

Abstract

Introduction

Hospital and doctor “report cards” claim to portray levels of quality and present the public and payors with ratings of these entities. Examination of their data shows counts of volumes and mortalities differ among reporting agencies, often even those using the same source (eg: MedPAR data).

Methods

One surgeon group carries out all the coronary artery bypass grafting procedures at this hospital. Research data is collected on all the surgical patients using an STS (Society of Thoracic Surgeons) certified database. The data set contains more than 300 variables including several related to patient mortality. All data is collected directly by designated clinical staff during and after the patient’s hospitalization. The database entries are audited semi-annually to insure accuracy of the data.

This hospital data is also collected by MedPAR, which is then used by web sites like Healthgrades.com. Administrative data is separately reported to the Texas Health Care Information Council (THCIC) and used to produce their score sheets.

Results

The table compares the methods and results reported by several agencies presenting healthcare data. Included is a break out of Medicare patients. The STS data uses a risk algorithm developed using pre-operative risk factors while the administrative databases use only the diagnostic coding data available. Differences in reported volumes are also seen.

Conclusions

Different data sources, algorithms for risk adjusting, methods of counting patients lead to a range of values purporting to show the mortality rate of a particular facility. The public may be confused trying to make healthcare decisions based on these numbers

Texas Health Care Information Council (THCIC)

- State agency (1995)
“to gather information from hospitals and health maintenance organizations and publish reports to help consumers compare and choose their hospitals and health plans.”

to report the performance of Texas hospitals on quality measures

- THCIC determined the Agency for Healthcare Research and Quality (AHRQ) indicators represent the current state-of-the-art in assessing quality of care using administrative data.
- Information from hospital billing records (administrative data), UB-92 universal bill format- diagnoses (maximum of 9), procedures (maximum of 6), age, gender, length of stay (maximum 999 days), accompanying medical conditions and discharge status.
- Data only applies to patients who were discharged from the hospital in the calendar year
- Mortality includes only those who died in hospital
- Use of a limited number of diagnosis and procedure codes (may affect accuracy of risk algorithm)
- LOS affected by factors such as case-mix, severity complexity, payer-mix, teaching status etc

Healthgrades.com

- Purchase Medicare data (MedPAR file) from the Centers for Medicare and Medicaid (CMS)
- Match with Social Security Death index to get discharge +1 month and discharge +6 month mortalities
- Deaths may be counted 2x (if death occurs within 6 months of discharge, while in another hospital, mortality counted for both hospitals)
- Use proprietary risk adjusting algorithm

MedPAR (Medicare Provider Analysis and Review)

- Inpatient records for Medicare patients.
- Reporting period is Oct 1 to Sept 30, each year
- Record up to 9 diagnostic codes, 6 treatment codes maximum, length of stay, sex, age, race, patient discharge status, severity corrected data
- One record per admission

Same Patients- Different Data- Different Reporting Groups

Reporting Source	Data Source	Risk Adjusting Algorithm	Reported Volume	---Mortalities---		
				In Hosp	Pred- icted	Risk Adjusted
All CABG Patients 1999 - 2001						
CRSTI STS Database	STS Database	STS	1121	2.8	3.6	2.1
THCIC	Admin	3M	1353	3.4	4.0	3.7
Medicare Patients Only 1999 - 2001						
CRSTI (Medicare Only)	STS Database	STS	460	4.6	5.6	2.3
MedPAR	Medicare	None	439	5.0	---	---
Healthgrades.com	MedPAR	Proprietary	377	4.5	4.0	N/A

Conclusions

Reports based on administrative data have limitations. Differing requirements of insurance payors affect the recording of administrative data (coding). Codes provide no specific details about a patient’s condition at admission, nor capture everything that occurs during the hospital stay.

AHRQ does not recommend public reporting of hospital-specific performance on these quality indicators: volumes, mortality for specific procedures, mortality for specific conditions and utilization related to quality of care. “These indicators must be used cautiously, because the administrative data on which the indicators are based are not collected for research purposes or for measuring quality of care, but for billing purposes.”

Cardiopulmonary Research Science and Technology Institute (CRSTI)

CRSTI is:

- 22 surgeons practicing at 18 different hospitals
- STS approved database used for clinical research data
- Collect over 300 data elements before surgery, during hospitalization and up to 30 days after procedure
- Data collected by clinicians, nurses, nurse practitioners, perfusionists
- Approximately 1700 Coronary Artery Bypass Grafting (CABG) cases per year
- Data file includes more than 32,000 cases from 1985

Dataset Used

- Calendar years Jan 1999 - Dec 2001
- All data from one hospital
- Analyzed using SAS
- CABG Only
- Mortality is “Operative-Mortality” defined by STS as within 30 days of procedure, or during same hospitalization.