Report of the Database Committee

November 21, 2015

Bernard Stockman
Members

- Laurent De Kerchove
- Erik de Worm
- Herbert Gutermann
- Steven Laga
- Wouter Oosterlinck
- Matteo Pettinari
- Tine Philipsen

- Marc Radermecker
- Paul Sergeant
- Marc Schepens
- Bernard Stockman
- Yves Van Belleghem
- Dries Gaerdelen
- Carine Vandeweyer
DBC 2015

• DBC Meetings: 4
• Symposium: improving the quality of care through better data-registration
• Atrial fibrillation registry
• Update BACTS-registry dataset: QUIP
• Update FMP application
Tuesday February 24, 2015

NOVOTEL – Brussels AIRPORT

Third Evening Symposium BACTS DATABASE COMMITTEE

“Improving the quality of care through better data-registration”

Program: Moderator Y. Van Belleghem and H. Guterman

19:30 – 20:00 Welcome

20:00 – 20:15 Introduction: limitations and pitfalls of data-registration. (B. Stockman, BACTS-DBC)

20:15 – 21:00 EACTS-QUIP : Quality Improvement Programme (D. Pagano and T. De By, EACTS)

21:00 – 21:30 Medico-legal aspects of data-collection (T. Goddeeris, Belgian Order of Physicians, KU LEUVEN)

21:30 – 22:00 Panel discussion: (Database Committee)

22:00 Refreshments

Please register online: www.bacts.org

Accreditation has been requested (Ethics and Economics)

Venue: NOVOTEL BRUSSEL AIRPORT, Leonardo da Vinciweg 15, 1851 Zaventem (Brussels)

Organisation & Information: bernard.stockman@olvz-aalst.be
Decision making / outcomes

- Clinical Judgement
- Experience
- Frailty
- Failure to rescue
- Euroscore
- Surgical team
- Postoperative care
- Anesthesia
- Phase of care mortality
Tuesday February 24, 2015

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Organisation & Information: bernard.stockman@olvz-aalst.be
1. Introduction and numbers

Since the 1st of November 2011 there is a regulation for the reimbursement of the disposable probes for concomitant atrial fibrillation ablation. To be eligible for reimbursement, three follow-up visits (at 6, 12 and 24 months), one echo and one holter are mandatory during two years. Exclusion criteria are permanent atrial fibrillation > 5 years, a left atrial diameter > 65 mm (parasternal long axis view) and percutaneous ablation for atrial fibrillation during the same admission.

As agreed with the RIZIV/INAMI, this report, generated three years after reimbursement, will describe the performed procedures, as well as their outcome and the follow-up per center. The data in this report are generated from the AFib Management Database on the 28th of March 2015 and concern all the ablations performed between the 1st of November 2011 and the 1st of November 2014.

In 2009, before reimbursement of the ablation devices, 211 concomitant atrial fibrillation (AF) procedures were registered in Belgium. We expected this number to increase significantly after reimbursement. However, in the first year of reimbursement (11/2011 until 10/2012) only 264 concomitant ablation procedures were performed. In the second year (11/2012 until 10/2013) this number increased to 271 procedures and in the third year after reimbursement (11/2013 until 10/2014), this number decreased again to 262 procedures.

The majority of these procedures were performed in 6 out of the 28 Belgian centers (Fig.1).

Fig.1: Number of procedures per center
Atrial fibrillation registry

• Final report May 2015
• Akkoordverklaring /déclaration d’accord
  – 1 nov 2011 to 31 dec 2015
  – Procedural registration
  – FU: two years, 3 visits, one echo, one holter
  – last patients: advice to continue the follow-up
• Future
Update BACTS – registry dataset

QUIP

BACTS Registry Data Specifications
QUIP Version, October 2015
Draft: not validated by BACTS – DBC yet.

Mandatory dataset BACTS in yellow
QUIP modifications are in green.
Incompatibilities/remarks BACTS-QUIP are in blue.

