

89 (17.0%) patients were offered pharmacological thromboprophylaxis. No VTE events were recorded in this group. However, in 435 (83%) patients who did not receive prophylaxis, 5 VTE events were recorded, including 3 proximal thrombi. We found no evidence of major or clinically relevant non-major bleeding.

A frequency histogram of derived TRIP (Cast) score values is shown in figure 3. A threshold of ≥ 6 for prophylaxis would result in 111 (21.1%) patients being offered prophylaxis, with all 3 of the proximal VTE events potentially prevented.

In conclusion, use of the TRIP (Cast) score in our ED population appears to outperform current risk assessment practice, at a small overall increase in the population eligible for prophylaxis.

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INCIDENCE OF HYPEROXIA IN TRAUMATICALLY INJURED PATIENTS RECEIVING PRE-HOSPITAL EMERGENCY ANAESTHESIA: A 5-YEAR RETROSPECTIVE ANALYSIS

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Aims/Objectives/Background Previous studies have demonstrated an association between hyperoxia and increased mortality in various patient conditions. In the present study, we aim to investigate the incidence of hyperoxia in trauma patients receiving PHEA, and we aim to determine factors that may help guide prehospital oxygen administration.

Methods/Design A retrospective cohort study was performed of all patients who received PHEA by a single helicopter emergency medical service (HEMS) service between 1 October 2014 and 1 May 2019 and who were subsequently transferred to one major trauma centre (MTC). Patient and treatment factors were collected from the electronic patient records of the HEMS service and the hospital. Hyperoxia was defined as a PaO₂ >16, based on the first arterial blood gas analysis upon arrival to hospital.

Results/Conclusions On presentation to the MTC, the majority of the patients (90/147, 61.2%) had severe hyperoxia, 30 patients (20.4%) had mild hyperoxia, 26 patients (19.7%) had normoxia, and 1 patient (0.7%) had hypoxia. The median [IQR] PaO₂ in the first ABGA after HEMS handover was 36.7 [18.5–52.2] kPa, with a range of 7.0–86.0 kPa. SpO₂ readings before handover were independently associated with presence of hyperoxia. An SpO₂ $\geq 97\%$ was associated with significantly increased odds of hyperoxia (OR 3.99 [1.58–10.08]), and had a sensitivity of 86.7 [79.1–92.4]%, specificity of 37.9 [20.7–57.8]%, positive predictive value of 84.5 [70.2–87.9]%, and a negative predictive value of 42.3 [27.4–58.7]%, for presence of hyperoxemia.

HEMS oxygenation strategies are effective; trauma patients who have undergone PHEA often have a profound hyperoxemia upon arrival in hospital. In the prehospital setting where ABGA is not readily available, target SpO₂ of 94–98% as recommended in BTS Guidelines should guide FiO₂ titration to reduce risk of tissue hyperoxia. Predeparture checklists should include an agreed system to adjust FiO₂ according to a patient's SpO₂ rather than fixed concentration.

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VIRTUAL PLATFORMS FOR LEARNING: BALANCING PANDEMIC NEEDS SPRINGBOARDS FUTURE EDUCATIONAL SUCCESS

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Aims/Objectives/Background The current Covid-19 pandemic poses many unprecedented educational challenges. Virtual learning is a recognised and increasingly validated modality that has been strategically adapted to facilitate pandemic educational delivery. Balancing platform usage with fewer available face to face sessions could facilitate clinical competency development and progression for all workforce colleagues and beyond.

Methods/Design This prospective cross-site large DGH survey, powered at an 8% margin of error with 95% confidence intervals, aimed to identify colleague perceptions of virtual learning platforms.

80 colleagues (41 males, 39 females) participated in survey monkey questionnaire completion over a designated three-week period following governance approval.

Demographic data was collated on job title/grade, sex, age bracket and whether the respondent currently worked in ED. Likert scale referenced statements on knowledge, confidence, utility and enjoyability were transcribed into metric data for analysis (1- strongly disagree, 2- partially disagree, 3- neither agree or disagree, 4- partially agree, 5- strongly agree).

Results/Conclusions Survey participants at undergraduate and postgraduate levels believed virtual platforms are useful (3.80, $p < 0.002$) and had confidence in them (3.90, $p < 0.001$) despite face to face preferences (4.23, $p < 0.001$). Respondents believed virtual mapping facilitated competency development and portfolio completion with high utility and system knowledge (3.68–4.08, $p < 0.001$). Whilst preferring platform variety and pre-determined guidance, subgroup analyses showed Foundation and Core EM Trainees had highest enjoyment levels (3.85–4.88, $p < 0.001$). Trainees preferred receiving virtual learning on one platform (4.78, $p < 0.001$). Perceptions on needing traditional classroom teaching were neutral (3.2, $p < 0.01$).

Overall, themes relating to respondent's perception of virtual platforms were positive. This survey provides a valid, transferable platform for developing and exploring future balanced use of virtual platforms as resources for educational progression and development.

