Understanding Practice in Clinical Audit and Registries tool: UPCARE-tool

A protocol to describe the key features of clinical audits and registries

FAQ

Who should complete the tool?

This tool is designed to be completed by individuals and organisations planning and implementing clinical audits and registries. It has been specifically designed for national clinical audits and registries commissioned by the Healthcare Quality Improvement Programme (HQIP; Part of the National Health Service in England) as part of the National Clinical Audit and Patient Outcome Programme (NCAPOP), but can be adapted and used by audits and registries in other settings.

What is the tool for?

The tool is a protocol for audits and registries. It has been designed to provide a "one-stop" summary of the key information about how clinical audits and registries have been designed and carried out. It is expected that this will be published openly for anyone to view, and help users of audit/registry data and audit/registry participants understand the methods, evaluate the quality and robustness of the data, and find information and data that is most relevant to them. For national clinical audits and registries commissioned by HQIP, the intention is that publishing this information openly will reduce the requirement for reporting ad hoc and contract monitoring data and information to HQIP and other national agencies.

What type of information is contained within UPCARE?

It is intended that the responses to the tool are factual and written concisely. Where possible, documents can be embedded and hyperlinks provided if information is published elsewhere. This document is intended to be a complete account of the information for the audit or registry. Please be vigilant about keeping any links included in the document up to date so readers can access full information about the audit or registry.

This tool is not intended to be used to formally "score" the quality of the responses. The design of this tool has been inspired by reporting checklists used for clinical guidelines (e.g. AGREE[1]) and in reporting research studies (e.g. STROBE[2], SQUIRE[3]).

Who is the intended audience for the tool?

The information contained within the UPCARE tool will enable audit and registry stakeholders to access in one place and in a standard format key information about the audit/registry and evaluate the integrity and robustness of the audit.

Examples of audit/registry stakeholders include:

- Patients / Carers / Public / Patient representative organisations
- Clinicians / Allied health professionals / Healthcare providers / Multi-disciplinary teams / Primary, secondary and tertiary care providers
- National agencies
- Commissioners
- Healthcare regulators

[1] AGREE stands for the Appraisal of Guidelines for Research & Evaluation. See https://www.agreetrust.org/about-the-agree-enterprise/introduction-to-agree-ii/, last accessed 24 April 2018.
[2] STROBE stands for Strengthening the Reporting of Observational Studies in Epidemiology. See https://www.strobe-statement.org/index.php?id=strobe-home, last accessed 24 April 2018.
[3] SQUIRE stands for Standards for Quality Improvement Reporting Excellence. See http://www.squire-statement.org/, last accessed 24 April 2018.

FAQ (cont'd)

How should the responses be written?

Please try and write responses clearly as this will help to make the tool accessible and useful. Some tips and suggestions for writing clearly include:

- avoiding technical jargon where possible
- using short paragraphs and bullet points
- using the "active" voice rather than passive
- keeping sentences short

Where information is published openly elsewhere please provide links and references rather than duplicating information that is already available

When and how often should I complete the tool?

The tool is intended to provide accurate and up to date information about the audit/registry, and so can be updated whenever and however frequently it is relevant to do so. For national clinical audits and registries commissioned by HQIP it is intended that the tool is updated annually, although audits can update the tool more frequently if they wish to.

Each version of the tool should include a date of publication and version number.

Where should the completed UPCARE report be published?

The completed tool should be published online e.g. on the website for the audit or registry.

How was UPCARE designed?

HQIP commission, manage and develop the NCAPOP (National Clinical Audit and Patient Outcomes Programme) under contract from NHS England and devolved nations. The work was led by HQIP who set up a Methodological Advisory Group (MAG) consisting of methodological, statistical and quality improvement experts. Meeting were held on a six monthly basis and the structure and content of the eight quality domains and their key items were agreed by the MAG. The tool was piloted by 5 programmes within the NCAPOP and re-edited in light of comments received. Other comments received by MAG members was also considered as part of the re-editing process. The final version of the UPCARE tool was signed off by the HQIP MAG and will be reviewed annually.

