

TITLES:

1. Operative outcomes in aortic valve surgery: Combined effect of surgeon and hospital volume in a population-based analysis
2. Operative outcomes in tricuspid valve surgery: Combined effect of surgeon and hospital volume in a population-based analysis
3. Operative outcomes in lung cancer surgery: Combined effect of surgeon and hospital volume in a population-based analysis

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RESEARCH PROJECT DESCRIPTION

We sought to evaluate trends in selection of high volume (HV), intermediate volume, and low volume hospitals for cardiac surgery, as well as examine trends in peri-operative complications, mortality, and failure to rescue (FTR). The NIS is the largest administrative data-base in the USA maintained by the Healthcare Cost and Utilization Project (HUCP). NIS includes de-identified data from 1000 nonfederal hospitals sampled annually, which represents near to 20 % of community and academic hospitals in the US.

Method: Patients who underwent cardiac surgery between 2000 and 2014 will be identified from the Nationwide Inpatient Sample (NIS). Peri-operative morbidity, mortality, and FTR will be examined over time. Hospital volume will stratified into tertiles based on the number of cardiac surgery per year for each time period. Logistic regression models were used to assess the effect of hospital volume on risk of complication, peri-operative mortality, and FTR over time.

The medical student will find a concept regarding cardiac surgery procedures, and will be responsible for data gathering from NIS. Medical student will be involved in statistic and preparing of the manuscript from their findings.

No funding except access to the Nationwide Inpatient Sample (NIS) will be required.