Method and Design Two systematic reviews were conducted simultaneously. The first identified and synthesised the qualitative evidence presented in existing systematic reviews regarding decisions to transfer residents to the ED. The second identified quantitative factors found to affect likelihood of transfer of residents. Five electronic databases were searched, including: MEDLINE, EMBASE, CINAHL, PsychINFO, Web of Science and Scopus.

Results and Conclusion In the qualitative component, six previous reviews met the inclusion criteria. Three syntheses were formed : (i) Transfer decisions involve negotiation with unequal power dynamics between residents, family members, care home staff and clinical practitioners (ii) Some transfers occur with the expectation that treatment in hospital will improve outcomes (iii) Some transfers occur due to factors external to the resident with no expectation that hospitalisation will be beneficial.

Twenty-six primary studies met the inclusion criteria for the quantitative component. Seven common domains of factors associated with ED transfer were identified: demographics, comorbidities, medication use, frailty, permanent indwelling devices, advanced directives and care home organisation. Within these domains, male sex, age, presence of specific comorbidities, polypharmacy and quality rating were associated with ED transfer across studies.

This provides context for policy makers and researchers developing interventions to reduce hospitalisations or use adjusted rates of hospitalisations as a care home quality indicator.

1482 PROGNOSTIC ACCURACY OF TRIAGE TOOLS FOR ADULTS WITH SUSPECTED COVID-19 IN A MIDDLE-INCOME SETTING

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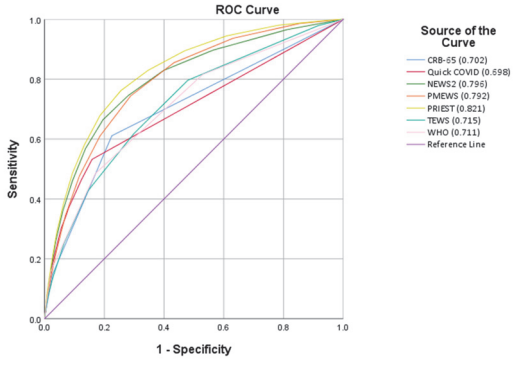
Aims, Objectives and Background Uneven vaccination in low- and middle-income settings and less resilient health care provision mean that emergency health care systems may still be at risk of being overwhelmed during periods of increased COVID-19 infection. Risk stratification tools proposed to allow rapid triage of need for admission in ED settings have almost exclusively been developed and validated in high-income settings during early waves of the pandemic.

Our study aimed to estimate the accuracy of risk-stratification tools recommended to predict severe illness in adults with suspected COVID-19 infection in the Western Cape of South Africa.

Method and Design An observational cohort study using routinely electronically collected clinical information in all state-run hospitals in the Western Cape between 27th August 2020 and 11th March 2022 was conducted to assess performance of the PRIEST tool, NEWS2, the WHO algorithm, CRB-65, TEWS, Quick Covid Severity Index and PMEWS in patients with suspected COVID-19. The primary outcome was death, respiratory support or ICU admission.

Results and Conclusion Of the 446,084 patients, 15,397 patients (3.45%, 95% CI:34% to 35.1%) experienced the primary outcome. Figure 1 presents the ROC curves for the triage tools for the total study period and figure 2 for the



Abstract 1482 Figure 1 Performance of tools predicting composite primary outcome for total study period

Abstract 1482 Table 1 Triage tool diagnostic accuracy statistics (95% CI) for predicting any adverse outcome (entire study period)

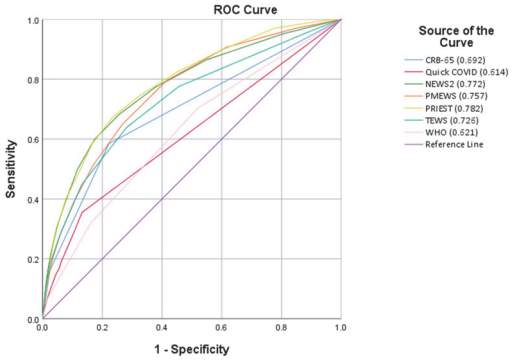
Tool	N*	C-statistic	Threshold	N (%) above threshold	Sensitivity	Specificity	PPV	NPV
CRB-65	432,584	0.70 (0.70, 0.71)	>0	102,964 (23.8%)	0.61 (0.61, 0.61)	0.78 (0.77, 0.78)	0.09 (0.09, 0.09)	0.98 (0.98, 0.98)
NEWS2	433,101	0.80 (0.79, 0.80)	>1	178835 (41.3%)	0.83 (0.83, 0.83)	0.6 (0.6,0.6)	0.07 (0.07–0.07)	0.99 (0.99, 0.99)
PMEWS	438,810	0.79 (0.79, 0.79)	>2	199,386 (45.4%)	0.85 (0.85, 0.85)	0.56 (0.56, 0.56)	0.06 (0.06, 0.07)	0.99 (0.99,0.99)
PRIEST	438,880	0.82 (0.82, 0.82)	>4	158,893 (36.2%)	0.83 (0.83, 0.83)	0.65 (0.65,0.66)	0.08 (0.08, 0.08)	0.99 (0.99, 0.99)
WHO	437,850	0.71 (0.71, 0.72)	>0	235,775 (53.8%)	0.82 (0.81, 0.82)	0.47 (0.47, 0.47)	0.05 (0.05, 0.05)	0.99 (0.99, 0.99)
TEWS	432,612	0.72 (0.71, 0.72)	>2	134,097 (31%)	0.62 (0.62, 0.62)	0.70 (0.70, 0.70)	0.07 (0.07, 0.07)	0.98 (0.98, 0.98)
Quick COVID	446,088	0.70 (0.69, 0.70)	>3	35,145 (7.9%)	0.33 (0.33, 0.33)	0.93 (0.93, 0.93)	0.14 (0.14, 0.14)	0.98 (0.98, 0.98)

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

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