

Acutely ill patients in hospital: Assessment of compliance with Early Warning Score (EWS) guidelines

Avinder Gobindpuri, Charlotte Mackay – F2 Doctors, Epsom and St Helier University Hospitals, London, UK

Background

- The NICE 50 guideline (2007) on acutely ill patients in hospital emphasises the importance of early recognition and management of patients who become unwell within the acute hospital setting.
- Evidence suggests that patients whose condition deteriorates whilst on a general medical ward often receive sub-optimal care (1)
- The NCEPOD 2005 report identified delayed recognition and implementation of appropriate management for acutely deteriorating patients as being key contributors to patient morbidity and mortality (2)
- The NICE guideline advocates the use of a 'track and trigger' system, whereby appropriate escalation of care occurs in response to the risk of clinical deterioration, as indicated by a patient's physiological observations.

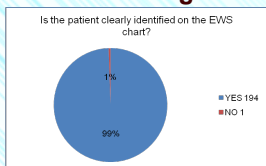
Aims and objectives

- To assess compliance with local and national EWS guidelines within the acute medical wards at a District General Hospital.
- To assess accuracy and completeness of recorded observations
- To determine whether appropriate action is being taken by nursing and medical staff in response to the EWS calculated.
- To identify areas where alterations or improvements to the current system could be made

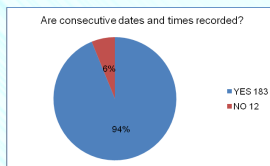
Methods/data collection

- Initial data was collected from 195 patients in acute medical wards within a District General Hospital over a period of 1 week in January 2010.
- Data was collected from observation charts, nursing and medical notes where appropriate.
- For each patient we looked at all observations over the preceding 24 hour period.
- The only exclusions were those patients who had been in hospital for less than 24 hours (hence we would not be able to assess a full 24 hour period of observations) and those on the LCP (as these patients would not be having any observations taken).
- The re-audit data was collected from 120 patients in acute medical wards over a period of 1 week in August 2010.

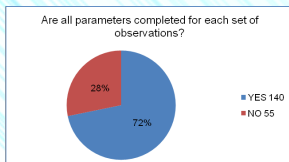
Findings from initial audit results



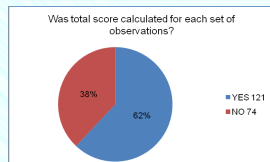
99% of patients were clearly identifiable on the observation charts.



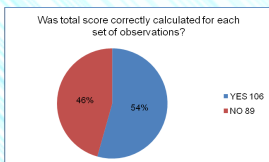
94% of patients had consecutive recordings on the observation charts.



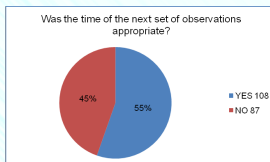
28% of patients did not have all parameters completed for each set of observations.



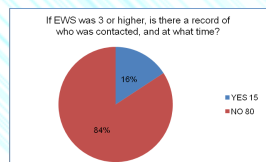
38% of patients did not have an EWS calculated on the observation charts.



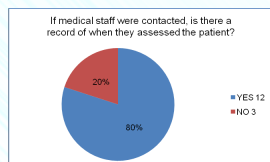
46% of patients had an incorrectly calculated EWS.



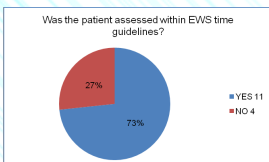
45% of patients had their observations repeated after an incorrect interval (according to local EWS guidelines).



Based on local guidelines, medical staff should be notified for every early warning score of 3 or higher. The audit found that 95 out of 195 patients fulfilled this criterion. In 84% of patients with an EWS of 3 or higher, there was no record of medical staff being contacted.



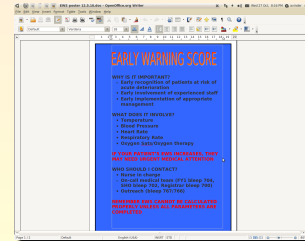
If there was a record of medical staff being contacted, in 80% of cases there was a record of when they assessed the patient.



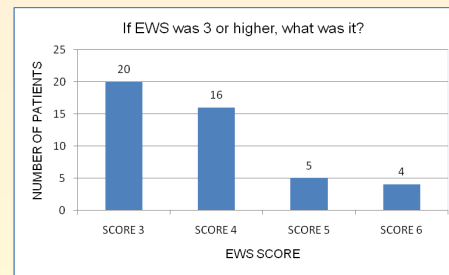
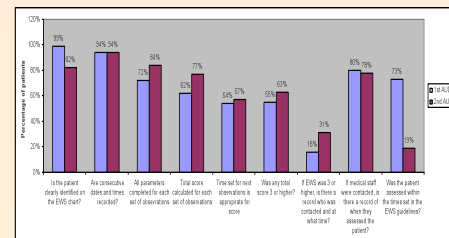
If there was a record of medical staff being contacted, in 73% of cases the patient was assessed within the EWS time guidelines.

Recommendations and action plan

- Increase awareness of the EWS audit by presenting findings at local audit meeting.
- Institute a 'refresher' programme on the Early Warning Score for nursing staff.
- Create and display on the Medical Wards a poster outlining and clarifying the importance of the EWS:
- Re-audit to assess whether any changes have been made in clinical practice.



Re-audit results summary



- There was an improvement in the proportion of patients who had all parameters completed for each set of observations (84% vs 72%).
- The percentage of patients who had an EWS calculated for each of their observations increased (77% vs 62%), but there was only a small improvement in the accuracy of EWS calculation (57% vs 54%).
- Whilst there was an improvement in contacting medical staff in response to a raised EWS, overall this remained low (31% vs 16%).
- Medical staff response rate was not as high on the re-audit (78% vs 80%)
- Medical staff were significantly worse at assessing patients within the EWS guidelines during the re-audit (19% vs 73%)

Discussion

- The EWS system only works if all the relevant parameters are completed.
- The initial audit highlighted completeness and accuracy of EWS calculation as being key areas for improvement. The re-audit showed a modest improvement in these areas, but there is still considerable room for progress to be made.
- Based on local guidelines, an EWS of 3 requires nursing staff to bleep the relevant team's FY1 and to repeat the observations and EWS within an hour. 95 out of 195 patients in the initial audit achieved this score. This finding may indicate that the guideline is impractical, especially during out of hours periods (at weekends and at night) when there is a minimal level of medical staff present to respond to the EWS.
- To investigate this further, as part of the re-audit we looked specifically at what – if greater than 3- the patient's EWS was. The breakdown of EWS shows that a large proportion of patients with an elevated EWS were only scoring a 3, suggesting that this threshold may be over-cautious and perhaps raising the threshold to 4 would be more appropriate. This is an area we feel requires further thought and development.
- The results from this audit also illustrate a widespread lack of documentation - it would be prudent from a medico-legal and clinical perspective if recording that medical staff have been contacted was encouraged as standard practice.

References

- Cullinane M, Findlay G, Hargraves C, Lucas S. An Acute Problem. London: *National Confidential Enquiry into Patient Outcome and Death*, 2005
- J, Smith G, Prytherch D, Parr M, Flabouris A, Hillman K. Intensive Care Society (UK); Australian and New Zealand Intensive Care Society Clinical Trials Group. A comparison of antecedents to cardiac arrests, deaths and emergency intensive care

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