Database dictionary and data definitions

This document is designed to accompany the BACTS Registry. This registry is a copy of the European Association for Cardio-Thoracic Surgery’s Adult Cardiac Surgery Database (Version 1.0). There have been only some minor modifications.
We realize that we cannot fulfill the data needs for every cardiac surgeon, but we feel that this dataset will be a significant improvement compared to the BACTS-CPT registration. The FileMaker Pro application has some extra fields, that are not included in the BACTS Registry Dataset but that have been added for convenience.
The questions have been recorded in the same order as the data collection form.
All the question titles and response options are listed exactly as in the published form, with embellishments in parentheses where more detail is required. The titles in bold caps are the headers, exactly as used in the Excel-file. All data options and codes are described. The excel-file should contain only the headers and the codes (not the descriptions).
Upload the excel-file to www.bactsregistry.org
These are the mandatory fields: PATIENT ID, BIRTH, GENDER, SURGEON 1, date of SURGERY, REDO, PROCEDURE, OTHER CARDIAC DETAIL, NON CARDIAC DETAIL.
Rows with missing “mandatory fields” will not be accepted. The mandatory fields are used to eliminate double inputs. The whole dataset is the minimal dataset.
The definitions found in the document are taken either from the STS dataset definitions, which can be downloaded in pdf format from the STS website at: http://www.sts.org/sections/etsnationaldatabase/datamanagers/adultcardiadb/datacollection/index.html or from the EuroSCORE website: http://www.euroscore.org
The EuroSCORE II modifications are incorporated in the registry.
The BACTS Registry is designed for adult cardiac surgery. All congenital cardiac surgery should be reported in the EACTS Congenital Database: www.eactscongenitaldb.org

In 2012 EACTS established a Quality Improvement Programme (QUIP) to encourage improvement of clinical outcomes for patients, and to promote the importance of integrating quality improvement initiatives in to daily clinical practice.
BACTS encourages the centers to participate in the QUIP ADULT CARDIAC DATABASE (ACD). In order to facilitate this participation we have adapted the BACTS registry.

The BACTS Database Committee
database@bacts.org
BACTS registry update

- 22 new fields
- 6 adapted fields
- Version 1.0 compatible

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOS ID - Hospital code</td>
<td>Text, a code for the hospital that is unique within the contributor country.</td>
</tr>
<tr>
<td>COUNTRY</td>
<td>Text; single value, country code of surgical unit.</td>
</tr>
<tr>
<td>PATIENT ID</td>
<td>String, unique patient identifier.</td>
</tr>
<tr>
<td>BIRTH</td>
<td>Date-of-birth, format (yyyy/mm/dd), valid date after 01/01/1880 and &lt;=Today</td>
</tr>
<tr>
<td>AGE</td>
<td>Age at operation, integer; single value.</td>
</tr>
<tr>
<td>GENDER</td>
<td>Text; single value, M: Male, F: Female.</td>
</tr>
<tr>
<td>Week</td>
<td>Text; single value, 1: Asian, 2: Black, 3: White, 4: Other, 5: Unknown.</td>
</tr>
<tr>
<td>SURGEON 1</td>
<td>Surgeon 1, format (xxxxxx-xx-140 RIZIV/INAMI number).</td>
</tr>
<tr>
<td>SURGEON 2</td>
<td>Surgeon 2, format (xxxxxx-xx-140 RIZIV/INAMI number).</td>
</tr>
<tr>
<td>ADMISSION</td>
<td>Date-of-admission, format (yyyy/mm/dd), valid date after 01/01/1880 and &lt;=Today</td>
</tr>
<tr>
<td>SURGERY</td>
<td>Date-of-surgery/operation, format (yyyy/mm/dd), valid date after 01/01/1880 and &lt;=Today</td>
</tr>
</tbody>
</table>
• **Update**
  – Filemaker support FMP 11 has ended
  – FMP 11 (format FP7) incompatible with FMP 12 and higher
  – FMP 13: encryption
  – FMP 14

• **Old FMP 11 registry**
  – Not updated
  – Can be used
  – New QUIP fields/options not included
FMP-users (13/28)

- Algemeen Stedelijk Ziekenhuis (Aalst)
- CHU Brugmann Huderf (Bruxelles)
- CH de Jolimont (Haine st Paul)
- CHR De Namur (Namur)
- CHR De la Citadelle (Liège)
- Imelda Ziekenhuis (Bonheiden)
- Grand Hôpital de Charleroi (Gilly)
- Linique St Jean (Bruxelles)
- Clinique Saint Luc Bouge (Bouge)
- UZ Antwerpen (Edegem)
- UZ Brussel (Brussel)
- ZNA Middelheim (Antwerpen)
- Jessa Ziekenhuis (Hasselt)
Angina Status: CSS 4
Dyspnoea: NYHA 4
Symptoms: 1 Symptoms unlikely to be ischaemia

Myocardial infarction
- Two of the following four criteria are necessary:
  1. Prolonged (>20min) typical chest pain not relieved by rest and/or nitrates
  2. Enzyme level elevation: either - CK-MB > 5% of total CPK
     - CK greater than twice normal
     - LDH subtype 1 > LDH subtype 2
     - Troponin > 0.2 μg/ml
  3. Any wall motion abnormalities as documented by LV Gram, Echo and/or EF < 45%
  4. Serial ECG (at least 2) showing changes from baseline or serially in ST-T and/or Q waves that are 0.03 s. in width and/or ≥ 1/3 of the total QRS complex in 2 or more contiguous leads.

