NACSA
- recent developments

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SCTS Executive
BORs meeting RCS(Eng) 18 Dec 2014
Overview

- Audit structure
- Problems in 2014, BORs 1 year ago, 13 point plan.
- Risk factor definitions and guidance
- 2011-2014 data release this summer
- Issues with analysis/statistics
- Outlier guidance and governance documents
- New developments and 2012-15 data validation
- Future structure of NACSA post BB
Who does what

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

- National Institute for Cardiovascular Outcomes Research (NICOR)

- 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. Professional liaison group.

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

- Us, we do the work, responsibility and professional integrity for data input at source.
BORs 1 year ago, 13 point plan

1. To write to NHS England to highlight the negative impact of publishing surgeon specific outcomes and seek their feedback. **Completed, copied to members.**
2. To continue the dialogue through the FSSA to explore the merits of unit vs surgeon specific data with the other surgical specialties. **In progress, aware and supportive of above.**
3. Through NICOR change the funnel plots to survival curves (as with the congenital cardiac surgical audit) and to present data as survival rather than mortality. **Accepted at NACSA Feb 2015 meeting.**
4. Through NICOR to investigate fixed benchmarks / calibration for assessment periods so that colleagues will know in real time how close they are to triggering an alert. **Discussed at NACSA Feb 2015 meeting, not possible for 2015 April publication, but will provide explanation to members and explore option of fixed calibration for next publication.**
5. Through NICOR abandon the stigmatising red / amber / yellow and adopt two levels of ‘Alert’ and ‘Alarm’ and to research the impact of alerts on previous occasions to understand if useful. **Discussion at PLG of NICOR with subgroup formed (chaired by Simon Ray) to produce guidance whilst formal document from HQIP expected at COP meeting Feb 2015.**
6. Through NICOR redefine the definitions of risk factors – particularly unstable angina and pulmonary hypertension to make interpretation more consistent. **Discussed at NACSA Feb 2015 meeting. User guide already produced for audit depts. to go with data request, and a guide on interpretation of risk factors will also be made for surgeons, with ACSSC allowed to proof in advance. ACSSC invited to formally review the risk factor definitions for NACSA.**
7. Through NICOR ensure that the results for surgeons in their first years of practice are not published, assuring that there will be still audit / governance of this activity. **Accepted at NACSA Feb 2015 meeting, with agreement surgeons not included until > 100 cases.**
8. To have unit level outcomes at the forefront of the published data / website and have consultant level data subservient to unit level data with a “health warning” attached regarding the team nature of cardiac surgery. **Discussed at NACSA Feb 2015 meeting, accepted possible for lightmedia presentation via SCTS website. In addition, subsequently agreed for provision of ability to add more information for surgeons, profile, photo etc. Presentation of COP on NHS choices will be discussed at HQIP meeting and see 13 below.**
9. To educate all colleagues and units to ensure that data is accurately entered into the database and rigorously validated locally with a “subsequent national sense check” at NICOR with SCTS. **Through communication from NICOR with request for first round data, to all members, as in 6 above.**
10. We will work with the Royal College of Surgeons of England to make it easier to provide external peer review if necessary. Engage actively with Medical directors to encourage early use of Independent review (IRM) through the RCS and provide guidance on local action. **New lower level review presented by Ralph Tomlinson at the SCTS exec meeting Feb 2015. Agreement to implement soon, with provision for surgeons to initiate process with potential funding from SCTS if trusts reluctant.**
11. Through the RCS communications department engage with the media to release positive stories and try to prevent media coverage that harms patient care and surgeons unnecessarily. **Ongoing.**
12. Lobby HQIP to provide their guidance on dealing with outliers consistently in all audits. **Ongoing, draft produced ahead of HQIP COP meeting.**
13. Engage with HQIP to discuss format of COP on NHS choices. **TG and DJ attending meeting 23 Feb, with further specific direct meeting organized.**
Problems with interpretation of risk factor fields

• A number of fields have been shown to be vulnerable to inconsistent interpretation, and a survey of members of ACSSC has confirmed this.
• The unstable angina field has already been reclassified to be more objective and relevant to contemporary practice.
• We need to review other subjective fields to clarify definitions eg pulmonary hypertension.
• The NACSA project group is already working to resolve these issues.
New risk factor definitions and guidance

• Dataset review meeting July 2015.
• Review of dataset, NICOR currently working to incorporate, planned to go live from April 2017.
• Each EuroSCORE risk factor definition reviewed and made more objective.
• Risk factors to allow calculation of EuroSCORE II incorporated to future proof.
• Guidance agreed to aid interpretation of fields.
Release of 2011-2014 data, problems

