# Position statement: Speech and language therapists working in adult and paediatric critical care units

The purpose of this position statement is to inform service planning and improvement in critical care, in relation to speech and language therapy. It is aimed at both speech and language therapists (SLTs) and clinical service managers.

## Introduction

The critical care environment is changing, with increasing complexity and flow of patients, with less sedation in order to reduce delirium and a greater focus on early therapeutic interventions and rehabilitation (GPICS, 2019). People are admitted to critical care with multiple aetiologies and co-morbidities that require integrated clinical management to enable the optimal outcome for long term functioning, quality of life and survivorship (Major et al. 2016).

Critical care encompasses the range of intensive care units paediatric intensive care units (PICU) and high dependency units (HDU). Intensive care units (ICU) may be general or specialist, small or large, regardless, they require the involvement of a range of allied health professionals to support physical, cognitive and emotional recovery. National guidelines recommend a collaborative multidisciplinary approach to care (GPICS, 2019; NICE CG83, 2009; NICE QS158, 2017). Monitoring of clinical outcomes, length of stay and mortality data should be collated through the Intensive Care National Audit and Research Centre (ICNARC) and Trauma Audit and Research Network (TARN).

The role of speech and language therapy services in critical care is to assess and manage the range of speech, swallowing and cognitive impairments that patients experience following critical illness, trauma, major surgery or long term decline. SLTs have skills and knowledge around the nature of these impairments and how to best facilitate their rehabilitation. SLTs play an integral role in tracheostomy weaning as part of the multi-disciplinary team (MDT). Increasing evidence supports early speech and language therapy assessment and intervention in a multidisciplinary setting to improve health outcomes (GPICS, 2019). Positive impacts include earlier facilitation of speech and safe commencement of oral intake which can help to prevent complications, improve mood and support a reduction to length of stay in ICU.

National guidelines by the Intensive Care Society (GPICS, 2019) recommend that to deliver the optimal speech and language therapy service in critical care, a minimum staffing level of 0.1 WTE SLT per bed (equals 1 SLT per 10 beds across levels). This can be increased depending on local patient complexity and service requirements. This level of staffing includes direct patient contact time, team discussions and strategic involvement.

## Policy context

This position statement includes both adult and paediatric critical care environments.
These units are classified according to the level of support a patient requires. These are described slightly differently for adults, paediatrics and neonates with Level 3 being the highest level of care, requiring advanced support to two or more organs including respiratory support.

Recent literature has demonstrated a strong link between intubation, tracheostomy and ventilation and disruption to laryngeal function for voice and swallowing Macht et al., 2012; Kim et al., 2015; Brodsky et al., 2016; Brodsky et al., 2018). In addition to this, communication is recognised as essential for psychological and emotional recovery (Tembo et al., 2015; Carroll et al, 2007). The early facilitation of options for both verbal and non-verbal communication methods benefits the evaluation of capacity for consent and may reduce delirium (Happ et al., 2015; Mobasheri et al., 2016). Communication and swallowing contribute to improved quality of life for patients in critical care and enhance the process of recovery and sense of normality (Morris et al. 2015; Segaran, 2006).

There is growing evidence and UK national guidance to support the early intervention by SLTs in assessing and managing these impairments with positive outcomes for rehabilitation of weaning, communication, nutrition and mobilisation (NTSP, 2013; GPICS, 2019; NCEPOD, 2014).

The National Tracheostomy Safety Project (NTSP) reports that 10-15% of UK ICU patients will have a tracheostomy - this includes 14,000 adults and 1200 children with tracheostomies. Involvement of allied health professionals such as respiratory physiotherapy and speech and language therapy are seen as essential to support weaning, speech and swallowing (McGrath & Wallace, 2014).