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EARLY AND DELAYED TRAUMATIC INTRACRANIAL BLEEDING IN THE ANTICOAGULATED HEAD INJURED PATIENT: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Aims/Objectives/Background Patients taking anticoagulant medication frequently attend the Emergency Department following head injuries. Whilst previously these patients were taking warfarin, they are now increasingly taking DOACs. Both classes of anticoagulant are believed to increase the incidence of traumatic intracranial haemorrhage (tICH). However, it is unclear whether DOACs confer the same risks as warfarin. There are also concerns that anticoagulated

patients, who have had an initially normal CT scan, are at risk of delayed tICH.

This systematic review and meta-analysis compares the incidence of early and delayed tICH in patients attending the Emergency Department on DOACs and warfarin.

Methods/Design A literature search was conducted using the Medline(OVID and PubMed), EMBASE, Web of Science and Cochrane libraries using defined keywords. Prospective studies and retrospective studies were included. The primary outcomes were the incidences of early and delayed tICH. Mortality rates were also assessed. Meta-analyses were performed to compare the rates of early and delayed tICH between the anticoagulant groups. The rates of injury were also compared to patients not receiving anticoagulation.

Results/Conclusions The literature search found 42 relevant studies. Twenty three studies investigated the incidence of early tICH and 26 assessed delayed tICH. The pooled incidence of early tICH was 5.7% for DOACs and 7.3% for warfarin. Odds ratio for early tICH on DOACs was 0.47% (95% CI 0.34–0.66) when compared to warfarin and 0.96 (95%CI 0.68–1.36) compared to no anticoagulation. The incidence of delayed tICH was 1.2% for DOACs and 1.8% for warfarin (OR 0.70 (95% CI 0.38–1.31)). Odds ratio of mortality following a head injury on DOACs compared to warfarin was 0.4 (95%CI 0.17–0.94).

The systematic review and meta-analysis suggests the rate of early tICH and mortality may be lower for patients on DOACs as compared to warfarin. It also finds that the rate of delayed tICH bleeding is low in both groups.

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THE 'SILENT VIDEO' AS A TRAINING AID FOR EMERGENCY DEPARTMENT MAJOR INCIDENT MANAGEMENT

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Aims/Objectives/Background There is a specific need to refresh knowledge of and update Major Incident Protocols (MIP) but a department may have less than one Major Incident (MI) every 5 years.

As part of our department's COVID-19 pandemic response, a 'silent movie' of PPE donning-and-doffing techniques was

played on large screens in the background during clinical handovers. We theorised that this technique might be effective in training ED staff on the MIP.

Methods/Design We created a seven-minute silent video about our MIP using volunteer actors from ED Doctors, Nurses, and Ancillary Healthcare Staff. Brief captions describing key aspects of the MIP were overlaid on video clips and images.

The video was played on a continuous loop on wall mounted TVs for six continuous weeks, located within the handover room used by all ED staff members.

A questionnaire was sent out to all staff in ED to assess how the video's content improved understanding of the MIP. The design of the questionnaire was based on the Moore's Expanded Education Outcome Model.

Results/Conclusions 64 of the respondents viewed the video. From the cohort, 70% were satisfied with the format of the video and 84% believed the content to be useful. Using the Moore's outcome model there was an increase in 62.1% of the declarative knowledge post viewing, and a 47.8% increase in the confidence of knowing what to do in a MI. The confidence in being able to locate the MIP tray and perform well in a MI had also increased by 47.2% and 42.02% respectively.

The repeated silent video format was an effective teaching tool, as reflected in all aspects of Moore's model; majority of respondents showed improved confidence in all aspects of the MIP. Background training videos could form part of ED training, especially for topics which are not included in formal training programs.

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MANAGEMENT OF OLDER MAJOR TRAUMA PATIENTS: THE IMPACT ON MORTALITY SINCE IMPLEMENTATION OF DEDICATED GUIDELINES

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Aims/Objectives/Background Older trauma is an increasing challenge for trauma networks and many clinical protocols do reflect age-related changes in physiology and management. In 2018 older trauma guidance was introduced in our trauma

Abstract 947 Table 1

Moore's Outcomes Framework	Measure/Question	Response
LEVEL 1 Participation	Participation in questionnaire	95 responses out of 851 staff.
	Have you seen the ED major Incident video in the Handover Room?	67% of respondents had seen the training video (90% of these watched the whole video).
LEVEL 2 Satisfaction	I was satisfied with the format, delivery and content of the video.	70% were satisfied with the format of the video
	I found the content of the video useful.	84% thought the content useful
LEVEL 3A Learning: Declarative Knowledge	I know how the ED is organised in a Major Incident.	Before 25%, After 66%.
	I know what to do in a major incident.	Before 35%, After 67%
LEVEL 3B Learning: Procedural Knowledge	I could locate the Major Incident tray in each area of the ED.	Before 28%, After 53%.
	I would be able to perform well in a Major Incident.	Before 40%, After increased to 69%