event when the turning of the head towards the ipsilateral side as the lower jaw touches the anterior chest wall will not work effectively, the catheter can be easily pulled back and be re-inserted.

We would support the development of this technology in two sectors: to increase the production and potential cost reduction, and the development of sensors that can be re-sterilized.

**Declaration of interest**

None declared.

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**Training for tracheostomy**

Editor—The 4th National Audit Project (NAP4) has highlighted several important areas for closing gaps in airway management. Some of its inspirational closing words read ‘Airway management is a fundamental anaesthetic responsibility and skill; anaesthetic departments should provide leadership in developing strategies to deal with difficult airways throughout the entire organisation’.1 One of the key findings was the significant morbidity and mortality from displaced tracheostomies in intensive care unit patients. This has quite rightly led to a focus on teaching and training to optimize management of these rare but potentially devastating emergency situations.

Aside from these critical incidents, anaesthetists routinely encounter tracheostomies in the theatre and critical care environment. In addition, adverse events not only present as acute emergencies from blocked or displaced tubes, but also more insidiously, because of inappropriate weaning strategies. It is therefore essential that anaesthetists of all grades possess a basic level of knowledge and familiarity with the day-to-day care of tracheostomies. Indeed, one would imagine that it is this core experience that would lead to increased confidence in managing emergencies when they arise.

The 2010 intermediate level training curriculum of the Royal College of Anaesthetists (RCoA) recommends that learning objectives include indications, anaesthetic principles, and management of the obstructed/misplaced tracheostomy.2 In addition, the 2010 RCoA Higher Intensive Care Medicine curriculum identifies percutaneous tracheostomy insertion as a core competency and lists elective changing of tracheostomy tubes as an objective.3 However, there are no formal learning objectives for other important aspects such as the process of weaning in tracheostomy patients and the equipment involved in daily management. We believe this to be a vital but often overlooked area of training.

We undertook a survey of our trainees investigating their perceived level of knowledge, training, and confidence with tracheostomy patients. The second part of the survey consisted of 17 true–false questions regarding tracheostomy equipment and weaning, based on the Trust Tracheostomy Policy. The results that we obtained were surprising to us and we imagine are not unique to our School of Anaesthesia.

Of the 49 responding trainees, 39 out of 49 stated that they had received no formal tracheostomy training. Fifteen out of 49 felt ‘not at all confident’ in caring for patients with tracheostomies and 21 out of 49 felt ‘not at all confident’ in making decisions regarding tracheostomy weaning. As expected, the level of confidence did vary appropriately with grade of trainee (Fig. 1). However, there were still a significant proportion of senior trainees with low confidence in these situations.

The anaesthetic registrars who were also training in intensive care medicine (ICM) (five trainees) were far more likely to have received formal training (4/5 vs 6/44). This was reflected in their increased levels confidence in both caring for tracheostomy patients and making weaning decisions (none of the dual ICM trainees felt ‘not at all confident’ in either of these situations).

There was an average overall score of 10/17 for the true/false questions regarding tracheostomy equipment and weaning. This average incremented appropriately with grade and experience. However, these answers revealed some striking deficiencies in the knowledge and understanding of the details of tracheostomy care. Alarmingly, 29 out of 49 trainees believed a trial of speaking valve could be considered before a trial of cuff down. Thirteen out of 49 trainees did not realize that fenestrated tubes were no longer used within the Trust, and 12 out of 49 trainees did not know that humidification was an essential component of tracheostomy care.

Our findings would suggest that training in tracheostomy care remains a worrying deficiency in the current curriculum, particularly for those trainees who are not on the ICM training programme. This is apparent in the levels of confidence among the trainees. It may contribute, if left unaddressed, to further adverse incidents. Our strategy to deal with this lack of confidence and training has been to develop and run a comprehensive training day. In addition to rehearsing emergency algorithms, there was a focus on general tracheostomy care and equipment. There was input from the physiotherapists and speech therapists, to ensure that communication,
weaning, and swallowing were also adequately covered. The inaugural pilot day was very well received by the trainees and we hope this will improve their practice in the future.

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Pain management: a global perspective
Editor—I read with interest the recent BJA postgraduate issue on Managing Pain: Recent Advances and New Challenges. I had hoped for mention of the crisis of acute and chronic pain in low-income countries. Pain is acknowledged as a global health problem\textsuperscript{1, 2} and pain management is considered inherent to the highest attainable standard of health as promised by the Universal Declaration of Human Rights.\textsuperscript{3} While as many as 10–20\% adults are estimated to suffer from pain in low-income countries, where the fewest options for pain management exist, pain, especially chronic pain, may occur in a higher percentage of the population and is likely an important contributor to disability. It is within these same low-income countries that a shift in epidemiology has occurred such that trauma and cancer rank among the leading causes of disability and premature death,\textsuperscript{4} and with very little surgical intervention or other treatments available for these disease states, a prolonged and painful disease course is the norm. Tragically, the perfect storm of few trained anaesthesia providers, limited access to non-steroidal anti-inflammatory drugs and narcotics,\textsuperscript{5} and an absence of adjuvant therapy for severe pain result in unbearable pain for most of these patients.

The scale and prevalence of pain is largely not known in low-income countries. The international literature reveals only a handful of studies evaluating pain even in middle-income countries,\textsuperscript{6, 7} so certainly the possibility of raising awareness, encouraging further analysis, and improving pain management in these settings represents a grand challenge. The BJA has often focused articles on such crises and challenges, and with this in mind, I bring you my comments on the excellent July issue on pain management.