Use of the AMB Score in a large urban district general hospital: Reducing admissions and validating the score

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Introduction

There has been an almost 47% rise in emergency hospital admissions over the last fifteen years. Ambulatory Emergency Care (AEC) has the potential to offer medicine the same benefits that day surgery has offered surgery, and to reduce the number of unnecessary admissions, thereby providing “same day” emergency care. This has benefits for patients and acute NHS hospital trusts.

Ambulatory Emergency Care

The AMB score was created to identify patients that might benefit from AEC. The aim of this project was to validate the AMB score and its effect on our medical admissions. Trusts utilising AEC have shown a reduction in the number of acute admissions leading to the closure of a significant number of beds.

AMB Score

The AMB score is a useful tool in medicine the AMB score was calculated, which shows that there is a clear statistically significant correlation between the AMB score and the length of stay. The data shows a number of patients being admitted via the medical take and are being discharged within a few days, many within 24 hours. Many of these patients fit the criteria for AEC treatment. The possible reasons why patients are not being considered for AEC may be because clinicians in the emergency department and primary care physicians are unaware of AEC and their admission criteria. They may also not be aware that AEC is able to manage a wider array of patients compared to an emergency department. It is worth noting that some patients with low AMB scores had longer lengths of stays, and vice versa, therefore the AMB score must be used in conjunction with clinical judgment and experience in order to be safe and effective.

Method

The case notes of all patients admitted via the “medical take” (using the trust “e-handover” system) over a 3 day period in two acute hospitals at BHR NHS Trust were requested via the trust “e-handover” system) over a 3 day period in two acute hospitals at BHR NHS Trust. There is increased AEC awareness in the community and emergency care. The medical admissions are being re-assessed to measure the impact on the “medical take”. Further work will involve looking at the time of patient presentation i.e. morning versus evening presentations and its effect on AEC.

Results: Descriptive statistics

73% of admissions had an AMB score of greater than 5, which suggests they could have been considered for ambulatory care. When length of stay is plotted against AMB score there appears to be a negative correlation. Neither the AMB Score or length of stay data fitted a parametric distribution. Therefore the Spearman’s Rho value was calculated, which shows that there is a clear statistically significant correlation between the AMB score and the length of stay. The data shows a number of patients being admitted via the medical take and are being discharged within a few days, many within 24 hours. Many of these patients fit the criteria for AEC treatment. The possible reasons why patients are not being considered for AEC may be because clinicians in the emergency department and primary care physicians are unaware of AEC and their admission criteria. They may also not be aware that AEC is able to manage a wider array of patients compared to an emergency department. It is worth noting that some patients with low AMB scores had longer lengths of stays, and vice versa, therefore the AMB score must be used in conjunction with clinical judgment and experience in order to be safe and effective.

Results: Correlation scatter plot

The AMB score was devised in a small semi-urban population; our results at a larger, more urbanised DGH have validated the usefulness of this scoring system in a different geographical environment. The AMB score is a useful tool in identifying potential patients for AEC but the AMB score requires an assessment from trained clinician before they can be deemed suitable for AEC. The negative correlation between bed days and AMB score clearly gives face validity to the scoring system, however there are exceptions. The AMB score is a useful triage tool but needs development at local level for better utilisation i.e. the need for intravenous antibiotic therapy is less of a hindrance to AEC at our trust due to our outpatient parenteral antibiotic service.

References