



## Editorial

## Emergency airway management: The need to refine – And redefine – The “state of the art”

### 1. Commentary

Over 15 years ago, Ron Walls and colleagues launched the National Emergency Airway Registry (NEAR), a multicenter effort to characterize airway management practices in United States (US) Emergency Departments (ED).<sup>1,2</sup> Data from NEAR helped to demonstrate the competence of emergency physicians in the most advanced airway management techniques and to spotlight emergent airway management as a defining intervention in the state-of-art practice of EM. NEAR played a pivotal role in the history of EM in the US, helping to cement the role of the emergency physician in the care of the critically ill.

Since its inception NEAR has influenced emergency care internationally. In this issue of *Resuscitation*, Hasegawa et al. provide one of the first reports from the Japan Emergency Airway Network (JEAN), a multicenter ED airway registry directly modeled after NEAR.<sup>3</sup> The authors' description of 1486 intubations performed at 10 academic and community EDs in Japan offers evidence of early success in this country's evolving emergency care system. The authors also point out gaps and variations in clinical practices, highlighting key areas for improvement.

The description is reminiscent of the US EM experience two decades ago; a nascent specialty struggling to define its scope, practice and workforce, and striving to prove its worth in the care of the sickest patients.

Hasegawa's study and comments are a testament to the progressive and forward-thinking vision of EM leaders in Japan. The Japanese EM community clearly recognizes the advances needed to achieve these goals, including the establishment of organized and accredited EM residency training, government investment in and oversight of EM, and a nationally unified approach to the organization and quality of emergency care. Most importantly, they are to be congratulated for embracing scientific evidence as an important component for achieving these aims. The accomplishments of EM in Japan should not be surprising given similar energetic efforts in other Asian countries. As evidenced by the Pan-Asian Resuscitation Outcomes Study (PAROS) network, our colleagues in Asia are not only skilled at using but also adept at generating scientific evidence.<sup>4</sup> While much of current Asian EM practice is influenced by scientific evidence from the US and other Western countries with developed emergency care systems, data are now beginning to flow in the opposite direction to impact – and improve – practices in the West. For example, recent studies from Japan have strongly influenced international recommendations for cardiopulmonary resuscitation chest compressions.<sup>5–7</sup>

Hasegawa's study also prompts us to reflect upon the current state of airway care in the US and other Western countries with mature emergency care systems. Despite its ubiquitous presence in contemporary EM practice, many vital questions regarding emergency airway management remain unanswered. For example, do specific airway management techniques or strategies improve outcomes? Does ED airway management encompass unrecognized harms? What are the minimum airway skill sets and training thresholds necessary for emergency physicians? Ironically, the majority of scientific evidence describing emergency airway management originates from the *out-of-hospital* setting, with numerous descriptions of the techniques, adverse events, outcomes, and training and skill thresholds for airway management by field practitioners.<sup>8–15</sup> Yet, we lack similar insights of airway management in the ED.

Why the need for introspection? Simply put, airway management in the ED is not immune to the unwanted events described in the out-of-hospital setting; for example, unrecognized esophageal intubation, oxygen desaturation and bradycardia, among others.<sup>8,9,12</sup> In the West, we have become somewhat complacent about ED airway practices. Recent national reports from the United Kingdom highlight that ED airway management complications and disasters can occur in settings with mature emergency care systems.<sup>16</sup> Without proactive surveillance, we are likely missing key opportunities for improving the quality and safety of ED airway care. Our colleagues in the out-of-hospital world have identified novel strategies for improving the safety and effectiveness of out-of-hospital airway management; for example, the use of supraglottic airway insertion to minimize chest compression interruptions or to simplify neuromuscular-blocked assisted airway management.<sup>17,18</sup> To advance EM internationally, we must similarly seek opportunities to refine – and redefine – the “state of the art.”

### Conflict of interest statement

The author declares no conflicts of interest.

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