The National Confidential Enquiry into Patient Outcomes and Death report on tracheostomy care (NCEPOD, 2014) identified that 52% of those with tracheostomy had dysphagia and 57% had early referral to speech and language therapy. Only 27% critical care patients had input from an SLT. Their key recommendations were:

- Involvement of speech and language therapy in critical care units needs to be facilitated to provide high quality communication strategies particularly for more complex patients
- Swallowing difficulty in tracheostomy patients should be clearly recognised requiring referral to SLT and access to FEES
- Swallowing difficulty in tracheostomy patients should be the subject of ongoing study

Post extubation dysphagia is thought to affect up to 60% of adult ICU patients with a reported 50% incidence of aspiration associated with increased length of stay, reintubation and mortality (Brodsky et al., 2016; Scheel et al., 2016). Literature on dysphagia occurrence in paediatric patients has demonstrated in 20-25% of children following heart surgery (Kohr et al, 2003; Yi et al, 2013).

NICE guidance (CG83 and QS158) demands comprehensive clinical assessment of patients in critical care with early rehabilitation and a consideration of psychological, cognitive, behavioural and nutritional needs. This would require a collaborative approach that includes speech and language therapy assessment and goal setting.

## Best practice

The recommendations for best practice are based on national guidance with an expectation of consistent speech and language therapy involvement. In many units, this may not be immediately achievable due to issues with dedicated funding for speech and language therapy staff and limited post-registration training to achieve competencies.

Best practice will be described in terms of clinical, professional and strategic involvement.

### Clinical

- Input to daily ward/board rounds and contribute to multi-disciplinary teams, such as tracheostomy teams, discussion and therapy planning, which includes completion of rehabilitation prescription documentation.
- Provide guidance for staff to be able to screen for communication and swallowing difficulties and make appropriate referrals for ongoing intervention.
- Provide timely assessment of communication and swallowing impairments for **all** tracheostomy patients.
- Utilise fibreoptic nasendoscopy when possible for supporting decisions for ventilator and tracheostomy weaning, speech, voice and swallowing.
- Be involved in decisions regarding risk feeding in order to advise on optimal consistencies to minimise risk and distress and maximise quality of life.
- Deliver interventions to facilitate rehabilitation of communication, swallowing and cognitive impairments. This may include Above Cuff Vocalisations (ACV) and alternative or augmentative methods of communication.
- Communicate with the MDT and document assessment findings, plan of management and outcomes following interventions.
- Provide ongoing speech and language therapy intervention and handover following transfer to other wards, discharge home and at follow-up clinics.
- Engage in clinical research on the nature and impact of communication and swallowing impairments in critical care patients.
- Support and promote well-being in service users with communication and swallowing impairments in critical care.

**Professional**

- Speech and language provision to be available at least over a five day week and ideally as a seven day service.
- To maintain a high level of knowledge and skill, through CPD and peer review and engage in multi-professional teaching and education.
- To be involved in clinical governance and annual critical care activity reporting and service audits.
- Support the development of competencies of SLTs and non-SLT staff working with the same patient group, whilst also supporting speech and language therapy service provision in units with limited staffing.

**Strategic**

- To be involved in audits and service reviews of speech and language therapy provision to critical care, considering future service needs and planning business cases.
- Ensure staff have a high level of knowledge, skills and expertise and comply with clinical governance requirements.
- Attend and report activity within local and national critical care networks, tracheostomy networks and professional bodies.
- Participate in the critical care peer review process and CQC inspections.
- Plan and engage in joint quality improvement and research projects.

## Benefits of providing a Speech and Language Therapy service in critical care

- To facilitate laryngeal weaning and effective secretion management as part of a collaborative multi-professional approach to improve patient outcomes (Bonvento, Wallace, Lynch, Coe, & McGrath, 2017).
- To provide evaluation and management options for communication to support patient decision-making and capacity and delirium assessments for consent processes (McGrath et al., 2018; Costello et al., 2010).
- To evaluate risks of dysphagia and deliver targeted interventions aiming for early commencement of oral intake, whilst reducing health complications of dysphagia (Logemann, 1998; Langmore, 2001).
- To support shorter lengths of stay and engage in early rehabilitation with improved clinical outcome (Freeman-Sanderson et al., 2016; Sutt et al., 2015; Cameron et al., 2009; Pryor et al., 2016).

