

Introduction

Transfer of stable patients who might otherwise be safely observed at a community hospital adds to the ever-increasing cost of healthcare in the United States. This study aims to show that over-triage of complicated mTBI patients leads to substantial costs to a healthcare system. Secondary outcomes are predictors of over-triage and transfer times.

Methods

A nine-year retrospective analysis of patients admitted to our tertiary care center that had mTBI with evidence of intracranial hemorrhage on computed tomography scan. Patients were dichotomized based on their mode of transfer (helicopter vs. ambulance), and admission status (primary admission versus secondary admission). Secondary over-triage was defined as patients with an injury severity score less than 15, no surgical interventions performed, and hospital stay less than 48 hours. Charges were calculated for each cohort and multi-variate linear regression analysis was used to determine predictors of over-triage.

Results

A total of 1,447 patients met the inclusion criteria for this study. 115 patients met the criteria for secondary over-triage. Secondary over-triaged patients are younger (median: 41y vs 60.5y, $p < 0.001$), had lower ISS (9 vs 16, $p < 0.001$), had a shorter hospital stay (1d vs 3d, $p < 0.001$) and a shorter intensive care unit stay ($p < 0.001$), had lower proportion of comorbidities (38.9% vs 58.0%, $p < 0.001$) and complications (0.9% vs 7.2%, $p < 0.001$). Secondary over-triaged patients had a higher chance of being discharged home and an average transfer time of 51 minutes. Lack of insurance was a major predictor of over-triage. Secondary over-triaged patients had an average cost of \$13, 294.

Conclusions

Significant over-triage of complicated mild traumatic brain injury patients leads to a cost of approximately \$13,000 per patient. Eliminating these transfers is another way to save on healthcare costs.

Learning Objectives

By conclusion of this session participants should be able to: 1) Define secondary over triage 2) Identify factors associated with over-triage of complicated mild traumatic brain injury 3) Identify ways in which to decrease the number of over-triaged patients

References

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