The revised national early warning score (NEWS) with modified Glasgow Prognostic Score (mGPS) is superior to the news for predicting in-hospital mortality in elderly emergency patients.

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Introduction:
The National Early Warning Score (NEWS) was developed in the UK to identify the risk of death. The previous study showed that the modified Glasgow Prognostic Score (mGPS) correlate with frailty in elderly patients [1]. The aim of this study is to evaluate the predict value of the revised NEWS with mGPS for in-hospital mortality (in 28 days) in elderly emergency patients.

Methods:
This study is secondary analysis and was carried out in Jikei University Kashiwa Hospital, in Japan, from 1 April 2017 to 31 March 2018. The acute medical patients aged 65 and older were included. The NEWS was derived from seven physiological vital signs. The mGPS was derived from C-reactive protein (CRP) and Albumin. Discrimination was assessed by plotting the receiver operating characteristics (ROC) curve and calculating the area under the ROC curve (AUC).

Results:
The AUCs for predicting in 28 days in-hospital mortality were 0.818 for revised NEWS with mGPS and 0.797 for the original NEWS. The AUC of the revised NEWS with mGPS was significantly higher than that of the original NEWS for predicting in-hospital mortality (p < 0.001).

Conclusion:
Our single-centred study has demonstrated the utility of the revised NEWS with mGPS as a high predictor of acute phase in-hospital mortality in elderly emergency patients.

References:

Receiver operator characteristic (ROC) curves for in-hospital mortality comparing the revised National Early Warning Score (rNEWS) with modified Glasgow Prognostic Score (mGPS) and the National Early Warning Score (NEWS) in the emergency department.