The current status of the adult cardiac database
(National adult cardiac surgery audit NACSA)

David Jenkins
RCS(Eng) 12 Dec 2014
Outline

• Who does what.
• Events since March 2014 data publication.
• Issues with data accuracy.
• Local validation.
• Internal performance monitoring.
• What you have complained about.
• The future, what we can do better.
Who does what

• Since 2008, independent, aim to commission, manage and support clinical audit programmes.

• National Institute for Cardiovascular Outcomes Research
  Department of UCL that manages 6 national clinical audits including NACSA and NCHDA. Collects the data and does the analysis. Currently commissioned by HQIP, until 2016.

• Units, audit depts. Local governance, validation and submission of data.

• Us, we do the work, responsibility and professional integrity for data input at source.
Recent events 1

• Data update on SCTS website for April 2010 until March 2013.
• This data had been previously sent back to units and validated by them.
• NICOR analysed distribution of the risk factors by surgeon and unit.
• Unexpected variation detected, particularly for ‘unstable angina’ field.
• In one unit an internal report suggested one surgeon’s risk data was potentially inaccurate. The first time evidence was presented of potential inaccurate data.
• Units then asked to revalidate their data by September and ‘unstable angina’ reclassified to make more objective.
Recent events 2

- NICOR under pressure, asked all units to ‘assure’ the accuracy of their data.
- External Black review of NICOR methodology – ‘fit for publication’, but not perfect.
- NHS choices publishes mortality by surgeon in unified simplified format as part of COP. Some concerns, units not mentioned.
- One adult cardiac surgeon labeled as ‘negative outlier’ (rather than OK), with adverse publicity.
History of Neurological Dysfunction

History of Pulmonary Disease

- 30%
- 20%
- 10%
- 0%
- -10%
- -20%

Octogenarian

Extracardiac Arteriopathy

Creatinine > 260μmol/L

Unstable Angina

Recent MI

Other than isolated CABG

Female

History of Neurological Dysfunction

History of Pulmonary Disease

Previous Cardiac Surgery

Critical Preoperative State

Moderate LV Function

Pulmonary Hypertension

Surgery on Thoracic Aorta

Post MI VSD

0%

−10%

40%

80%

200

400

600

800

Volume

SCTS
Society for Cardiothoracic Surgery in Great Britain & Ireland
Previously published data format

Data For Period April 2010 - March 2013
Risk Adjusted In-Hospital Mortality Rate

- 184 operations with a mortality rate of 1.46%
- National Average
- One-Sided 95% Control Limit (Corrected)
Replaced by uniform format for all specialties

My NHS BETA Data for better services

NHS Choices >

Consultants specialising in Adult cardiac surgery in England named jenkins

Select a different specialty

Filter your results

Topics

• Key Facts

Location

Please enter a location or

Consultant name

jenkins

Update results

Showing 1-1 of 1 results

<table>
<thead>
<tr>
<th>Address &amp; contact details</th>
<th>Volume of operations</th>
<th>Risk adjusted hospital mortality rate after adult cardiac surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Jenkins</td>
<td>194 operations</td>
<td>Within the expected range with a value of 1.48</td>
</tr>
<tr>
<td>GMC membership number: 33208680</td>
<td>View source information</td>
<td></td>
</tr>
<tr>
<td>Provides services for: Papworth Hospital NHS Foundation Trust</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Concerns about the process

• NHS medical director: are the audits robust, is the data correct, potential for legal challenge?
• HQIP about NICOR: no formal external statistical approval, is the data validation good enough, is the risk adjustment appropriate?
• Surgeons: is it fair, are others gaming, why keep recalibrating, is it useful for patients?
• Patients and public: these surgeons all look OK, of my nearby units which is the best?
Data accuracy

• Surgeons, our personal responsibility for accuracy at source.
• **Please** check your own data complete and accurate.
• Better collection of data, reduce missing fields.
• Protect yourself, careers at stake.
• NICOR need to educate us better about definitions and interpretation of risk factor fields.
• Audit systems at units need to be contemporary and keep up with changes.
• Units need to review key variables, activity and deaths regularly eg monthly audit meetings.
• Audit departments need to be staffed to chase missing fields.
Local validation of data

• Importance of individual responsibility and integrity. Systems to avoid risk of ‘gaming’ charge.
• We suggest random samples of ~10% of case notes with an independent observer (eg anaesthetist) to compare risk fields in database with the clinical record with review of inconsistencies.
• Discussion and recording of controversy.
• Examples included in new professional book.
• Expectation of models from HQIP, and requirement for positive signoff from units.
Local validation of data
(Examples of what we have done in Papworth)

• Anaesthetists input risk data into database in theatres.
• Risk scores for patient deaths reviewed at monthly audit meetings.
• Every 2 years audit dept organise random review of case notes for 5- 10% cases and revalidate risk scores.
Internal monitoring of performance

- Difficult with complexity of model and retrospective recalibration, ‘moving goalposts’.
- Internal tracking is possible, eg we use 50% log EuroSCORE over one year.
- Positive collective action for surgeons at risk. Eg temporary relieved from IHU duties, elective lists screened, group sharing of high risk cases.
- Guidance from HQIP on how medical directors should respond to alerts.
- Aim to prevent colleagues becoming ‘red outliers’ in future with better early warning systems.
Responses

• Exec meeting July 2014 – New clinical audit committee to cover thoracic, congenital and adult cardiac.
• Better engagement with NICOR, more representation at NACSA and PLG meetings.
• Engagement with other specialties through FFSA and RCS(Eng).
• Individual replies to members concerns over the summer.

• Education on risk factor definitions and interpretation.
• Review of risk factor field definitions, objectivity, through NACSA.
• NACSA new analyst to review analysis and calibration options.
• Outlier guidance sought from HQIP. Planned toolkit for MDs.
You have told us...

• It’s a team effort, why my name?

• I don’t want to contribute my data anymore.

• I didn’t realise I would be an outlier.
You have told us...

• It’s a team effort, why my name?
• Agree, but we take final responsibility
• I don’t want to contribute my data anymore.
• Unfortunately there is no choice, we are obliged. If we don’t stay involved others will do it for us
• I didn’t realise I would be an outlier.
• I sympathize, but in the future you will be better informed
You have told us...

• My medical director doesn’t understand this, he will just suspend me.

• It will encourage risk averse behaviour, worse for patients.

• Is all this statistical stuff and risk adjustment correct?
You have told us...

- My medical director doesn’t understand this, he will just suspend me.
- We will educate and provide guidance
- It will encourage risk averse behaviour, worse for patients.
- Possibly, NICOR have already excluded emergency and salvage cases
- Is all this statistical stuff and risk adjustment correct?
- HQIP are reviewing NICOR processes, external statistical review more scrutiny than ever before
What we can do, improvements for future

• Better education of risk factor definitions and interpretation, planned from NICOR.
• Review of risk adjustment methodology at NICOR, potential for fixed benchmark prospectively so goalposts don’t change.
• Take more responsibility for our data personally and collectively improve internal performance monitoring to help each other.
Thank you

I need to hear your concerns

Please contact me:
david.jenkins@papworth.nhs.uk