

## Use of the National Early Warning Score (NEWS) to Identify Acutely Deteriorating Patients with Sepsis in Acute Medical Ward

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### Abstract

**Introduction:** The National Early Warning Score (NEWS) is well established in acute medical units to identify acutely deteriorating patients and is shown to have good prognostic value. NEWS, however, has only been used in the Emergency Department as a triage tool. We aimed to evaluate the validity of NEWS in Acute Medical Ward (AMW) that treats predominantly acute infection-related conditions to the Internal Medicine service. **Materials and Methods:** We undertook a retrospective cohort study and analysed NEWS records of all patients admitted to AMW at Singapore General Hospital between 1 August 2015 and 30 July 2017. The outcome was defined as deterioration that required transfer to Intermediate Care Area (ICA), Intensive Care Unit (ICU) or death within 24 hours of a vital signs observation set. **Results:** A total of 298,743 vital signs observation sets were obtained from 11,300 patients. Area under receiver operating characteristic curve for any of the 3 outcomes (transfer to ICA, ICU or death) over a 24-hour period was 0.896 (95% confidence interval, 0.890-0.901). Event rate was noted to be high above 0.250 when the score was >9. In the medium-risk group (score of 5 or 6), event rate was <0.125. **Conclusion:** NEWS accurately triages patients according to the likelihood of adverse outcomes in infection-related acute medical settings.

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**Key words:** Death, Infection, Intensive care, Intermediate care

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