Congestive heart failure:
( A low EF alone, without clinical evidence of heart failure does not qualify as heart failure )
**BACTS Cardiac Registry**

**Last Name:** ABCD  
**First Name:** Jo  
**Gender:** M  
**Date of birth:** 19/10/1943  
**Race:** Asian  
**Operation:** 16/11/2015  
**Surgeon 1:**  
**Surgeon 2:**  

**Preoperative data**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Age: 72 years</td>
<td>Gender: M</td>
<td>Weight: 60 kg.</td>
<td>Last preop creat: 1768 μmol/l</td>
<td>Creat clearance: 2.83 ml/min</td>
<td>Renal Euroscore 2: Dialysis (regardless of CC)</td>
<td>Active endocarditis: Yes</td>
<td>Critical condition: ☒</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 mg/dl</td>
<td></td>
<td></td>
<td></td>
<td>NYHA: NYHA 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>LV Function: Very Poor (&lt;20%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pulmonary hypertension: severe (&gt;55)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Weight of Intervention: Single non CABG</td>
</tr>
</tbody>
</table>

© BACTS database committee 2011-2015 (version 2.0), database@bacts.org — clickworks: info@clickworks.eu

Logged in by: BACTS, center: DEMO
Welcome back!

Login

Passwoord
Lost?

Remember?

Log in
- Algemeen Stedelijk Ziekenhuis (Aalst)
- AZ Maria Middelares (Gent)
- AZ Sint-Jan (Brugge)
- CHR de la Citadelle (Liège)
- CHR de Namur (Namur)
- CHU Brugmann Huderf (Bruxelles)
- CHU de Charleroi – Hôpital Civil (Charleroi)
- CHU de Tivoli (La Louvière)
- CHU St.-Pierre (Bruxelles)
- Clinique Saint-Luc Bouge (Bouge)
- Clinique St. Jean (Bruxelles)
- Cliniques Universitaires Saint-Luc (Bruxelles)
- Grand Hôpital de Charleroi (Gilly)
- AZ Delta (Roeselare)
- Hôpital de Jolimont (Haine-St.Paul)
- Hopital Erasme (Bruxelles)
- Imelda Ziekenhuis (Bonheiden)
- Jessa Ziekenhuis (Hasselt)
- Onze Lieve Vrouwziekenhuis (Aalst)
- UZ Antwerpen (Edegem)
- UZ Gent (Gent)
- UZ Leuven (Leuven)
- ZNA Middelheim (Antwerpen)
- ZOL Campus Sint-Jan (Genk)
Number of procedures

- 2014: 10297 procedures (midnight)
- 4 Missing centra: number of procedures?
- Skipped records @ upload: 455
- Upload 24/7
- Only complete patient data
- Message / email

On 07/11/2015 20:38 an Excel file was uploaded for...

Result of the upload was:

Result:

1 rows saved into the database
0 rows skipped, already in the database
412 rows skipped, due to errors

Data specifications can be found through this link

Row 2: The value 'Two vessels' in the column 'vessels'
Row 3: The value 'No vessel' in the column 'vessels'
## Procedures 2014

**Procedure types:**

<table>
<thead>
<tr>
<th>Procedure Type</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAB alone</td>
<td>4294</td>
<td>44%</td>
</tr>
<tr>
<td>Valve alone</td>
<td>2240</td>
<td>23%</td>
</tr>
<tr>
<td>CAB &amp; valve</td>
<td>1045</td>
<td>10.7%</td>
</tr>
<tr>
<td>CAB &amp; other</td>
<td>192</td>
<td>2%</td>
</tr>
<tr>
<td>Valve &amp; other</td>
<td>621</td>
<td>6.4%</td>
</tr>
<tr>
<td>CAB &amp; valve &amp; Other</td>
<td>190</td>
<td>1.9%</td>
</tr>
<tr>
<td>Other</td>
<td>1170</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Totaal</strong></td>
<td>9752</td>
<td>100%</td>
</tr>
</tbody>
</table>
BACTS data analysis

