Validation of a Modified Early Warning Score (MEWS) in emergency department observation ward patients

Objective: The Modified Early Warning Score (MEWS) is a simple physiological scoring system, which can easily be applied at the bedside. The ability of MEWS to identify patients at risk of deterioration in a busy ward was investigated. Method: In a prospective cohort study, we applied MEWS to patients admitted to the 16-bed emergency department observation ward (EDOW) of a tertiary teaching hospital. Results: Data on 427 consecutive EDOW admissions were collected from 7 June to 4 July 2004. Main outcome measures were death, intensive care unit (ICU) admission and inpatient hospital admission. Scores of > 4 were associated with increased risk of death (OR 54.4, 95% CI = 4.7-633.7), ICU admission (OR 12.7, 95% CI = 1.1-147.3) and hospital admission (OR 9.5, 95% CI = 3.3-27.9). Conclusion: MEWS is suitable for bedside application in an EDOW setting and may help identify patients at risk of deterioration who require increased levels of care as hospital inpatients and in ICU. Where experienced staff is not available to closely monitor patients in an EDOW, the use of the MEWS system may aid close monitoring and identification of high-risk patients. (Hong Kong j.emerg.med. 2006;13:24-30)

Introduction

The emergency department (ED) observation ward is the interface between ED care and hospital inpatient or intensive care unit (ICU) management in hospitals in Hong Kong. Because of resource limitations, the number of patients that can be monitored and treated in the ICU and as hospital inpatients is restricted. The identification of patients who might benefit from critical care is therefore crucial.