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Domain 1: Organisational information

1.1. The name of the programme
National Vascular Registry (NVR)

1.2. The name of the organisation carrying out the programme
Royal College of Surgeons of England

1.3. Main website for the programme
www.vsqip.org.uk

1.4. Date of publication and version number of the tool on your website
25/09/2019 – v1.0

Domain 2: Aims and objectives

2.1. Overall aims

1. Produce accurate and reliable information for clinicians, patients, hospital staff and the public by ensuring that the data we collect is as complete and accurate as possible and by ensuring the information is produced using appropriate statistical methods.
2. Deliver the NVR in a way that supports vascular services to improve the quality of the care they deliver to patients.
3. Ensure the confidentiality of patient information supplied by hospitals is protected.

2.2. Quality improvement objectives

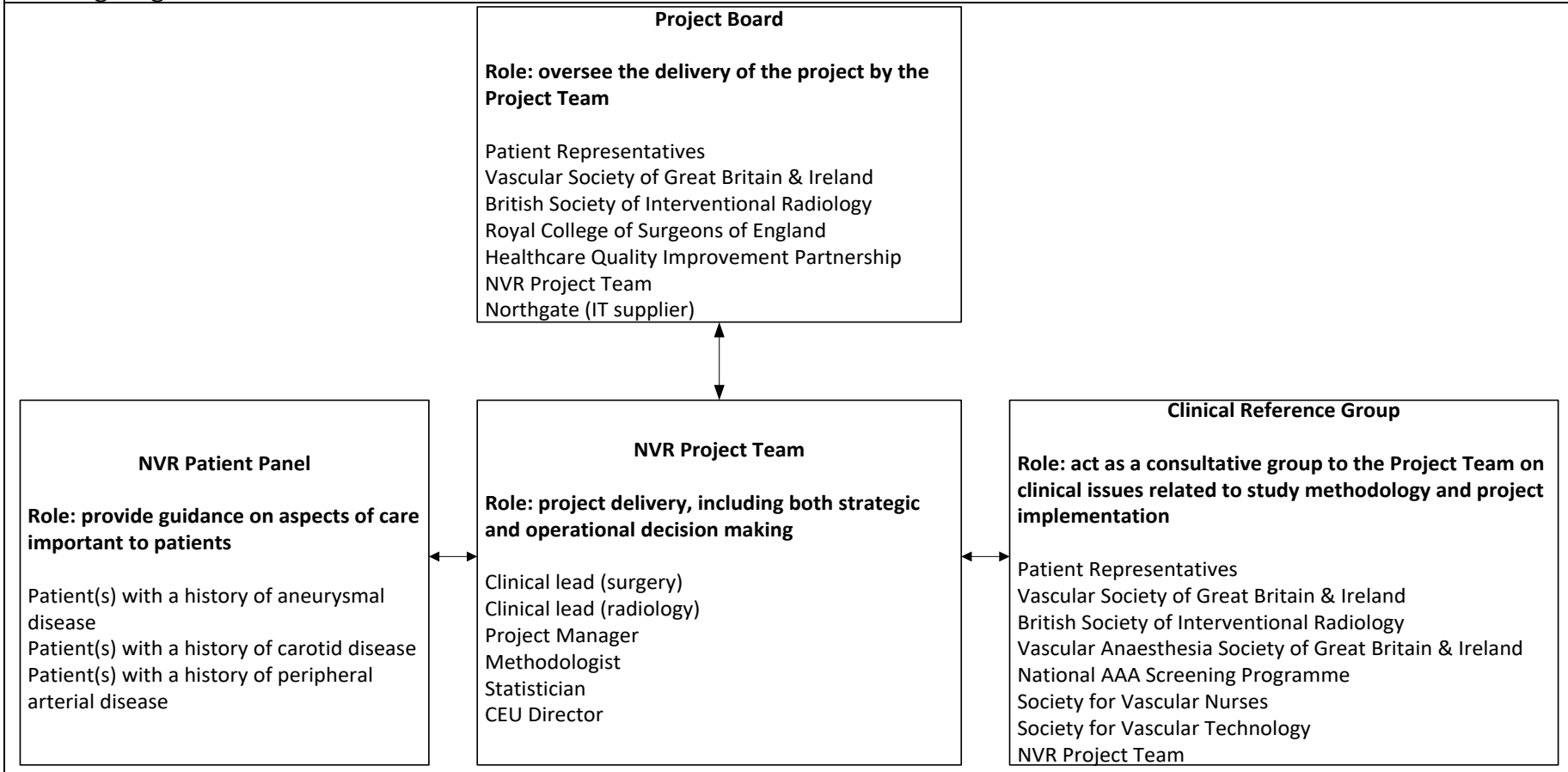
The process related quality improvement objectives of the NVR are to:

