Enhancing advanced airway skills in trainees amid crisis: A call for comprehensive training programs

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In times of crisis, the importance of well-trained and proficient healthcare professionals cannot be overstated. The ability to manage airways effectively is a critical skill for anesthesiologists, particularly in high-stakes situations where rapid and precise interventions can be the difference between life and death.

This editorial aims to address the pressing need to improve advanced airway skills in trainees during crises, emphasizing the significance of continuous professional development programs and the promotion of innovations.

One of the primary challenges faced during a crisis is the demand for a skilled workforce.[1] Sri Lanka is currently facing a shortage of specialist medical officers in all fields. Anesthesiologists play a pivotal role in airway management, which requires sufficient training to ensure that trainees are well-prepared to handle the complexities of emergency situations. Adequate manpower requires not only recruitment but also systematic training programs that integrate theoretical knowledge

with hands-on experience.[1]

Training should not be viewed as a one-time event but rather as an ongoing process. Continuous professional development programs play a vital role in keeping healthcare professionals abreast of the latest advancements in airway management. This involves regular workshops, conferences, and skill-building sessions that allow professionals to refine their techniques and stay informed about emerging technologies and best practices.

The use of simulation training is important for improving advanced airway skills. High-fidelity mannequins offer a realistic and immersive training experience, allowing trainees to practice critical

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interventions in a controlled environment.[2] These simulations can replicate various clinical scenarios, including difficult airway situations, enabling trainees to develop the confidence and competence required in real-life emergencies.

However, in resource-constrained environments, low-fidelity mannequins can serve as valuable alternatives. These cost-effective models provide basic anatomical features and allow for repetitive practice of fundamental airway manoeuvres. Balancing the use of high-fidelity and low-fidelity mannequins can enhance training accessibility and effectiveness, ensuring that a broader spectrum of trainees receives adequate preparation.

The digital era offers unprecedented opportunities for remote learning, a feature that proves particularly valuable during crises. Online training programs provide flexibility, allowing trainees to access educational materials and simulations from various locations. These programs can be tailored to meet the specific needs of trainees, offering a personalized learning experience that accommodates different learning styles and paces. The higher education institutes should facilitate trainees enrolling these programs. Solutions should exist when financial problems prevent them from undertaking such programs.

The number of scientific publications on the 'difficult airway' has significantly increased in the past 20 years, dominating the anaesthetic literature and other research topics in anaesthesia.[3] Still the number of contribution from Sri Lanka is minimal. The practice of research culture should be promoted in order to improve training and quality of clinical care given.

Promotion of special interest groups and airway leads in institutions are widely practiced in developed world. The concept of airway leads was generated following recommendations and findings of the Fourth National Audit Project (NAP4) in the UK.[4] The aim of this initiative is to establish a network of practitioners to assist and to improve overall anaesthetic airway management. Local airway leads in Australia are supported by a state airway lead who is a nominated executive member of the Airway Management SIG. The role of the airway lead is not proscriptive and allows for variation and flexibility of practice according to local requirements. These kind of special interest groups may increase the interest in local trainees about advanced airway.

The effectiveness of airway management training programs are linked to the availability and maintenance of appropriate equipment. Adequate funding and resource allocation are essential to procure state-of-the-art airway management devices and simulators. Furthermore, a proper system for equipment maintenance and regular updates is necessary to ensure that the training tools remain in optimal condition for continuous use.

Innovation is key to advancing airway management training and ensuring that trainees are exposed to cutting-edge technologies. This includes the development of novel simulation models, virtual reality applications, and other innovative tools that enhance the realism of training scenarios. There are significant number of innovations related to airway and airway management developed over the past years. These includes; various monitoring devices, capnography, cuff pressure monitoring devices, ventilatory modes and non-invasive ventilation and second generation supraglottic airway devices (SADs) and tracheal tubes. [4] They are mainly Collaboration between

healthcare institutions, industry partners, and educational researchers is crucial to fostering an environment conducive to continuous improvement and innovation.

Enhancing advanced airway skills in trainees during a crisis requires a multifaceted approach that addresses manpower, training resources, online programs, sustainability, continuous professional development, equipment needs, maintenance, and the promotion of innovations. As we navigate through uncertain times, investing in comprehensive training programs is not only a pragmatic response to immediate challenges but also a strategic investment in the long-term resilience and preparedness of our healthcare workforce. By prioritizing advanced airway management training, we empower our trainees to face crises with confidence and competence, ultimately saving lives and safeguarding the well-being of our communities.

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