Abstract

Background and Objective*: The most important indicator in assessing the health of hospital wards, especially intensive care units, is the hospital mortality rate. Improved therapeutic capacity and increased use of new technology over the past years have led to increased use of intensive care units. Accurate disease classification and accurate patient outcome prediction can help optimize the use of ICU beds by reducing unnecessary monitoring. Despite the development of many effective tools in the ICU in recent years, many hospitals and training centers in the country still use only GCS and vital markers to evaluate patients. The use of a validated index for evaluating hospitalized patients in ICUs seems necessary to adequately manage the limited services needed for patients in need***..*

Methods*: The present study was a cross-sectional study and its statistical population included patients admitted to intensive care unit of Alavi hospital in Ardabil. Data were collected using a questionnaire. The questionnaire was divided into 5 sections. Questionnaires included demographic characteristics, TRIOS, and APACHE IV tools. Based on the answers given to each questionnaire, a specific score was assigned to each section. The death rate will be considered as the patient's death rate during hospitalization and hospital stay. The basis for predicting patient mortality will be based on the score obtained from each of these instruments..*

Results*: In the present study, 53 patients admitted to ICU ward were studied. The mean age of the patients was 71.79 years, the youngest being 20 and the oldest being 97. Evaluations of the performance of the APACHE IV scoring system showed that this system is desirable in predicting mortality in ICUs in different age groups. Results of this study were statistically significant (P <0.05). According to the results of our study, the TRIOS scoring system was not sufficiently accurate in predicting mortality. (P <0.05). The accuracy of the SAPS II scoring system in predicting ICU mortality was not desirable in this study. (P <0.05). The LODS system did not have the desired accuracy and efficiency in predicting mortality in ICU patients (P <0.05)***..*

Conclusions*.: We found that the APACHE IV, SAPS II, LODS and TRIOS scoring systems are the best and most efficient APACHE IV calibration system. The difference between the comparative study of these systems with each other using linear regression was statistically significant for the APACHE IV system (P <0.05).*

Keywords: *ICU, Predicting score models, Mortality*