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Editorial

Re-imagining how care is delivered in the tactical and austere setting: luck vs skill

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Thirteen – an unlucky number for some, but for those involved in the Thailand cave rescue it will forever be a figure that symbolises a seminal event where clinicians, medics and rescue workers overcame a volatile and stressful environment utilising innovation, clinical creativity and highly skilled teams to save the lives of the Wild Boar soccer team. Imaging and integrating a full face dive mask into the anaesthetic intervention to provide constant positive airway pressure led to the successful rescue of 12 boys and their soccer coach¹. This is exactly what Australian Dr Richard Harris did. With over 30 years' experience in cave diving and being a senior consultant anaesthetist, Dr Harris' ability to embrace uncertainty, perform under stress, and work collaboratively to affect positive patient outcomes was more skill than luck.

This issue of the *Journal of High Threat & Austere Medicine (JHTAM)* exemplifies researchers and tactical medics who are striving to re-imagine current practices, and provide an evidence base to adopt new and novel skills or treatment algorithms within uncertain, complex and stressful environments to improve patient care. Original research by Mackie et al, presented in this edition as a continuation of previous published protocol², was conceived by Special Forces medics within the Australian Army who found peripheral intravenous catheter (PIVC) insertion and securement in the austere tactical setting challenging and therefore developed a new method to reduce dislodgement and optimise damage control resuscitation efforts. This study is a pragmatic example of how audits of practice in the austere setting can be enacted to shape future training and provide quantitative data to support a practice change. A further strength of this research is the collaboration between Defence clinicians and international research experts from the Alliance for Vascular Access Teaching and Research (AVATAR) group.

Effective team decision making has the potential to improve the quality of healthcare outcomes. Pre-hospital medical teams such as fire-rescue, paramedics and/or police must appropriately respond to improve the outcome of deteriorating patients such

as those trapped in a vehicle following a collision. In this issue of *JHTAM*, Miletta builds on our understanding and use of shared mental models (SMMs)³ and the different MARCH mnemonics⁴, which have shown to promote performance under stress and enhance patient outcomes. Stress in all forms affects how people make decisions⁵ and the introduction of a dual stream mnemonic CrashMARCH emphasises life-saving interventions while also promoting safety on scene following a vehicle collision. The treatment pathway embedded within this updated mnemonic has been informed by tactical medicine, and could be imparted to rescue authorities and tested by emergency or paramedic researchers to assess the utility of this integrated approach.

In the same way the Thailand cave rescue shifted conventional views on what is possible within diving and hyperbaric medicine, the article in this issue by Brayford-Harris et al argues for a rethink on the governance, training and medical practices within an emerging sub-speciality of tactical emergency medical care, namely public order medicine. Any setting where conventional medical assets are not suitable requires careful discourse and examination of risk versus benefit, as well as an understanding of the legal implications and training and workforce selection.

Building on our understanding of uncertainty and enhancing decision making, Watson and Dawson's book review in this issue on Annie Duke's *Thinking in bets – making smarter decisions when you don't have all the facts* reveals key insights. The authors explore if patient outcomes are the result of skill or luck, consider which viewpoints are pivotal to success, and conclude that the concept of uncertainty must be embedded in the training of pre-hospital and trauma clinicians to optimise individual performance and patient outcomes.

It took more than two weeks to rescue the Wild Boars from the Tham Luang cave complex. When evacuation to a more appropriate echelon (or role) of care is delayed, the principles described in the prolonged casualty care (PCC) standard⁶ may inform the practices of combat medics and others operating in remote, austere settings. In this issue, former Special Forces