Predicting Survival, Functional Outcomes after ICU Admission

In a new study published in JAMA, physicians and nurses were more accurate in predicting the likelihood of death and less accurate in predicting cognitive abilities in six months for critically ill intensive care unit (ICU) patients. The study is being released to coincide with its presentation at the 2017 American Thoracic Society International Conference.

The study covered five ICUs and patients who spent at least three days in the ICU and required mechanical ventilation, vasopressors, or both. The patients' attending physicians and bedside nurses were also enrolled.

Of 303 patients studied (median age, 62 years), six-month follow-up was completed for 299 (99 percent), of whom 169 (57 percent) were alive. Predictions were made by 47 physicians and 128 nurses. Physicians most accurately predicted six-month mortality and least accurately predicted cognition. Nurses most accurately predicted in-hospital mortality and least accurately predicted cognition.

Predictions of long-term survival and functional outcomes influence decision making for critically ill patients, but little is known regarding their accuracy. The JAMA study found that accuracy was higher when physicians and nurses were confident about their prediction.

Compared with a predictive model including objective clinical variables, a model that also included physician and nurse predictions had significantly higher accuracy for in-hospital mortality, six-month mortality, and return to original residence.

"ICU physicians' and nurses' discriminative accuracy in predicting six-month outcomes of critically ill patients varied depending on the outcome being predicted and confidence of the predictors," the authors write. "Further research is needed to better understand how clinicians derive prognostic estimates of long-term outcomes."

The study was led by Scott D. Halpern, MD, PhD, of the University of Pennsylvania Perelman School of Medicine, Philadelphia. The research team noted several limitations of the study, including that it focused on clinicians' abilities to discriminate among patients who will or will not experience adverse outcomes but did not assess the calibration of these predictions.

Source: JAMA
Image Credit: Mr. Wesley P Elliott (Army Medicine)

Published on : Tue, 23 May 2017