therapists while they are conducting dysphagia assessments, which carry risks of aerosolization. This poses immediate and worrying risks for these vital front-line staff who are helping to manage and to rehabilitate patients during the COVID-19 pandemic. We are concerned about the risks to staff who may be inadequately protected and wish to offer our support. Currently tracheostomy insertion and removal are listed as aerosol-generating procedures, but not dysphagia assessment related to tracheostomy care. During such assessment, many of these patients are more likely to cough due to the nature of their condition and nearly all patients have excess oral and tracheal secretions. Whilst infectivity is difficult to quantify, most patients with tracheostomy or dysphagia who are seen by SLT during this pandemic will be recovering from critical illness, where

prolonged detection of SARS-CoV-2 virus in respiratory and oral secretions has been clearly documented (see references below).

Accepting that the evidence base is weak across the board when it comes to aerosol-generating procedures, given the clear risks of viral transmission to staff associated with dysphagia assessment, the NTSP strongly supports the SLT expert consensus that this should be considered an aerosol generating procedure. Following on from this, it seems clear that staff should be protected with appropriate PPE to conduct these assessments in these high-risk encounters.

Please contact me if there is anything further that the NTSP can do to support you and our SLT colleagues.

Kind regards

With best wishes



Dr Brendan A McGrath
National Clinical Advisor for Tracheostomy, NHS England.

Consultant in Anaesthesia & Intensive Care Medicine
University Hospital South Manchester
Chair National Tracheostomy Safety Project
European Lead Global Tracheostomy Collaborative

brendan.mcgrath@tracheostomy.org.uk

References

Zhao J, Yuan Q, Wang H, et al. Antibody responses to SARS-CoV-2 in patients of novel coronavirus disease 2019. Clin Infect Dis 2020.

Wölfel R, Corman VM, Guggemos W, et al. Virological assessment of hospitalized patients with COVID-2019. Nature 2020.

National Tracheostomy Safety Project. Registered Charity 1160824 & Company 9062489
www.tracheostomy.org.uk

Appendix 3 – Letter of support from the British Thoracic Society



Kamini Gadhok
Chief Executive
Royal College of Speech and Language Therapists
2 White Hart Yard
London
SE1 1NX

20 April, 2020
By email

Dear Ms Gadhok

As you know, the British Thoracic Society counts a number of Speech and Language Therapists among its members.

We are aware, through Jemma Haines, that the Royal College of Speech and Language Therapists is lobbying for the provision of adequate personal protective equipment for speech and language therapists while they are conducting dysphagia assessments (which carry risks of aerosolisation) and we are writing to confirm the Society's support for your request.

We hope that you will keep the Society informed of developments in this area.

Thank you. Kind regards

Handwritten signature of Professor J Bennett in black ink.

Professor J Bennett
FRCP Chair of Board of Trustees

Handwritten signature of Dr M Munavvar MD DNB in black ink.

Dr M Munavvar MD DNB
President

Appendix 4 – Letter of support from ENT-UK



at The Royal College of Surgeons of England
35-43 Lincoln's Inn Fields
London WC2A 3PE

Tel: 020 7404 8373

Email: entuk@entuk.org Web: www.entuk.org

20 April 2020

Kamini Gadhok MBE CEO
Royal College of Speech & Language Therapists
2 White Hart Yard
London SE1 1NX Dear Kamini

Re: Letter in support of for the RCSLT position on dysphagia assessment with respect to the COVID-19 pandemic.

ENT UK is the professional membership body representing Ear Nose and Throat surgery, as well as its related specialties in the United Kingdom. As a registered charity, we support members at varying stages of their career in ENT, providing a clear vision for setting and delivering safe and effective service and training standards.

Our members work in close teamwork with speech and swallow therapy colleagues, often assessing and managing patients together in combined outpatient services. We fully sympathise and support your college's request to Public Health England that speech and language therapists be provided with full personal protective equipment to support appropriate dysphagia assessments.