## Risks of not providing a Speech and language therapy service in critical care

- Prolonged length of stay in critical care and hospital due to respiratory complications of dysphagia, leading to need for additional ventilatory support and high nursing care needs.
- Prolonged artificial nutrition due to delayed detection and rehabilitation of swallowing impairments.
- Delayed or failed tracheostomy weaning due to poorly identified laryngeal abnormalities and secretion management problems.
- Reduced resolution of communication and cognitive impairments associated with delirium and with negative impact on psychological well-being and quality of life.
- Restriction to timely and comprehensive rehabilitation as mandated by NICE national guidelines (NICE QS158, 2017).
- All these would contribute to additional costs and extended length of stay in critical care and hospital.

## Key recommendations

- SLTs are essential members of the multidisciplinary team in the critical care environment carrying out specialist assessments and delivering interventions for communication and swallowing impairments that are specific to adult, paediatric and neonatal patient's needs (NTSP, 2013).
- A minimum SLT staffing level of 1.0 WTE per 10 beds is recommended in order to provide timely and responsive service with a high level of skill and team integration (GPICS, 2019).
- Funding should be made available to enable the routine use of instrumental assessment such as FEES and alternative communication aids to support rehabilitation of patients in this setting.
- SLTs need to develop and maintain robust clinical competencies, as determined by RCSLT Tracheostomy Competencies (2014). Critical care skills should be aligned with non-medical colleagues using the AHP critical care development framework (2018) to support clinical progression.
- Training, funding and support should be provided for SLT's use of FEES for detailed evaluation of swallowing and laryngeal impairments for adding value to plans for weaning, speech and swallowing interventions with the wider team.
- A whole team approach is required for the rehabilitation of communication and swallowing impairments. Training and education provided by SLTs to patients, their families and staff help to raise awareness of the value and impact of speech and language therapy in a multidisciplinary context.
- Ongoing involvement in wider strategic discussions supports plans for future service provision in critical care as clinical demands change and new technologies emerge.

## Workforce

- As referred to in GPICS (2019), a minimum staffing level of 0.1 WTE per bed (equals one SLT per 10 beds) is recommended to deliver a consistent, safe and reliable speech and language therapy service to critical care patients. Service requirements may differ so this recommendation should be subject to local review and discussion.
- SLTs working in critical care must have specialist skills, knowledge and experience for the population group and demonstrate competency in these (GPICS, 2019). For those developing skills, support should be arranged from a senior SLT with the required level of experience. If this is not available on-site, this must be sourced externally to ensure compliance with clinical governance and skills development.
- A minimum of a five-day speech and language therapy service is expected, although a seven-day service into critical care is desirable, in line with the provision of multidisciplinary rehabilitation (NHS England, 2019)
- Regular attendance of local education sessions and critical care network meetings are important to raise the awareness of the role of speech and language therapy and to evaluate the impact of the service.
- SLT's expertise and skills should be maintained through attendance on speech and language therapy specific training events, Clinical Excellence Networks, Continuous Professional Development and contribution to multi-professional conferences.

## References


Bonvento, B., Wallace, S., Lynch, J., Coe, B., & McGrath, B. A. (2017). Role of the MDT in the care of the tracheostomy patients. *Journal of Multidisciplinary Healthcare, 11*(10), 391-398. doi:10.2147/JMDH.S118419

Brodsky, M. B., Huang, M., Shanholtz, C., Mendez-Tellez, P. A., Palmer, J. B., Colantuoni, E., & Needham, D. M. (2016). Recovery of Dysphagia Symptoms after Oral Endotracheal Intubation in ARDS Survivors: A 5- Year Longitudinal Study. *Ann Am Thorac Soc*. doi:10.1513/AnnalsATS.201606-455OC

