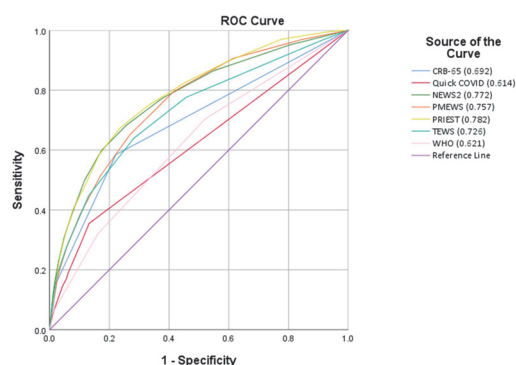


Abstract 1482 Table 2 Triage tool diagnostic accuracy statistics (95% CI) for predicting any adverse outcome (Omicron period)

Tool	N*	C-statistic	Threshold	N (%) above threshold	Sensitivity	Specificity	PPV	NPV
CRB-65	136,961	0.69 (0.68, 0.70)	>0	31,373 (22.9%)	0.59 (0.59, 0.59)	0.78 (0.78, 0.78)	0.05 (0.05, 0.05)	0.99 (0.99, 0.99)
NEWS2	137,125	0.77 (0.76, 0.78)	>1	76,183 (55.6%)	0.87 (0.87, 0.87)	0.45 (0.45, 0.45)	0.03 (0.03, 0.03)	0.99 (0.99, 0.99)
PMEWS	138,954	0.76 (0.75, 0.76)	>2	59,876 (43.1%)	0.80 (0.80, 0.80)	0.58 (0.58, 0.58)	0.04 (0.04, 0.04)	0.99 (0.99, 0.99)
PRIEST	158,893	0.78 (0.77, 0.79)	>4	46,529 (33.5%)	0.75 (0.75, 0.75)	0.67 (0.67, 0.67)	0.04 (0.04, 0.04)	0.99 (0.99, 0.99)
WHO	138,666	0.62 (0.61, 0.63)	>0	72,599 (52.4%)	0.70 (0.70, 0.70)	0.48 (0.48, 0.48)	0.03 (0.03, 0.03)	0.99 (0.99, 0.99)
TEWS	136,967	0.73 (0.72, 0.74)	>2	39,509 (28.8%)	0.64 (0.64, 0.64)	0.72 (0.72, 0.72)	0.04 (0.04, 0.04)	0.99 (0.99, 0.99)
Quick COVID	140520	0.61 (0.60, 0.63)	>3	8,210 (6.4%)	0.17 (0.17, 0.17)	0.94 (0.94, 0.94)	0.06 (0.06, 0.06)	0.98 (0.98, 0.98)

*Patients with <3 parameters were excluded from analysis when estimating performance

**Abstract 1482 Figure 2** Performance of tools predicting composite primary outcome for the Omicron period

period of the Omicron wave. NEWS2, PMEWS, PRIEST tool and WHO algorithm identified patients at risk of adverse outcomes at recommended cut-offs with moderate sensitivity (>0.8) and specificity ranging from 0.47 (NEWS2) to 0.65 (PRIEST tool). The low prevalence of the primary outcome, especially in the Omicron period, meant use of these tools would have more than doubled admissions with only a small reduction in risk of false negative triage.

Triage tools developed specifically in low- and middle-income settings may be needed to provide accurate risk prediction. Existing triage tools may need to be used at varying thresholds to reflect different baseline-line risks of adverse outcomes in different settings.

1491

DETERMINANTS OF POST-INTUBATION HYPOTENSION IN TRAUMA PATIENTS FOLLOWING PREHOSPITAL EMERGENCY ANAESTHESIA

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Aims, Objectives and Background Prehospital emergency anaesthesia (PHEA) is a safe and necessary procedure for the most seriously injured trauma patients. The avoidance of secondary insults such as hypoxia and hypotension are key to reduce mortality. Despite this, a proportion of patients experience post-intubation hypotension (PIH), for which the determinants remain unclear. This multi-centre study aims to compare the differential determinants of PIH in trauma patients undergoing PHEA.

Method and Design In this retrospective observational study, across three regional Helicopter Emergency Medical Services (HEMS), data were obtained from the electronic medical records for a consecutive sample of adult trauma patients who underwent PHEA, 2015–2020 inclusive.

Hypotension was defined as new systolic blood pressure (SBP) <90mmHg or >10% drop if SBP<90mmHg pre-PHEA, within 10 minutes of PHEA. A purposeful selection logistic regression model was used. Each variable was first tested in turn to explore the unadjusted association with the outcome. Significant variables were then included in the multivariable analysis. Variables were successively eliminated until only statistically significant variables remained. The ARU Research Ethics Panel granted ethical approval (AH-SREP-20–047).