Dysphagia assessments by their very nature involve the risk of triggering a protective cough, both at bed- side or endoscopy. Although research base is limited in relation to relative risk of aerosol generation during such assessments, there is multi-disciplinary expert consensus between ENT and speech therapy colleagues that dysphagia assessment should be considered high risk for aerosol generation and therefore high potential risk to professionals through droplet spread of Covid-19.

We write to express our organisation's full support in your request to Public Health England.

Yours sincerely,

Professor Nirmal Kumar
President ENT UK

Mr Taran Tatla
Honorary Secretary ENT UK

British Academic Conference in Otolaryngology (BACO) and British Association of Otorhinolaryngology – Head & Neck Surgery (BAO-HNS)

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Appendix 5 – Letter of support from the UK Swallow Research Group



Professor David G Smithard
BSc MBBS MD FRCP RCSLT(Hon)
Chair UKSRG

Queen Elizabeth Hospital
Stadium Road
Woolwich
SE18 4QH

20th April 2020

Kamini Gadhok MBE CEO
Royal College Speech and Language Therapists

2 White Hart Yard

London SE1 1NX

Dear Kamini

The UK Swallowing Research Group is a multidisciplinary research based organisation. The members come from many different healthcare professional backgrounds, the largest being speech and language therapy. Speech and language therapists are vital to the management of patients with swallowing problems.

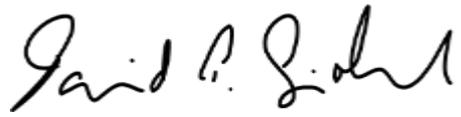
Assessments of a persons swallow involve a clinical assessment of the swallow, which may be followed by a fibre-optic endoscopic evaluation of the swallow or a Videofluoroscopy. Anyone of these swallowing assessments may trigger a cough reflex at any time, generating an aerosol of which the speech and language therapist will be in direct line. Endoscopy entails exposure to an aerosol during the procedure and whilst cleaning the endoscope.

Although there is little objective research around the clinical assessment, aerosol generation in a cough and endoscopy is accepted.

Given these facts, it is entirely appropriate that speech and language therapists should be provided with full PPE whilst undertaking these aerosol generating assessments. We would support the Royal College in their request to PHE.

If we can be of any further assistance please get back in touch.

Yours sincerely

A handwritten signature in black ink, appearing to read "David G. Smithard". The signature is written in a cursive style with a large initial 'D' and a long, sweeping tail.

David G Smithard

Appendix 6 – Letter of support from the European Society for Swallowing Disorders

Kamini Gadhok
Chief Executive
Royal College of Speech and Language Therapists
2 White Hart Yard
London
SE1 1NX

22 April, 2020
By email

Dear Ms Gadhok,

We are aware that the Royal College of Speech and Language Therapists is lobbying for the provision of adequate personal protective equipment for Speech and Language Therapists while they are conducting dysphagia assessments.

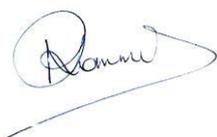
The ***European Society for Swallowing Disorders*** would like to express our support for the provision of adequate personal protective equipment for Speech and Language Therapists.

Dysphagia Assessment at the bedside includes Aerosol generating procedures. The clinical and scientific community is aware that these procedures consist of the highest risk of transmission of respiratory viruses, and use of enhanced respiratory protective equipment is indicated for health and social care workers performing or assisting in such procedures.

Assessment of Dysphagia is of vital importance in order to reduce the risk of malnutrition, dehydration, institutionalisation, poor medical care outcomes and aspiration pneumonia. If Dysphagia is not assessed consistently and timely, further threats to the health system are imposed (increasing the costs and prolonging hospital stay). Dysphagic symptoms not assessed may prove life threatening in specific patients.

We hope that you will keep the Society informed of developments in this area. Thank you.

Kind regards,

A handwritten signature in blue ink, appearing to read 'Natalie Rommel', with a long horizontal line extending to the right.

