Accuracy of emergency severity index of triage in Imam Hossein hospital - Tehran, Iran (2011)

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Abstract

Background and Objective: Triage is the most important and the first stage of patient’s management at the time of arrival to hospital emergency department. Emergency severity index (ESI) is a common triage system worldwide. This study was aimed to evaluate the accuracy of ESI in emergency department of Imam Hossein hospital in Tehran, Iran.

Materials and Methods: In this descriptive study the result of patients’ triage based on ESI were gathered for all patients referred to emergency department of Imam Hossein Hospital from January to April 2011. A questioner was filled for each patient by the nurse and a emergency specialist independently. The λ index was applied to compare the nurse observation with the specialist clinician. The STATA-11.0 statistical software and roc tab table were used to determine the validity, specificity and sensivity of triage. Data were analyzed using Chi-Square and Fisher tests.

Results: The calculated λ for the degree of agreement of triage between nurse and clinician was 81% (95% CI: 0.79-0.83). The sensivity of triage for step I, II, III, IV and V were 100%, 53.2%, 90.7%, 67.1% and 98% respectively. The specificity of triage for step I, II, III, IV and V were 99.8%, 97.5%, 93.7%, 98.3% and 94% respectively. There was a significant overlapping between the triage step and the patient clinical outcome.

Conclusion: This study showed that five steps triage contain a high accuracy and estimation of patient outcomes.

Keywords: Emergency severity Index, Five-step triage system, Nurse, Clinician, Patients outcome

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