• Delayed multiple times because of late data challenges (over dispersion) and re analysis.
• Incorrect change in presentation format without discussion with SCTS.
• Unauthorised removal of old data from SCTS website before new data ready.
• Incorrect identification of ‘positive outliers’ at surgeon level and notification by SCTS.
• Slow correction of deficiencies on NHS choices website.
Unfamiliar data format to units
Release of 2011-14 date, successes

• No big bang joint COP release. No adverse publicity for members/units/SCTS.
• No surgeon level ‘positive outliers’.
• Some positive local publicity for good performers.
• Additional expert statistical review and understanding of the outlier uncertainty – false discovery analysis. Letters reflected this.
• Data format reverted to familiar, reported as survival, alert/alarm. SCTS website clean up.
Current NACSA statistics

- Change to simplified alert and alarm outlier status.
- Correction for over dispersion. Survival reporting.
- Level of significance 0.001 (99.8% control limit) for alarm.
- Level of significance 0.025 (95% control limit) for alert.
- Understanding of certainty of an ‘outlier’ really being different: false discovery rate $= \frac{\eta \alpha}{\kappa}$
- 39 units, 282 surgeons. Outlier status more likely true for units than surgeons.
Current data presentation example

Data For Period April 2011 - March 2014
Risk adjusted In-Hospital Survival Rate

163 operations with a risk-adjusted survival rate of 98.96%
Added functionality to describe practice, please use it
New helpful information published

- Risk factor interpretation, user guide, ready for April 2016 collection. To units.
- Recalibration risk adjustor spreadsheet calculator, from NICOR to audit managers.
- Maintaining Good Practice – handling of potential consultant outliers (BCS). On-line.
Maintaining Good Clinical Practice – Handling of Potential Consultant Outliers

A Joint Report

from UK Cardiac Professional Societies

Commissioned and Chaired by the British Cardiovascular Society

SCTS
Society for Cardiothoracic Surgery in Great Britain & Ireland
Evolving process, no RCT of outcome reporting
Original Article

The contribution of the anaesthetist to risk-adjusted mortality after cardiac surgery

O. Papachristofi, L. D. Sharples, J. H. Mackay, S. A. M. Nashef, S. N. Fletcher and A. A. Klein on behalf of the Association of Cardiothoracic Anaesthetists (ACTA)*

Summary

Table 3 Variation in in-hospital death attributed to each group. Values are proportion.

<table>
<thead>
<tr>
<th>Centre</th>
<th>Surgeon</th>
<th>Anaesthetist</th>
<th>Patient and other covariates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>0.00%</td>
<td>0.25%</td>
<td>95.75%</td>
</tr>
<tr>
<td>Intervention</td>
<td>4.00%</td>
<td>0.25%</td>
<td>95.75%</td>
</tr>
</tbody>
</table>
Ongoing projects with NICOR

• Research project, led by MJ, to investigate the effect of variation of facility on mortality.
• Analysis of the impact of previous ‘outlier’ status identification on future outcomes.
• Development of early warning system by NICOR to support units and potentially prevent outlier status.
What happened to previous outliers?
Ongoing projects/agreements with NICOR

• Additional outcome measures should be by unit, anonymised and commence after the next data round. Learn from the data, agree definitions, evolution to report by unit, eventually into COP.
• Joint working group to agree eg LIMA use, MV repair rate, LOS, bleeding etc
• Discussion with NICOR and DS to consider maturity of governance and need for future reporting of control limits in public domain. Advice to HQIP.
Ongoing projects/agreements with NICOR

- Review of re-calibration, expert statistical advice.
- Private providers, lobby to include all UK patients in audit.
- Expansion of ‘surgical council’ principle, provisional agreement to report cases by unit rather than senior surgeon, avoid risk averse behaviours.
2012-2015 data release

• Call to units last week, first round deadline 29 Jan, please avoid delays.
• Report May 2016?
• No significant changes to statistics, DS minor revisions only.
• Same methodology, same reporting format, same statistical controls, same alert/alarm governance.
Changes in audit roles/structures

• Ben Bridgewater ‘retiring’ from NICOR and HQIP.
• NICOR (with SCTS input) will appoint their new NACSA audit lead, to provide clinical support.
• SCTS will retain the new (July 2014) Clinical Audit Committee formula, with an SCTS audit lead sitting on the SCTS exec and the NICOR PLG.
• Improved understanding/partnership with NICOR.
Thank you