Natalie Rommel

President of ESSD

On behalf of the ESSD Board

22 April 2020

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Appendix 6 – Letter of support from BAPEN

21st April 2020

Kamini Gadhok
Chief Executive
Royal College of Speech and Language Therapists
2 White Hart Yard
London
SE1 1NX

Dear Ms Gadhok

As you know the British Association of Parenteral and Enteral Nutrition (BAPEN) has close professional links with the Royal College of Speech and Language Therapists (RCSLT).

It has come to BAPEN's attention that RCSLT have approached Public Health England (PHE) to request that swallowing evaluations are designated as aerosol generating procedures (AGP).

BAPEN is aware that swallowing evaluations often elicit a cough response as a consequence of aspiration (food and liquid going down the wrong tube). On this basis, BAPEN is writing to confirm support for RCSLT's position that a swallow evaluation is recognised as an aerosol generating procedure. BAPEN has already written to PHE to request a change of status for Nasogastric tube insertion (NGT) to an AGP¹. We would wish to point out that BAPEN has the support of many other professional bodies in its request for a revision of the designation of NGT to that of an AGP¹.

BAPEN believes that the evidence base for NGT being a non AGP is extremely lacking and furthermore, PHE has designated "cough induction" as an AGP^{2,3}. Indeed, swallowing assessments bear many similarities to "cough induction" as defined by PHE. The science around coughing now indicates that coughing does generate aerosol as well as droplets.

The probability of a cough occurring during assessment of swallowing safety is so high that all such procedures should be considered as AGP during the Covid-19 crisis.

BAPEN also supports this stance as a means of ensuring the provision of personal protective equipment appropriate for an AGP as defined by PHE for Speech and Language Therapists and other healthcare professionals during the current COVID 19 pandemic.

BAPEN strongly supports the RCSLT submission to PHE.

Yours sincerely,



Dr Trevor Smith

President, BAPEN

1. BAPEN letter to PHE re NGT and AGP:

<https://www.bapen.org.uk/pdfs/covid-19/bapen-letter-to-public-health-england.pdf>.

2. BAPEN overview of NGT as AGP during Covid-19:

<https://www.bapen.org.uk/pdfs/covid-19/ngt-and-agp-and-ppe-15-04-20.pdf>

3. BAPEN NGT safety in Covid-19:

<https://www.bapen.org.uk/pdfs/covid-19/covid-19-and-enteral-tube-feeding-safety-16-04-20.pdf>



Kamini Gadhok
Chief Executive
Royal College of Speech and Language Therapists
2 White Hart Yard
London
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via email to louise.borjes@rcslt.org

23 April, 2020

Dear Kamini

Support for the RCSLT position on adequate personal protective equipment for swallow assessments during the COVID-19 pandemic

We are writing on behalf of the British Association of Stroke Physicians (BASP), which is a registered charity and professional association representing clinicians who care for patients with stroke in the British Isles. We support the RCSLT request for adequate personal protective equipment for healthcare professionals conducting swallow assessments, which carry risks of aerosolisation and put these healthcare workers at further risk during the COVID-19 pandemic.

BASP believes that speech and language therapists have an important role, based on good evidence, to not only improve communication for stroke survivors with language difficulties (aphasia),ⁱ but also to assess patients' swallowing so that patients with dysphagia can benefit from early nasogastric tube feeding, which can improve outcome.ⁱⁱ This is why early assessments of swallowing are part of standard practice for all of our patients with stroke.

Speech and language therapists and nurses provide front line assessments of swallowing and recommend insertion of nasogastric tubes, both of which carry a risk of aerosolisation of the contents of patients' upper airways. We recognise that there is currently a lack of research evidence directly looking at aerosol generation during these procedures, but we know that these assessments often induce forceful and prolonged reflexive coughing. This puts the healthcare workers conducting these procedures at further risk during the COVID-19 pandemic, when patients with stroke (who are usually older with multiple co-morbidities) are at greater risk of COVID-19.

Therefore, we support the Royal College of Speech and Language Therapists expert consensus that conducting a swallow assessment is an aerosol generating procedure and requires the commensurate personal protective equipment for healthcare professionals conducting these assessments during the COVID-19 pandemic. We believe that the same applies to nasogastric tube insertion.