Results and Conclusion During the study period, 6184 patients were identified. After predefined exclusions, 998 patients were included in the final analysis. 218 (21.8%) patients recorded one or more episodes of PIH, with a peak prevalence at 8 minutes. The variables significantly associated with PIH were: age >55 years, pre-PHEA tachycardia (>100/minute), fluid administration prior to HEMS arrival, and fentanyl omission at induction, table 1.

The pseudo-R² for the final model suggests there is significant variation in the outcome not explained by the captured variables alone. Clinician gestalt appears to successfully identify patients most at-risk of PIH, demonstrated by the omission of fentanyl for this group.

In addition to drug-dose modification, pre-PHEA volume administration, cautious haemodynamic observation, and early vasopressor intervention may be warranted to

Abstract 1491 Table 1 Multivariate analysis of variables associated with post-induction hypotension within 10 minutes of prehospital emergency anaesthesia

		odds ratio (95% CI)	p value
Age group	16-34	REF	
	35-54	1.16 (0.77-1.76)	NS
	55-74	1.92 (1.24-2.97)	<0.01
	75+	1.90 (1.08 – 3.29)	<0.05
Starting SBP (mmHg)	Mid (90-140)	REF	
	Low (>90)	0.63 (0.37 – 1.04)	NS
	High (>140)	0.39 (0.26– 0.56)	<0.01
Starting HR (bpm)	Mid (60-100)	REF	
	Low (<60)	1.42 (0.74-2.61)	NS
	High (>100)	1.70 (1.20 – 2.42)	<0.01
Fluids	None	REF	
	Any	1.61 (1.14 – 2.27)	<0.01
Drug combination (Fent/Ket/Roc)	1,1,1	REF	
	0,1,1	1.76 (1.11 – 2.81)	0.02
	3,2,1	1.04 (0.63-1.73)	NS
	Roc Only	2.56 (1.21 – 5.35)	0.01
	Other	1.33 (0.80 – 2.23)	NS

HR – heart rate, SBP – systolic blood pressure, MAP – mean arterial pressure, REF – reference, NS – non-significant, Roc – rocuronium. SBP Mid/Low/High, HR mid/low/high – 60-100/>100/<60bpm

reduce avoidable harm in trauma patients undergoing PHEA.

1423 THE POSITIVES, THE CHALLENGES AND THE IMPACT: AN EXPLORATION OF EARLY CAREERS NURSES EXPERIENCES IN THE EMERGENCY DEPARTMENT

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Aims, Objectives and Background The intense working environment of the Emergency Department (ED) is exciting and rewarding; but is renowned for high staff turnover and burn-out. The wellbeing and retention of the existing workforce is imperative. The purpose of this study was to explore the experiences of early careers nurses in the ED; identify aspects of ED they enjoyed, the challenges and explore potential coping mechanisms used to mitigate negative situations.

Method and Design A qualitative design was used. Eleven semi-structured interviews were conducted with adult and paediatric emergency nurses who had worked in the ED for less than three years. Data were transcribed, coded and analysed using thematic analysis. The setting for this study was an emergency department in a major trauma centre. Data was collected between January-August 2020 following ethical approval.

Results and Conclusion Four key themes emerged; (1) Drawn to ED Nursing'; (2) 'Teamwork'; (3)'Time to care' and (4) 'Psychological impact'. Opportunities for learning and development and being able to provide good levels of patient care were identified important to participants. Challenging aspects of the job included high workloads, exposure to traumatic incidents, violence and aggression. The psychological impact included feelings of burnout, exhaustion, flashbacks, personal growth and perspective. Teamwork, a strong support network

and opportunities for formal and informal debrief were identified as helping to mitigate challenging aspects of the job

By identifying the factors that maintain wellbeing and sustain the workforce, we can promote and support them. The benefits to a stable and well supported workforce in ED are many; improved and sustainable patient care, reduced staff turnover and alleviating pressures on the existing workforce. Research is now drawing on how we can provide psychological support to those who have been faced with caring for patients in a way that challenges their own moral framework.

1723 DIAGNOSTIC ACCURACY OF A NOVEL TRANSCRIPTOMIC CLASSIFIER FOR BACTERIAL AND VIRAL INFECTIONS – AN INDIVIDUAL PATIENT DATA META-ANALYSIS

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Aims, Objectives and Background Arising from demographic differences between healthcare systems, patients in the emergency department (ED) present with a broad range of diagnoses and clinical severities. Independent validation of a novel diagnostic tool is critical to ensure reliable and reproducible clinical performance. So far, three independent cohort studies have validated the performance of the machine-learning classifier IMX-Bacterial/Viral/Non-infected (IMX-BVN) to diagnose bacterial and viral infections; those have been combined to facilitate an individual patient data meta-analysis of performance.

Method and Design ED patients (n=1,277) with suspected infection from three international, observational studies (USA/Germany/Greece) were included. Of those, 661 had a unanimous ('consensus') ground truth of infection status established