Inpatient Quality Indicators in Portuguese Public Hospitals

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Background

• “The findings suggested that there may be differences in quality in rural critical access hospital and urban acute care hospitals.”(1)

• “Disparities in clinical process of care measures are largely the result of differences in where minority and nonminority patients seek care.”(2)

• “Analysis of data from the new Hospital Quality Alliance reporting system shows that performances varies among hospitals and across indicators.”(3)


• “The objective of our study was to assess hospital variations in the quality of care delivered to acute miocardial infarction (AMI) patients among three Swiss academic medical centers. Our results showed important hospital-to-hospital variations. In the quality of care provided to patients with AMI between these three university.”(4)

• “The different measures led to consistent and plausible relationships between quality and hospital characteristics.”(5)

• “Patients and health insurance are increasingly interested in the quality of care provided by hospitals. Quality indicators are often used to evaluate the quality of inpatient treatment.”(6)

(4) WD, Pitts SR, Burnand B. Variations in the quality of care of patients with AIM among Swiss university hospitals. 2005

(5) Keeler EB, Rubenstein LV, Kahn KL, Draper D, Harrison ER, McGinty MJ, Rogers WH, Brook RH. Hospital characteristics and quality of care. 1992

• “(...) the operations for which surgical mortality has been advocated has a quality indicator are not performed enough to judge hospital quality.” (7)

• “Efforts to use volume standards as the basis for evidence-based hospital referrals should be re-evaluated by all stakeholders before promoting further efforts to regionalize health care delivery using volume cutoffs.” (8)


Justification

• There is no specific study published in Pubmed about IQI in Portuguese Public Hospitals;

• It is important for Portuguese inpatients and hospitals;

• To increase a friendly competition among the hospitals for the best health care;

• If correctly used, this study may improve the care quality of the hospitals and promoting member satisfaction;

• If there has been applied different treatment plans, detailed analysis of longitudinal data will quickly reveal which approaches deliver better outcomes and which are more cost effective overall.
Importance & Application

- Patients are increasingly interested in the quality of hospitals they attend;
- Make the information democratically accessible, objective and systematic;
- Provide precious data on hospital care conditions;
- Help to identify problematic areas that need further investigation.

Definition

“Inpatient Quality Indicators are a set of measures that provide a perspective on hospital quality, using hospital administrative data. IQI include inpatient mortality for certain procedures and medical conditions, utilization of procedure for which there are questions of overuse, under use and misuse and also volume of procedures for which there is some evidence that a higher volume of procedures is associated with lower mortality.”

by the Agency for Healthcare Research & Quality
Type of Indicators

- Indicators that are a volume of patients who undergo through certain procedures;

- Indicators that are a rate that associates the mortality of a certain procedure or group of procedures with the volume of patients treated;

- Indicators that are a rate that associates the number of a certain procedure or group of procedures with the population in metro area or country.

Research Questions & Aims

- Prove the existence of a connection between the quality of the hospital and its characteristics;

- Compare the quality between 94 Portuguese Public Hospitals by location (north, south, central) and type (central, district and district level one);

- Compare the results with the one’s of the best local hospital and with absolute value in articles or information from experts.
Participants

Portuguese public hospitals

Public hospitals

Hospitals

Flowchart
Type of Study

- Observational
- Analyse Unit: Portuguese Public Hospitals
- Longitudinal
- Retrospective data
- Analytic

Methods

1. Writing IQI's sintaxe following AHRQ's technical specifications

2. Calculating the IQIs

3. Analyse the indicators already calculated (comparing them with reference values available in the AHRQ website)

4. AHRQ Quality Indicators Software Version 3.2 - March 2008 ©
SPSS
Coronary Artery Bypass Graft (CABG) Volume (IQI 5)
Procedure Volume Indicator

Coronary Artery Bypass Graft (CABG) Volume (IQI 5)

Numerator:
Discharged, age 18 years and older, with ICD-9-CM codes of 3610 through 3619 in any procedure field.

ICD-9-CM CABG procedure codes:
- 3610: Aortic Coronary Bypass
- 3611: Aortic Coronary Bypass - Con. Art.
- 3612: Aortic Coronary Bypass - Con. Art. (AOO)
- 3613: ABD-ORCH. ART BYPASS 7576
- 3614: ART SEEN B/P ACQUIRED

Exclude cases:
- MDC 13 (pregnancy, childbirth, and puerperium)
- MDC 15 (neonatal and other newborns)

Denominator:
Not applicable.

Dados
1. Writing IQI’s syntax following AHRQ’s technical specifications

2. Calculating the IQIs (IQI5)
3. Analyse the indicators already calculated (IQI5)

**TIPO A – grupos económicos**

1. Grupo I
2. Grupo II
3. Grupo III
4. Grupo IV

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TIPO A – grupos económicos

[no Grupo I estão os hospitais especializados, mais complexos e com mais tecnologia]

**TIPO C – grupos administrativos**

1. Hospital central
2. Hospital distrital
3. Hospital distrital de nível

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**Expected Results**

- Significant regional disparities;
- Better indicators in hospitals that operate in the principal urban areas;
- Better indicators in traditional academic hospitals;
- Higher quality on district hospitals level I;
- Help hospitals’ administrators to plan budgets allowing them to see which areas need more improvement and therefore more investment;
- Change the present healthcare system.
Results

PTCA Mortality Rate (IQI 30)
Related Volume and Mortality Indicators for Inpatient Procedures

Abdominal Aortic Artery (AAA) Repair Mortality Rate (IQI 11)
Mortality Indicators for Inpatient Procedures
Acute Stroke Mortality Rate (IQI 17) Mortality Indicators for Inpatient Medical Conditions

Primary Cesarean Delivery Rate (IQI 33) Procedure Utilization Indicators
Limitations

- It may not reflect the actual and real situation of the hospitals considered;
- Data is usually collected for billing purposes instead of specific clinical purposes;
- Data may lead to wrong conclusions;
- The data is not in the same format that the one used in the IQIs’ software;
- We have still no access to population in metro area or county, age 40 years and older, and aged 18 years and older.

Bibliographic research (Pubmed)


• Keeler EB, Rubenstein LV, Kahn KL, Draper D, Harrison ER, Mc Ginty MJ, Rogers WH, Brook RH. Hospital characteristics and quality of care. 1992

• WD, Pitts SR, Burnand B. Variations in the quality of care of patients with AIM among Swiss university hospitals. 2005