We therefore support the Royal College of Speech and Language Therapists in requesting that swallow assessments and nasogastric tube insertion are added to the list of aerosol generating procedures to ensure appropriate personal protective equipment guidance is recommended for the healthcare workers conducting these procedures.

Yours sincerely,

Prof. Rustam Al-Shahi Salman
President of BASP
Honorary consultant neurologist

Dr. Michelle Dharmasiri
Chair of BASP clinical standards committee
Consultant stroke physician

The British Association of Stroke Physicians is a registered charity (no. 1134589) promoting the advancement of Stroke Medicine in the UK



ⁱ Brady MC, Kelly H, Godwin J, Enderby P, Campbell P. Speech and language therapy for aphasia following stroke. Cochrane Database of Systematic Reviews 2016, Issue 6. Art. No.: CD000425. DOI: 10.1002/14651858.CD000425.pub4.

ⁱⁱ Dennis MS, Lewis SC, Warlow C; FOOD Trial Collaboration. Effect of timing and method of enteral tube feeding for dysphagic stroke patients (FOOD): a multicentre randomised controlled trial. Lancet. 2005;365(9461):764–772. doi:10.1016/S0140-6736(05)17983-5

The British Association of Stroke Physicians is a registered charity (no. 1134589) promoting the advancement of Stroke Medicine in the UK

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Appendix 7 – list of members of the RCSLT COVID-19 Advisory Group

Katherine Behenna, Lead for Head & Neck and Voice Disorders SLT Service, Nottingham University Hospitals Trust

Lee Bolton, Clinical Lead Speech & Language Therapist/Improvement Coach, Imperial Health Charity; Pre-doctoral Research Fellow, Imperial College London

Grainne Brady, Clinical Lead Speech & Language Therapist Head & Neck, The Royal Marsden NHS Foundation Trust

Gemma Clunie, Clinical Specialist SLT (Airways/ENT) Imperial College Healthcare NHS Trust; HEE/NIHR Clinical Doctoral Fellow, Imperial College London

Dr Margaret Coffey, Clinical Service Lead, SLT (Head and Neck/ENT), Honorary Clinical Research Fellow, Imperial College London

Dr Hannah Crawford, Professional Head of Speech & Language Therapy, Tees, Esk & Wear Valleys NHS Foundation trust

Zoe Dalal, Team lead, Wellington Hospital

Pauline Downie, Professional Lead for Speech and Language Therapy, NHS Lanarkshire

Dr Roganie Govender, Consultant SLT & NIHR Clinical Lecturer, University College London Hospital, Head and neck Cancer Centre; Hon Senior Research Associate, University College London, Research Department of Behavioural Science & Health, Epidemiology & Public Health

Jemma Haines, Consultant Respiratory Speech & Language Therapist, NIHR Manchester BRC PhD Fellow & Service Lead for Manchester Airways Service, Manchester University NHS FT

Lauren Isaacs, Principal Speech & Language Therapist, Adult Community Speech & Language Therapy, Norfolk Community Health and Care NHS Trust

Gemma Jones, Clinical Lead SLT, Cardiff and Vale University Health Board; Highly Specialist SLT Critical Care, Cwm Taf Morgannwg University Health Board

Hannah Lewthwaite, Speech and Language Therapist, Clinical Expert Pathway Lead for Dysphagia, Solent NHS Trust

Julia McDowall, Clinical Lead Speech and Language Therapist (intensive care/neurosurgery), North Bristol NHS Trust

Dr Jackie McRae, Consultant Speech and Language Therapist, University College London Hospital

Claire Mills, Clinical Specialist Speech and Language Therapist in Critical Care; NIHR Clinical Doctoral Research Fellow, University of Leeds

Suzannah Partner, Clinical Lead Speech and Language Therapist, Community Neurorehabilitation, Central London Community Healthcare NHS Trust

Francesca Pepper, Clinical Lead Specialist - Adult Speech and Language Therapy, Hertfordshire division, Central London Community Healthcare

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