4th March 2024

Dear Dr Henderson,

Re: Regulation 28: Report to Prevent Future Deaths in the matter of David Bryan Moore

Thank you for sending us a copy of your report regarding the sad death of Mr David Moore. We have jointly reviewed the information available to us in the report via our Safe Anaesthesia Liaison Group (SALG). SALG is a collaborative project between the Association of Anaesthetists, NHS England's Patient Safety team and the Royal College of Anaesthetists. One of its core objectives is to analyse anaesthesia-related serious incidents and to share the learning with the specialty across the UK. We have also consulted with the Faculty of Intensive Care Medicine (FICM), the Intensive Care Society (ICS) and the National Tracheostomy Safety Project (NTSP).

Your prevention of future deaths report highlighted your concern regarding the "Guidelines for the anaesthetic and/or Intensive Care management of a flanged tracheostomy tube." The College, FICM and ICS have worked with the NTSP to develop, publish and disseminate guidelines for tracheostomy care since 2012. This was in response to critical incident analysis research that identified recurrent themes in the management of tracheostomies in anaesthesia, critical care and hospital wards that led to patient harm. We have summarised key references below, and summarise key points from these existing documents below, with respect to general tracheostomy care and in the specific case of adjustable flanged tracheostomy tubes.

The NTSP first published guidance in 2012. The guidelines are supported by a comprehensive bank of learning materials available on the www.tracheostomy.org.uk website. The College co-developed tracheostomy e-learning resources with the NTSP which are available from the NHS e-learning for healthcare program. Guidance has been disseminated through a number of national Quality Improvement projects, including an NHS England National Patient Safety Improvement Program (NatPatSIP) in 2020. Detailed formal guidance for tracheostomy care in the critical care setting was developed by NTSP and endorsed by FICM and ICS, last revised and published in 2020. This standards document, which is freely available via the FICM website, contains specific guidance for the management of adjustable flanged tracheostomy tubes, and states that "*The position and orientation of the tracheostomy tube must be checked and documented, with the patient in the position that they will be nursed in (rather than the insertion position). This should include the distance from the carina, which is especially important for adjustable flanged tubes.*" The resources hosted on the NTSP website, which is signposted from the guidance, states that "*It is essential to review the position of the flange (hence the length of the tube) on a daily basis. If the patient has neck swelling, as this worsens or resolves, the flange may need adjusting.*"

The executive summary of the most relevant guidance to the index case (the NTSP, FICM and ICS standards) makes it clear that local critical care units and teams need to train, support and equip their staff in order to safely care for this vulnerable patient group. From Section 1(Executive Summary):

> *"There is increasing evidence from national and international quality improvement programs that a multidisciplinary tracheostomy team that reviews and coordinates the*

management of tracheostomy patients can bring benefits for the quality and safety of care, including organisational efficiencies and significant cost savings.

"All patients with tracheostomies admitted to critical care units should expect safe care to be delivered by appropriately trained, equipped and supported staff. Patient-centred high-quality care also focusses on communication, vocalisation, mobilisation, information and a prompt return to oral intake. Improving the quality and safety of patients with tracheostomies and laryngectomies is a hospital-wide issue, and our speciality is well placed to lead and to contribute to the safe management of this vulnerable patient group."

The sad case of Mr Moore highlights a number of common problems with tracheostomy management in the critically ill patient. We do not have the specific clinical details, but several important details are clear from your report:

- Mr Moore was critically ill following his severe burn. This significantly reduces the physiological reserve of a patient to tolerate any problems with the airway or breathing and means that even minor blockages or displacements can lead to rapidly life-threatening situations.
- There is inevitable swelling associated with a severe burn, which can be dramatic. Swelling around the head and neck, in combination with extensive burns dressings, can make the maintenance and management of artificial airway devices difficult, even for expert teams following appropriate guidance.
- The reason for the displaced tracheostomy tube in Mr Moore's case was that the tube became displaced during a roll to facilitate a change of dressings.
- Mr Moore's tracheostomy was approximately 8 days old, and presumably performed using an open surgical technique. The tracheostomy stoma (the opening between the trachea and the skin on the front of the neck) would be expected to be sufficiently mature by this time to facilitate attempts at tracheostomy tube reinsertion. Given the nature of his critical illness and the likely difficult and swollen neck anatomy, reinsertion of a tracheostomy tube can still be difficult, or even impossible in this situation.

Our clinical experts recognise that neck swelling can be a dynamic process, particularly in patients with severe burns affecting the head, neck and chest. This can lead to migration of any artificial airway device, including oral tubes and tracheostomy tubes. This is often the reason why adjustable flanged tracheostomy tubes are chosen in cases such as Mr Moore's. Assessment of the condition of any artificial airway device in a critically ill patient is part of routine medical and nursing care and is recommended to be undertaken *"at least once per nursing shift (8-12 hours)"* in the FICM/ICS/NTSP standards.

The NTSP had agreed with the Difficult Airway Society in 2023 to review and revise the current guidelines for tracheostomy emergency management. The Royal College of Anaesthetists, Association of Anaesthetists, Faculty of Intensive Care Medicine and the Intensive Care Society will be stakeholders in this update, which will ensure that updated guidance will be appropriately disseminated. Other stakeholders representing the multidisciplinary team involved in tracheostomy care will also be involved, including head and neck surgery, nursing, physiotherapy, and speech and language therapy. We anticipate publication of updated guidelines in 2025. Index cases such as the case of Mr Moore help to inform updates to such guidance where necessary and we thank you for bringing this case to our attention.

SALG publishes regular Patient Safety Updates, which are distributed to all members of the Association of Anaesthetists and Royal College of Anaesthetists. FICM publishes regular Safety

Bulletins, which are distributed to all their members. We will use these publications to highlight the learning from Mr Moore's death and re-promote the guidance to our members.

We would be happy to respond to any questions that you might have.

Yours Sincerely

[redacted]

[redacted]

President
Royal College of Anaesthetists

[redacted]

President
Association of Anaesthetists

References

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4. BA McGrath, N Ashby, M Birchall, P Dean, C Doherty, K Ferguson, et al. Multidisciplinary guidance for safe tracheostomy care during the COVID-19 pandemic: the NHS National Patient Safety Improvement Programme (NatPatSIP). Anaesthesia 2020; 75 (12), 1659-1670

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