PREVENTIVE MEDICINE

A Promising New Risk Score

At present, clinicians lack a medical risk score for mortality "that applies to the general medical population, does not require specialty-specific predictors, and is easily computed from inexpensive quantitative data," according to researchers from Intermountain Medical Center, Murray, UT and University of Utah, Salt Lake City. But combining data from the routine tests of complete blood count and basic metabolic profile, they say, may be the key to providing such a score.

The researchers used data on 71,921 patients (the study's training population) tested at an Intermountain Healthcare laboratory to develop the Intermountain Risk Score (IRS), which uses complete blood count, basic metabolic profile, age, and sex data to predict mortality. Next, they investigated the score's ability to predict mortality among 47,458 additional patients tested at an Intermountain Healthcare laboratory (the study's test population), 16,372 patients from the Third National Health and Nutrition Examination Survey (NHANES III), and 2,558 patients who underwent coronary angiography at Intermountain Healthcare.

The IRS's mortality predictions "closely mirrored actual results," the researchers say. They found that the score was "exceptional" at predicting one year and five year mortality in the training population and at predicting 30-day, one year, and five year mortality in the test population. It also was associated with mortality at one and five years in the NHANES III population and with mortality at 30 days and one year in the angiography popula-

tion; in the latter population, the associations were independent of comorbidities and treatments. Thresholds of risk significantly stratified the test, NHANES III, and angiography populations. When the researchers applied the IRS's complete blood count and basic metabolic profile components before its age and sex components, age and sex added minimal predictive ability.

The researchers conclude that the IRS "provided exceptional stratification of mortality" in patients who are representative of the general U.S. population. They add that while only a few components of the complete blood count and the basic metabolic profile are used clinically, "each component provided meaningful contribution" to the score's predictive ability.

PAIN MANAGEMENT

Whose Pain Scale Is It, Anyway?

The Faces Pain Scale-Revised (FPS-R) is a self-report measure of pain intensity that presents drawings of six facial expressions and asks the patient which expression best reflects his or her level of pain. But could some nurses have the mistaken view that the FPS-R requires the provider to match the patient's facial expression to a drawing?

With this concern in mind, researchers at Prince of Wales Hospital, Sydney, Australia studied and attempted to enhance nurses' knowledge of the FPS-R at their hospital over the course of three years. During one week in 2002, they approached

99 nurses and asked them two questions: whether they had used the FPS-R and whether they could describe how to use the FPS-R with a patient who could communicate. With regard to the second question, a nurse's answer was considered correct only if it described the scale as a self-report, and nurses who answered the question incorrectly were informed of the correct answer. Following this survey, the hospital implemented a number of education programs regarding pain assessment and management, including programs in 2003, 2004, and 2005 that reinforced the correct use of the FPS-R. Three years after the baseline survey, the researchers performed an identical follow-up survey among 101 nurses.

During the baseline survey, 46% of nurses said they had used the FPS-R and 54% said they had not. Of all these nurses, 53% described the scale correctly, 34% described it incorrectly, and 13% said they could not describe it. Among nurses who said they had used the FPS, 50% described it correctly, 43% described it incorrectly, and 7% said they could not describe it.

During the follow-up survey, 70% of nurses said they had used the FPS-R and 30% said they had not. Of all these nurses, 55% described the scale correctly, 38% described it incorrectly, and 8% said they could not describe it. Among nurses who said they had used the FPS, 56% described it correctly, 37% described it incorrectly, and 7% said they could not describe it.

The researchers conclude that the nurses displayed "poor overall knowledge" of the FPS-R on both surveys and that neither individual nurses' personal experience with the scale nor the hospital's education programs

appear to have enhanced such knowledge. They suggest that the scale's visual aspect "may create significant confusion in the minds of nurses, who are familiar with both observational and self-reporting means" of gathering information on patients. To help dispel this conclusion, they say, it could be beneficial to include explicit instructions about the FPS-R's self-report nature and to undertake education efforts that are more comprehensive than the ones implemented at their hospital.