The College of Cardiac Surgery:

Are we able to improve quality of Cardiac Surgical care?

Prof.dr.I.Rodrigus
Vice president College of Cardiac Surgery
History

• Foundation BACTS: 29/11/1995
• Objectives:
  – To advance education in the field of CTS on a regional, federal and European level
  – To promote research in CT physiology, pathology and therapy
  – To associate Belgian surgeons and others involved in the practice of CTS
  – To hold scientific meetings
  – To provide appropriate professional advise to the authorities
Cardiac Surgery in Belgium

± 100 Cardiac surgeons
29 Cardiac centers (B3)
Quality Control Committee (QCC)

- Complete registry by CPT® codes (current procedural terminology)
- Systematic peer review, site visits
- Aggregated, anonymous report
- Individual report to the Head of department
- (yearly) meeting
- Separate studies (voluntary but with a high response rate)
  - Atrial septal defect
  - OPCAB, LIMA-LAD
College of Cardiac Pathology

- Creation of Colleges: (RD 15/2/1999)
  - 4 cardiac surgeons
  - 8 cardiologists
- Loss of confidentiality
- Incompatibility QCC-College
- Resignation QCC and College
College of Cardiac Surgery

- New College of Cardiac Surgery (RD 14/9/2004)
- 6 Members proposed by the BACTS
  - De Smet, Rodrigus, Kolh, Van Kerrebroeck, Van Praet, van Nooten
- New Database Committee
  - Van Belleghem, Stockman, Sergeant, Stefanidis, Glineur, De Worm, Radermecker, Wauthy
Mission of the College

• Quality indicators on good medical practice
  – Infrastructure
  – Manpower
  – Medical practice
  – Results
• Data registration model
• Site visits
• National year report
• Answer to questions
• Feed-back to hospitals and doctors
• Financial report
In practice

- Data registration by the DBC
- Study subject
  - Time table
  - Budget
- Contract with the Minister of Health
- Presentation of results
In practice: BACTS - College - DBC

- Government
- College
- BACTS Board
- Other committees
- Database Committee
- Cardiac centers
What have we done so far?

- **2005**: Survey on the practice of cardiac surgery and data collection in Belgium (response rate 89%)
  - [http://www.bacts.org/doc/10440](http://www.bacts.org/doc/10440)
  - Part I: practice
    - Number of surgeons
    - Age
    - Duty roster
    - Number of interventions
  - Part II: data collection
    - Database / registration
    - EuroSCORE
    - Mortality & morbidity meeting
2005 Survey (1)

Number of surgeons per center:
- 2: 8%
- 3: 13%
- 5: 21%
- 9: 37%

Mean age of surgeons: 46.8 y
2005 Survey (2)

Duty roster
2005 Survey (3)

- **Database activity (n=24)**
  - 75% of the centers has developed own DB
  - 4 centers: only minimal dataset
  - Wide variety on persons involved in data registration, input and transfer
  - 11 centers calculate EuroSCORE for every patient
  - 12 centers participate in the EuroSCORE plus program of the DBC
  - 14 centers have a formalised “mortality & morbidity” meeting
What have we done so far?

- **2006**: Survey on the use of mechanical assist devices in Belgium in 2002-2005
  - Postcardiotomy cardiogenic shock
    - Reversible cardiac insufficiency after cardiotomy, when the patient cannot be weaned from the ECC
  - Bridge to transplant
    - Limited list of devices (implantable)
    - Listed at Eurotransplant for heart transplantation
    - Transplantation centers
    - Maximum of 20 devices per year
2006 Survey

- Impression HTX centers: > 20 devices / year
- What to do with a patient in cardiogenic shock, without cardiac operation?
- Should we offer “destination therapy”
2006 Survey \(^{(3)}\)

- Results will be available soon
- \textbf{72.5\%} response rate, including all centers for heart transplantation
- 4 year period:
  - 235 VAD’s used in 227 patients
  - Mean number of VAD per center: 11.8 (range 0 – 69)
2006 Survey (4)

Benchmark VAD use per center 2002-2005
2006 Survey

- **Postcardiotomy support**
  - 147 VAD’s
  - 35,5 devices per year
  - Different devices
    - Centrifugal pumps 78 (53 %)
    - Abiomed 18 (12 %)
    - Medos 19 (13 %)
    - Excor Berlin Heart 7 (5 %)
    - Impella 23 (16%)
2006 Survey (6)

Indications for PCCS support

Survival to discharge: 20%
2006 Survey \(^{(7)}\)

- **Bridge to transplantation**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
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<tbody>
<tr>
<td>2002</td>
<td>20</td>
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<td>2004</td>
<td>19</td>
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<tr>
<td>2005</td>
<td>32</td>
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<tr>
<td>Total</td>
<td>86</td>
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43 (50 %) effectively underwent heart transplantation, with hospital discharge in 38 (88%)

Overall survival to discharge: 52 %
• How can we improve quality of care?
• How can we assess/measure quality?
• What is the role of the College in this quality improvement plan?
• Improvement of quality goes beyond improvement of mortality rates
Quality Measurement in Adult Cardiac Surgery:
Part 1—Conceptual Framework and Measure Selection

David M. Shahian, MD,ᵃ Fred H. Edwards, MD,ᵇ Victor A. Ferraris, MD,ᶜ
Constance K. Haan, MD,ᵇ Jeffrey B. Rich, MD,ᵈ Sharon-Lise T. Normand, PhD,ᵉ
Elizabeth R. DeLong, PhD,ᶠ Sean M. O’Brien, PhD,ᶠ Cynthia M. Shewan, PhD,ᵍ
Rachel S. Dokholyan, MPH,ᶠ and Eric D. Peterson, MD, MPHᶠ

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The Predictive Accuracy Of The New York State Coronary Artery Bypass Surgery Report-Card System

Ashish K. Jha and Arnold M. Epstein

We examined the impact of New York State’s public reporting system for coronary artery bypass surgery fifteen years after its launch. We found that users who picked a top-performing hospital or surgeon from the latest available report had approximately half the chance of dying as did those who picked a hospital or surgeon from the bottom quartile. Nevertheless, performance was not associated with a subsequent change in market share. Surgeons with the highest mortality rates were much more likely than other surgeons to retire or leave practice after the release of each report card.

Health Affairs 2006;25:844
Public Reporting and Pay for Performance in Hospital Quality Improvement

Peter K. Lindenauer, M.D., M.Sc., Denise Remus, Ph.D., R.N., Sheila Roman, M.D., M.P.H., Michael B. Rothberg, M.D., M.P.H., Evan M. Benjamin, M.D., Allen Ma, Ph.D., and Dale W. Bratzler, D.O., M.P.H.

CONCLUSIONS

Hospitals engaged in both public reporting and pay for performance achieved modestly greater improvements in quality than did hospitals engaged only in public reporting. Additional research is required to determine whether different incentives would stimulate more improvement and whether the benefits of these programs outweigh their costs.
Conclusion

• Start with quality improvement in your own service / hospital!
  – Guidelines, protocols, clinical pathways
  – Consult within your own service and within your hospital
  – Data registration
    • Activities
    • Results
  – Education programs
Conclusion

The road to quality is not paved with candies. It can only be constructed by team work!