

Airway Guidelines – what relevance do they have in the emergency department?

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To date airway guidelines have been aligned with national associations/organizations and for the most part discipline specific. Most existing guidelines address airway management performed in the operating theatre by anaesthetists. Other guidelines addressing airway management in the critically ill patient although not intended to be location specific, have been almost exclusively authored by anaesthetists. Critically ill patients may require airway management in any setting including the prehospital, emergency department (ED), ward, intensive care unit (ICU) or operating theatre environment. There currently are no existing emergency medicine airway management guidelines. All patients presenting to the ED requiring airway management are critically ill and it seems logical that existing critical care guidelines should directly apply to clinicians working in this setting. There has been a historical and cultural gap in many parts of the world on 'whose job it is' to manage the airway outside of the operating theatre with some evidence that an airway performed by a 'non-anaesthetist' represents a higher risk airway. This literature is biased by name tag assumptions of proficiency based on regional practice variations in the provision of airway management in the ED. 'Owning' the airway is about matching the provider and skill with the patient and environment and should be judged based on patient-centred outcome measures (more on this in my talk on the dangerous airway).

The Canadian Airway Focus Group (CAFG) was the first airway guideline to include emergency physicians as authors and refer to airway 'providers' as opposed to using discipline specific terminology. These guidelines have been integrated into national airway management educational programming (Airway Management & Interventions in Emergencies: AIME) delivered through the Canadian Association of Emergency Physicians (CAEP). In the Part 1 document on managing the encountered difficult airway in the unconscious airway, the algorithm begins with a failed first attempt at laryngoscopy and intubation. The progression stresses the importance of optimizing each attempt and avoiding repetition without a change in approach.

While the goal in most airway management algorithms is to successfully place a tracheal tube in preparation for a scheduled procedure, in the ED tracheal intubation is performed as part of the technical package of resuscitation. Ensuring optimal oxygenation/ventilation and correcting hemodynamics is vitally important in managing critically ill patients before tracheal intubation is attempted. Timely intubation in these patients has nothing to do with rapidly pushing drugs. The ABCs of resuscitation rarely require rapid deployment of a laryngoscope.

An unsuccessful laryngoscopy and intubation attempt must be followed by facemask or supraglottic ventilation before any further laryngoscopy. There is no prescription when to 'tap-out' after x number of intubation attempts in the CAFG guideline. As long as

subsequent attempts represent a change whether that be with an untried optimization manoeuvre with the same device, using a different device or the presence of a more skilled provider up to three attempts may be appropriate. However, declaring a failed intubation can occur at anytime throughout this progression. Failed intubation in the context of maintained oxygenation and ventilation should direct the provider to an exit/'bail-out' strategy which most commonly involves placement of a supraglottic airway in the ED setting.

At any point after a failed intubation attempt, if rescue face mask or supraglottic ventilation does not reoxygenate the patient (poor or absent waveform capnography and falling saturations), the algorithm shifts to a time dependent can't ventilate/can't oxygenate (CVCO) scenario where the provider must cognitively and verbally commit by declaring a failed airway (or whatever terminology you choose) and ready self and team for the need to do a XXXX (FONA, surgical airway, neck rescue, cut the neck cric etc). This *should happen without delay unless* there is an immediately available untried intervention that has a higher likelihood of success. This may include establishing neuromuscular blockade, a trial of intubation, or placement of an SGA. The risk at this juncture is that the airway provider delays initiation of an emergency front of neck airway in favour of re-attempting what has already failed. Performing a cricothyrotomy should never be perceived as a failure when indicated even if the procedure fails to rescue a dying patient. It is up to all providers to attain and maintain this skill for it to be a viable rescue option. While there is no evidence supporting one approach over another, the scalpel finger bougie approach is recommended by this author as the preferred tactile approach to securing a front of neck airway.

The CAFG Part 2 document addresses the approach to the anticipated difficult airway. This topic will be covered in a separate lecture. The decision of how to proceed with airway management assumes that in critically ill patients, delaying or cancelling the case is not possible. There may be rare scenarios where delay is the safest route. However, the main decision revolves around the safety of using a neuromuscular blockade as part of an RSI to secure the airway. This decision has historically revolved around assessing the patient's intrinsic anatomy or acquired pathology as a potential obstacle in safely and rapidly securing the airway with a tracheal tube. If high risk, then an awake approach should be considered. More recently it has been recognized that rendering a physiologically compromised patient apnoeic poses a significant risk, including a 3% incidence of postintubation cardiac arrest. Refractory hypoxemia, hypotension, acidosis, and right ventricular strain represent a cohort of patients that may be considered apnea intolerant from worsening critical hypoxemia, the effects of induction drugs and/or positive pressure ventilation. The physiologically difficult airway may warrant considering an awake approach. While awake tracheal intubation (ATI) may be considered a safer approach for managing both anatomically and physiologically at-risk patients, this is predicated on them being cooperative enough to tolerate this approach. While some clinicians consider ATI relatively contraindicated in critically ill patients this 'default out' may be unwarranted.

If time allows, I will talk about the meaning of life and sing a Leonard Cohen song.

