

Validity of manual and electronic triage in predicting hospitalization in critical care unit

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Abstract

Background and objectives: The Electronic Triage System (ETS) has been recently developed and introduced to emergency department in the country. The present study aims to study its validity in predicting hospitalization in critical care unit and compares it with the routine triage.

Material and Methods: In this cross-sectional retrospective study which was performed in Imam Reza Hospital of Tabriz, medical records were reviewed for 491 patients who have been triaged electronically and 848 patients who have been triaged with manual triage. The association between the triage category and hospitalization was assessed by Phi and Cramer's V, SPSS 16 software and at 0.05 significance levels.

Results: The distribution of the patients who were hospitalized in critical care units, in the categories of ESI in routine triage was as follow: ESI1: 16.7%, ESI2: 26.7%, ESI3: 3.8, ESI4: 0.6% and ESI5: 0%. The distribution for electronic triage was: ESI1: 11.1%, ESI2: 3.3%, ESI3: 3.1%, ESI4: 2.8% and ESI5: 0%. The value of V for routine and electronic triage was 0.246 (P<0.001) and 0.096 (P=0.314) respectively.

Conclusion: For manual triage, there was a significant relation between triage category and hospitalization in critical care unit. As a result, the validity of manual triage was confirmed in predicting the study outcome. Unlike the manual triage, the evidences of this study were not sufficient enough to prove the validity of electronic triage in predicting the study outcome. Using other outcome measures such as death and length of stay, beside hospitalization can provide us with a better and comprehensive view on validity of triage.

Key Words: Triage, ESI, Electronic Triage, Validity, Hospitalization, Critical Care

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