1. For AAA repair – (1) patients should have pre-operative CT/MR angiogram assessment; (2) All elective procedures should be reviewed preoperatively in an MDT that includes surgeon(s) and radiologist(s) as a minimum
2. For carotid endarterectomy – (1) the time between the onset of symptoms and treatment should be no more than 14 days;
3. For major lower-limb amputation – (1) Amputations should be undertaken on a planned operating list during normal working hours; (2) a consultant surgeon should operate, or be present in the theatre to supervise a senior trainee (ST4 or above) undertaking the amputation, (3) a patient should have routine antibiotic and DVT prophylaxis before surgery.

The outcome related quality improvement objectives of the NVR are to reduce mortality and morbidity rates from all procedures.

Domain 3: Governance and programme delivery

3.1. Organogram



3.2. Organisations involved in delivering the programme

Clinical Effectiveness Unit at the Royal College of Surgeons -
https://www.rcseng.ac.uk/standards-and-research/research/clinical-effectiveness-unit/

Contracted by HQIP to manage and run the NVR. Also Provides the statistical methodology and the analysis presented in the annual report and associated short reports/ journal papers.

Vascular Society of Great Britain and Ireland
https://www.vascularsociety.org.uk/

The Vascular Society of Great Britain and Ireland is the pre-eminent organisation in the country promoting vascular health by supporting and furthering excellence in education, training and scientific research.

British Society of Interventional Radiology
https://www.bsir.org/

The BSIR is a charitable foundation founded to promote and develop the practice of Interventional Radiology.
What are the main objectives of the society?

- To support and develop access to high quality information on Interventional Radiology for patients and all healthcare professionals.
- To support audit and research in Interventional Radiology
- To support education and training in Interventional Radiology

Vascular Anaesthesia Society of Great Britain and Ireland
https://www.vasgbi.com/

VASGBI was formed in 1997 to provide a forum to promote communication and understanding among anaesthetists who care for patients undergoing vascular surgery. The society aims to support all those involved in vascular anaesthesia, from dedicated vascular anaesthetists to those with limited vascular responsibilities. The committee includes members from both district general and teaching/university hospitals to provide fair representation of all vascular anaesthetists.

3.3. Governance arrangements

The NVR is governed by a project board, which meets twice a year. The group is chaired by Prof Ian Loftus and includes representatives from the organisations listed in the organogram in section 3.1. The board is responsible for overseeing the audit and providing oversight and advice to the project. The board is the guarantor of the data from the audit and is responsible for signing off the annual report. The chair of the Programme Board is the accountable officer of the project.

The clinical reference group reports to the project board and is responsible for delivering the programme. It includes members from the Vascular Society's audit and quality improvement committee.

Decisions are only taken at meetings where meetings are quorate. There is a process for reviewing membership to ensure an active board, quorate meetings and which leads the direction of the programme.

