HOSPITAL Score Predicts Avoidable 30-day Readmissions

Researchers in an international, multicentre study found that the HOSPITAL score accurately predicted patients at high risk of a 30-day potentially avoidable readmissions.

"Interventions to reduce readmissions are demanding and complex. We need to target patients who are most likely to benefit, which means identifying who is at high risk for avoidable readmission," said Jacques Donzé, MD, MSc, lead author of the study and research associate at Brigham and Women's Hospital (BWH) and Harvard Medical School. Dr Donzé is also an associate physician at the Bern University Hospital in Switzerland

Researchers think the score can help target patients who need intense transitional care interventions to prevent avoidable hospital readmissions.

HOSPITAL is an acronym created to identify the variables associated with hospital readmissions. The findings have just been published in *JAMA Internal Medicine*.

"Interventions to reduce readmissions are demanding and complex. We need to target patients who are most likely to benefit, which means identifying who is at high risk for avoidable readmission," said Donzé. "The three main advantages of this score is that it is simple to use, it can be calculated before discharge so that interventions can be started, and it performs well in many populations and countries."

The study was conducted with data from 117,065 adult patients discharged from nine hospitals in four countries. Donzé and his team estimated the risk of 30-day avoidable readmission using several predictors at discharge. They were:

- Haemoglobin level;
- Discharge from an Oncology service;
- Sodium level;
- Procedure during the index admission;
- Index Type of admission (urgent);
- Number of Admissions during the last 12 months;
- Length of stay.

Based on these seven predictors, each patient obtained a score between 0 and 13, which reflects the risk of readmission. Within 30 days after discharge, 15 percent of the medical patients had a readmission, and 9.7 percent had a potentially avoidable readmission.

Using the HOSPITAL score, 62 percent of the patients were categorised as low risk, 24 percent as intermediate risk, and 14 percent as high risk for a potentially avoidable readmission. Patients who scored seven points or more were identified at high risk. They had four times the risk of being readmitted within 30-days compared to patients with four points or fewer, described as at low risk.

The score was indicated as a good tool for identifying patients at high risk for potentially avoidable readmission.

In terms of clinical profile, patients with a potentially avoidable readmission had "an urgent or emergent index admission, were more frequently discharged from an oncology service, had a length of stay greater than five days, had more hospitalisations in the past year, were more likely to have had a procedure, and more often had a low haemoglobin or low sodium level at discharge."

Donzé commented on the efficiency of the HOSPITAL score. "This score is easy to use and is currently the most widely validated prediction model for hospital readmission in medical patients. It remains to be shown whether interventions to reduce readmission are more efficient when targeted specifically to the high-risk patients according to the HOSPITAL score," said Donzé.

Source: [Eureka Alert](#)
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