Brodsky, M. B., Levy, M. J., Jedlanek, E., Pandian, V., Blackford, B., Price, C. . . . Akst, L. M. (2018). Laryngeal Injury and Upper Airway Symptoms after Oral Endotracheal Intubation With Mechanical Ventilation During Critical Care: A Systematic Review. *Crit Care Med, 46*(12), 2010-2017. doi:10.1097/ccm.0000000000003368

Cameron, T. S., McKinstry, A., Burt, S. K., Howard, M. E., Bellomo, R., Brown, D. J., . . . O'Donoghue, F. J. (2009). Outcomes of patients with spinal cord injury before and after introduction of an interdisciplinary tracheostomy team. *Crit Care Resusc, 11*(1), 14-19. Retrieved from http://www.tracheostomyteam.org/admin/For_Healthcare_Providers/Docs/ccr_11_1_010309-014_Cameron.pdf

Carroll, S. M. (2007). Silent, Slow Lifeworld: The Communication Experience of Nonvocal Ventilated Patients. *Qual Health Res, 17*(9), 1165-1177. Doi: 10.1177/1049732307307334

Faculty of Intensive Care Medicine (FICM), & The Intensive Care Society (ICS). (2019). Guidelines for the Provision of Intensive Care Services (GPICS) Edition 2. Retrieved from https://www.ficm.ac.uk/sites/default/files/gpics-v2.pdf

Freeman-Sanderson, A. L., Togher, L., Elkins, M. R., & Phipps, P. R. (2016). Return of Voice for Ventilated Tracheostomy Patients in ICU: A Randomized Controlled Trial of Early-Targeted Intervention. *Crit Care Med, 44*(6), 1075-1081. doi:10.1097/ccm.0000000000001610

Happ, M. B., Seaman, J. B., Nilsen, M. L., Sciulli, A., Tate, J. A., Saul, M., & Barnato, A. E. (2015). The number of mechanically ventilated ICU patients meeting communication criteria. *Heart & Lung, 44*(1), 45-49. doi:10.1016/j.hrtlng.2014.08.010

Intensive Care Society and Faculty of Intensive Care Medicine. (2018). Allied Health Professionals: Critical Care Professional Development Framework. Retrieved from http://www.ics.ac.uk/ICS/Resources___AHP_Framework.aspx

Kim, M. J., Park, Y. H., Park, Y. S., & Song, Y. H. (2015). Associations between prolonged intubation and developing post-extubation dysphagia and aspiration pneumonia in non-neurologic critically ill patients. *Ann Rehabil Med, 39*. doi:10.5535/arm.2015.39.5.763

Kohr, L. M., Dargan, M., Hague, A., Nelson, S. P., Duffy, E., Backer, C. L., & Mavroudis, C. (2003). The incidence of dysphagia in paediatric patients after open heart procedures with transesophageal echocardiography. *Ann Thorac Surg, 76*(5), 1450-1456.

Langmore, S. (2001). *Endoscopic evaluation and treatment of swallowing disorders*. New York: Thieme.

Logemann, J. (1998). *Evaluation and Treatment of Swallowing Disorders* (2nd ed.). Austin, TX: Pro-Ed.

Macht, M., Wimbish, T., Clark, B. J., Benson, A. B., Burnham, E. L., Williams, A., & Moss, M. (2012). Diagnosis and treatment of post-extubation dysphagia: results from a national survey. *J Crit Care, 27*(6), 578-586. doi:10.1016/j.jcrc.2012.07.016

Major, M. E., Kwakman, R., Kho, M. E., Connolly, B., McWilliams, D., Denehy, L. . . . van der Schaaf, M. (2016). Surviving critical illness: what is next? An expert consensus statement on physical rehabilitation after hospital discharge. *Crit Care, 20*(1), 354. Doi: 10.1186/s13054-016-1508-x

McGrath, B., & Wallace, S. (2014). The UK National Tracheostomy Safety Project and the role of speech and language therapists. *Current Opinion in Otolaryngology & Head and Neck Surgery, 22*(3), 181-187.

