delivering safe care). We integrated a middle range psychological theory with our findings to recommend a focus for training nurses in streaming and service improvements. We recommend a collaborative approach to service development, guidance and training (including input from emergency department clinicians, primary care clinicians) and a range of training strategies that are suitable for less experienced junior nurses and more experienced senior nurses and nurse practitioners.

11 EXTERNAL VALIDATION OF THE DUTCH PREDICTION MODEL FOR PREHOSPITAL TRIAGE OF TRAUMA PATIENTS IN SOUTH WEST REGION OF ENGLAND, UNITED KINGDOM

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Aims/Objectives/Background This is the first external validation of a European empirically derived prediction model for identifying major trauma in an unselected group of injured patients transported by ambulance in the United Kingdom.

Methods/Design This study was an external validation of a Dutch prediction model for identifying major trauma using a retrospective cohort of injured patients who ambulance crews transported to hospitals in the South West region of England. Major trauma was defined as Injury Severity Score (ISS)>15.

Participants were patients ≥16 years with a suspected injury and transported by ambulance from February 1, 2017 to February 1, 2018. This study had a census sample of cases available to us over a one year period.

We tested the accuracy of the prediction model in terms of discrimination, calibration, clinical usefulness, sensitivity and specificity and under- and over triage rates compared to existing trauma triage practices in the South West region.

Results/Conclusions A total of 68 698 adult patients were included in the final external validation cohort. The median age of patients was 72 (i.q.r. 46–84); 55.5% were female; and 524 (0.8%) had an ISS>15. In comparison the Dutch cohort was younger (45 years), more were male (58.3%) and more patients had an ISS>15. (8.8%) The model achieved good discrimination with a C-Statistic 0.75 (95% CI, 0.73 – 0.78). At a maximal specificity of 50% the model resulted in a sensitivity of 86%. The model improved undertriage rates at the expense of increased overtriage rates compared with routine trauma triage methods in the South West of England.

The Dutch prediction model for identifying major trauma can lower the undertriage rate to 17%, however it would increase the overtriage rate to 50% in this UK cohort. Further research is needed to determine whether the model can be practically implemented by paramedics and is cost-effective.

140 KILLED IN ACTION (KIA): AN ANALYSIS OF MILITARY PERSONNEL WHO DIED OF THEIR INJURIES BEFORE REACHING A DEFINITIVE MEDICAL TREATMENT FACILITY IN AFGHANISTAN (2004–2014)

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Aims/Objectives/Background Most fatalities from trauma, in civilian and military settings, die before reaching a hospital. However, no previous studies have comprehensively examined this phase of care. The aim of this study was to define the time interval between injury and death in UK military personnel who died pre-hospital from enemy action (Killed in Action, KIA).

Methods/Design The UK Joint Trauma Theatre Registry (JTTR) was used to identify all UK military personnel who died in Afghanistan (2004–2014). Through novel linkage of medical and tactical databases, an accurate timeline of events was obtained. Cause of death was determined from post mortem review. The primary objective was to report time between injury and death. Secondary objectives: mortality at key timepoints, the temporal lethality of different anatomical injuries, and trends in the case fatality rate (CFR, defined as deaths/injuries x100). Data are reported as n(%), and median [interquartile range]. Proportions compared with a Fisher's exact test, and survival was with a Gehan-Breslow-Wilcoxon test; level of significance was corrected by Bonferroni.

Results/Conclusions 2413 UK personnel were injured in Afghanistan from 2004–2014; 448 died, a CFR of 18.6%. 390 (87.1%) of total deaths (KIA + Killed Non-Enemy Action) were prehospital. Complete timeline data were available for n=303 (87.1%) KIA – this cohort had a median injury severity score of 75.0 [55.5–75.0]. The median time between injury and death in KIA was 0.0 [0.0–21.8] minutes; 173 (57.1%) died immediately, and by 10 min more than two-thirds had died. Primary injury to the head had a significantly shorter time to death compared to the abdomen and lower extremity (both p<0.01). Significant improvement in survival over the decade was due to a reduction in pre-hospital CFR without an increase in in-hospital CFR.

Over two-thirds of KIA deaths occurred within 10 min of injury. Improvement in the CFR in Afghanistan was predominantly in the prehospital phase.

160 STUDY OF SHORTNESS OF BREATH (SOB) POINT-OF-CARE BIOMARKER PANEL IN PATIENTS PRESENTING WITH SHORTNESS OF BREATH IN EMERGENCY DEPARTMENT

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Aim Study of shortness of breath (SOB) point-of-care biomarker panel in patients presenting with shortness of breath in Emergency Department.

Objective To study the sensitivity and specificity of SOB point-of-care biomarker panel in diagnosing Acute Coronary Syndrome (ACS), Heart Failure (HF) and Pulmonary Embolism (PE).

Background Shortness of breath (SOB) is one of the commonest symptoms of patients presenting to the emergency department (ED).

The differential diagnosis of SOB is very vast, knowing the frequency and severity potential of ACS, HF and PE should be considered.

Methods/Design 165 consecutive subjects 18 or more years old, presenting to the ED due to a primary complaint of SOB were included in this prospective study.

After detailed history and thorough physical examination, the blood samples of patients included in the study were