Study identifies risk factors for hospital readmissions

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Hospital readmission, an important measure of quality care, costs the United States an estimated $17 billion each year. And according to the Centers for Medicare and Medicaid Services (CMS), about half of those readmissions could be avoided.

Therefore, there is significant interest in identifying factors that influence readmission rates, especially those that can be identified prior to discharge. To pinpoint which stroke patients are most at risk, researchers at Wake Forest Baptist Medical Center undertook a retrospective case-control study to determine factors associated with readmission within 30 days. The study is published in the June 11 online edition of the *American Journal of Medical Quality*.

"If you can recognize who is at risk, you can really focus on those people to try to make sure they are treated appropriately and followed closely," said Cheryl Bushnell, M.D., associate professor of neurology at Wake Forest Baptist and director of its Comprehensive Stroke Center.

The goal of this single-center study was to identify at the time of discharge the factors that are strongly associated with readmission in patients with ischemic and hemorrhagic stroke. The study compared 79 stroke patients who were readmitted to the hospital within 30 days to 86 controls over an 18 month period. There were no significant differences in age, gender or race-ethnicity between the stroke patients and controls.

The researchers found that readmitted patients were significantly more

likely to have a prior diagnosis of [congestive heart failure](#), [coronary artery disease](#), cancer or absence of hyperlipidemia, elevated lipid (fat) levels in the blood. In addition, readmitted patients were more likely to have been hospitalized two or more times during the year prior to the initial stroke admission.

The findings suggest that stroke severity and number of hospitalizations within the year prior to the [stroke](#) admission are important predictors of subsequent readmission within 30 days, independent of other clinical factors, Bushnell said.

"If our model is validated in a larger study, it could then be used in [electronic health records](#) to provide a potentially reproducible, efficient and effective means of selecting patients most at risk for subsequent [hospital readmission](#). A logical next step is to develop innovative tools and programs for [stroke patients](#) to keep patients from being readmitted," Bushnell said.

A limitation of the study was that data was collected solely at discharge, she said, adding that subsequent research will include evaluation of post-discharge data.

  Provided by Wake Forest University Baptist Medical Center

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