McGrath, B. A., Wallace, S., Wilson, M., Nicholson, L., Felton, T., Bowyer, C., & Bentley, A. M. (2018). Safety and feasibility of above cuff vocalisation for ventilator-dependant patients with tracheostomies. *Journal of the Intensive Care Society, 0*(0), 1751143718767055. Doi: 10.1177/1751143718767055

Mobasheri, M. H., King, D., Judge, S., Arshad, F., Larsen, M., Safarfashandi, Z. . . . Darzi, A. (2016). Communication aid requirements of intensive care unit patients with transient speech loss. *Augment Altern Commun, 32*(4), 261-271. doi:10.1080/07434618.2016.1235610

Morris, L. L., Bedon, A. M., McIntosh, E., & Whitmer, A. (2015). Restoring speech to tracheostomy patients. *Critical Care Nurse, 35*(6), 13-28. Doi: 10.4037/ccn2015401

National Confidential Enquiry into Patient Outcomes and Death. (2014). On the Right Trach? A review of the care received by patients who underwent a tracheostomy. Retrieved from http://www.ncepod.org.uk/2014tc.html

National Institute for Clinical Excellence. (2017). Rehabilitation after Critical Illness in Adults Quality Standard [QS158]. Retrieved from https://www.nice.org.uk/guidance/qs158

National Institute for Health and Clinical Excellence. (2009). NICE clinical guideline 83: Rehabilitation after critical illness. Retrieved from https://www.nice.org.uk/guidance/cg83/evidence/full-guideline-242292349

NHS England. (2019). *Adult Critical Care Service Specification*. NHS England Retrieved from https://www.england.nhs.uk/wp-content/uploads/2019/05/Adult-Critical-Care-Service-Specification-FINAL.pdf

Pryor, L., Ward, E., Cornwell, P., O'Connor, S., & Chapman, M. (2016). Patterns of return to oral intake and decannulation post-tracheostomy across clinical populations in an acute inpatient setting. *Int J Lang Commun Disord, 51*(5), 556-567. doi:10.1111/1460-6984.12231

Royal College of Speech and Language Therapists. (2014). Tracheostomy Competency Framework. Retrieved from https://www.rcslt.org/members/publications/publications2/tracheostomy_competency_framework

Scheel, R., Pisegna, J. M., McNally, E., Noordzij, J. P., & Langmore, S. E. (2015). Endoscopic Assessment of Swallowing After Prolonged Intubation in the ICU Setting. *Ann Otol Rhinol Laryngol, 125*(1), 43-52. Doi: 10.1177/0003489415596755

Segaran, E. (2006). Returning to normal: The role of eating in recovery from a critical illness. *BJNN, 2*(3), 141-148. doi:doi:10.12968/bjnn.2006.2.3.21103

Sutt, A. L., Cornwell, P., Mullany, D., Kinneally, T., & Fraser, J. F. (2015). The use of tracheostomy speaking valves in mechanically ventilated patients results in improved communication and does not prolong ventilation time in cardiothoracic intensive care unit patients. *J Crit Care, 30*(3), 491-494. doi:10.1016/j.jcrc.2014.12.017

Tembo, A. C., Higgins, I., & Parker, V. (2015). The experience of communication difficulties in critically ill patients in and beyond intensive care: Findings from a larger phenomenological study. *Intensive and Critical Care Nursing, 31*(3), 171-178. doi:10.1016/j.iccn.2014.10.004

UK National Tracheostomy Safety Project. (2013). National Tracheostomy Safety Manual. Retrieved from www.tracheostomy.org.uk

Yi, S. H., Kim, S. J., Huh, J., Jun, T. G., Cheon, H. J., & Kwon, J. Y. (2013). Dysphagia in infants after open heart procedures. *Am J Phys Med Rehabil, 92*(6), 496-503. doi:10.1097/PHM.0b013e31828763f4