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Embargoed for Tuesday April 1, at 12:01 a.m. CT

STS Press Release
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## Hospital Readmission Rates Not a Reliable Measure of Hospital Quality in Cardiac Surgical Care

Statistical analysis shows readmission rates are driven mostly by chance

Chicago – Hospital readmission rates are not a reliable measure of hospital quality in cardiac surgical care because they are driven by chance rather than statistically significant measurements, according to a study in the April 2014 issue of *The Annals of Thoracic Surgery*.

"Medicare and other insurance companies are looking at tying financial incentives to readmission rates, and hospitals with high readmissions can face large penalties," said Terry Shih, MD, from the University of Michigan, Ann Arbor. "Because our results show that overall readmission rates are unreliable, these penalties are essentially being driven by chance."

Dr. Shih and Justin B. Dimick, MD, MPH looked at data on about 245,000 Medicare beneficiaries who underwent coronary artery bypass grafting (CABG) surgery at one of 1,210 hospitals between 2006 and 2008. The median number of CABG operations performed per hospital during the study period was 151, and the median risk-adjusted 30-day readmission rate was 17.6%.

Overall, the researchers found that readmission rates for the majority of hospitals did not reach a minimum acceptable level of reliability. The

## **Key Points**

- Medicare and other insurance companies are looking at tying financial incentives to readmission rates, and hospitals with high readmissions can face large penalties.
- The study found that overall hospital readmission rates for CABG surgery are not a reliable measure of hospital quality in cardiac surgical care; however, readmission rates at high-volume hospitals may more accurately predict readmission risk following surgery.
- Additional research is needed to examine risk factors for readmission using a clinically rich database with a broader cohort of patients.

researchers also found that hospital case volume is a large determinant of the reliability of readmission rates. The more surgeries a hospital performs per year, the higher the reliability in the readmission rate.

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"Patients should know that if they choose a hospital with hundreds of CABG cases per year, that hospital's readmission rate is likely to be a true representation of the chance that he or she will be readmitted after CABG surgery," said Dr. Shih. "However, if the hospital only has a dozen cases per year, the readmission rate has very little ability to predict whether or not that patient will be readmitted."

Dr. Shih adds that while this study has important implications for how surgical outcomes are measured, additional research is needed, "A comprehensive assessment of risk factors for readmission using a clinically rich database with a broader cohort of patients, such as the STS Adult Cardiac Surgery Database, is an important area of further research."

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For a copy of the study contact Cassie McNulty at 312-202-5865 or <a href="mailto:cmcnulty@sts.org">cmcnulty@sts.org</a>.

Founded in 1964, The Society of Thoracic Surgeons is a not-for-profit organization representing more than 6,700 cardiothoracic surgeons, researchers, and allied health care professionals worldwide who are dedicated to ensuring the best possible outcomes for surgeries of the heart, lung, and esophagus, as well as other surgical procedures within the chest. The Society's mission is to enhance the ability of cardiothoracic surgeons to provide the highest quality patient care through education, research, and advocacy.

The Annals of Thoracic Surgery is the official journal of STS and the Southern Thoracic Surgical Association.

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