<table>
<thead>
<tr>
<th>Statistics for 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Averages for your hospital</td>
</tr>
<tr>
<td>Average age : 69.137</td>
</tr>
<tr>
<td>Percentage men : 71.9%</td>
</tr>
<tr>
<td>Percentage female : 28.1%</td>
</tr>
<tr>
<td>Proceduretypes :</td>
</tr>
<tr>
<td>Averages for all hospitals</td>
</tr>
<tr>
<td>Average age : 66.527</td>
</tr>
<tr>
<td>Percentage men : 69.4%</td>
</tr>
<tr>
<td>Percentage female : 30.6%</td>
</tr>
<tr>
<td>Proceduretypes :</td>
</tr>
</tbody>
</table>
EACTS ADULT CARDIAC DATABASE PROJECT

Results of pilot online interactive database

Domenico Pagano- Chair QUIP
Theo De By- Manager Database Project
http://www.eacts.org/quip/video
QUIP Database

Benchmarking Tool
- Adult Cardiac Surgery Outcomes

Clinical Decision Guide
- Compare individual patient profiles and outcomes in dataset

Reports
- Standard and bespoke unit reports
Founding Charter

QUIP ADULT CARDIAC DATABASE

1 INTRODUCTION

1.1 This Charter is an agreement between the European Association for Cardio-Thoracic Surgery ("EACTS") and the various Cardio-Thoracic Surgery Centres and surgeons listed in Appendix 1 ("the Participants"). It outlines the purpose, the principles and the rules governing the QUIP Adult Cardiac Database ("ACD").

1.2 Any Cardio-Thoracic Surgery Centre or surgeon by submitting the registration form becomes a party to this Charter and agrees to comply with these rules.

2 AIMS

2.1 The ACD collects data allowing users to examine the outcomes of surgical procedures carried out in participating countries.

2.2 Participants will be able to compare their outcomes with the collective data shared by colleagues internationally.

2.3 The detailed risk stratification of specific patients will enable doctors to advise patients with more confidence about the risks involved in various procedures for patients sharing their characteristics and history.

2.4 Restricted access to the database will be made available to researchers in order to advance the art and science of cardiac surgery.

2.5 Other access to the ACD may be made available by the EACTS Council on such terms as it may see fit.

2.6 The fields of data held on the ACD may be varied from time to time by the Council of EACTS.

2.7 The Council of EACTS shall have power to delegate day to day control to the ACD Committee ("the Committee") which is to be chaired by the ACD Director ("the Director").
Registration Form

QUIP ADULT CARDIAC DATABASE (ACD):
Cardio-Thoracic Surgery Centre

I confirm that I have read the QUIP Adult Cardiac Database Founding Charter and agree to its terms. In particular I confirm that:

- I am aware that the collective information submitted will be used to produce and disseminate details of the outcomes for patients with the characteristics, and for the procedures, recorded on the ACD;
- I am aware that in addition, the contents of the ACD will be made available for research purposes;
- I am aware of my responsibility to ensure that the information submitted is accurate, complete and robust;
- I am aware of my responsibility to comply with any applicable local laws and procedures;
- I am aware of my responsibility to register the project with the relevant institutional and/or local ethics, audit, or research committee for the purposes of project approval;
- I am properly authorised by the relevant Participant to submit the data;
- I am aware of the possibility that the data held on the ACD may occasionally permit the surgical outcomes of identifiable surgeons to be known;
- I am aware of the Security Policy presently being followed to protect the ACD [Founding Charter, Appendix 2] and that this may be modified from time to time by the managers of the ACD in order to protect the security of the data.
- I confirm that the information submitted relates only to surgeons who have been informed of and consent to the possibility that the data held on the ACD may occasionally permit the surgical outcomes of identifiable surgeons to be known.

Authorised Signature

Date

Name of Signatory:

Job Title:

Email Address:

Centre

Name:

Address:

Country:
• Update data-definitions
• Update excel-file
• Update FMP application
• Charter / sign agreement
• Analysis tool
• Upload: national registry
• MOU-BACTS
Memory of Understanding

8) There is a possible conflict of interest leading to the incompatibility of simultaneous membership of the Database Committee and membership of the Board of Directors of the BACTS or membership of the College. Any other position with possible conflict of interest needs to be presented to the database committee.

The acting members of the database committee will not be member of any other national audit or malpractice committee during their membership of the Committee.
Memory of Understanding

- Conflict of interest - Incompatibility
  - DBC / board member: to be discussed
  - DBC / college member:
  - Your opinion

- Change MOU
  - Has to be approved in the general assembly
DBC committee future

- National participation in QUIP
- Representative of all centers
- Steering / general committee
- Site visits: educative goal

- Invitation to participate