3.4. Declarations and Conflicts of interest

All DOI are collected in advance of board meetings and decisions regarding whether a COI exists and appropriate actions are made by the Chair. Any new DOI are also requested at each board meeting as a standing agenda item.

Domain 4: Information security, governance and ethics

4.1. The legal basis of the data collection

The NVR has approval under section 251 of the NHS Health and Social Care Act 2006 to collect identifiable data without consent in an emergency setting (CAG approval number CAG 5-07(f)/2013). Patients can opt out of their identifiable data being collected by contacting their local clinical team or notifying the registry directly at nvr@rcseng.ac.uk

All patients in Scotland and Northern Ireland, and those undergoing elective surgery in England and Wales are required to consent for their personal identifiable data to be collected and stored on the NVR. More information is available on the VSQIP website: https://www.vsqip.org.uk/resources/leaflets/obtaining-patient-consent/

4.2. Information governance and information security

The NVR is run by the Royal College of Surgeons of England (RCSEng). The RCSEng has completed and met the standards of NHS Digital's Data Security and Protection Toolkit on 22/03/2019 - https://www.dsptoolkit.nhs.uk/OrganisationSearch/8HM21

Domain 5: Stakeholder engagement

5.1. Approaches to involving stakeholders

Patients are involved by:

- Providing feedback on the infographics used within the 2017 annual report, so that they can be improved for future years,

Clinicians are involved by:

- Presenting key findings from the audit at the professional annual conference
- Collecting the data

Domain 6: Methods

6.1. Data flow diagrams

The most recent version of the NVR's data flow diagram can be found on the VSQIP website:
https://www.vsqip.org.uk/resources/information-governance/nvr-dataflow-diagram/

6.2. The population sampled for data collection

Patients undergoing vascular surgical procedures in UK NHS hospitals:

- Carotid endarterectomy/stenting
- Repair of abdominal aortic aneurysm (AAA)
- Lower limb angioplasty/stenting
- Lower limb bypass (surgical revascularisation)
- Lower limb amputation

6.3. Geographical coverage of data collection

All NHS trusts/health boards in the UK undertaking vascular surgery or vascular interventional radiology are eligible to participate in the NVR.

6.4. Dataset for data collection

The NVR's datasets are published in the proformas section of the VSQIP website:
https://www.vsqip.org.uk/resources/proformas/

6.5. Methods of data collection and sources of data

Clinical data were collected by clinical teams and entered into a secure online webtool designed specifically for the registry.

Ad-hoc organisational surveys were undertaken using Survey Monkey.

6.6. Time period of data collection

The NVR in its current format commenced data collection from January 2014.
The old NVD, which closed in January 2014, collected data from as far back as 2008 or earlier.

6.7. Time lag between data collection and feedback

Participants receive real time feedback of data via the audit webtool.

Feedback is via an annual report, which is published approximately 5 months after the end of data collection. The lag between data collection for patients included in the report is 11 months.

The time from report submission to commissioners and funders, to publication of the report is dependent on HQIP/NHS England's SRP in relation to public facing reports.

6.8. Quality measures included in feedback

Various process and outcome measures about each eligible NHS trust/health board in the UK are published for each of the NVR procedures. These are published in:

- Annual reports (e.g. https://www.vsqip.org.uk/reports/2018-annual-report/)
- Outcomes section of our website - https://www.vsqip.org.uk/surgeon-outcomes/

These are updated once a year.

A small number of process and outcomes measures are available in real-time on the NVR IT system. These can be accessed by users of the NVR IT system.

6.9. Evidence base for quality measures

For all procedures:

- Vascular Society of Great Britain and Ireland (VSGBI). The Provision of Services for Patients with Vascular Disease. [The Vascular Society, 2018]

For carotid endarterectomy:

- National Institute for Health and Clinical Excellence (NICE). Stroke: The diagnosis and acute management of stroke and transient ischaemic attacks [NICE 2008]
- National Stroke Strategy [DH 2007] and its associated publication "Implementing the National Stroke Strategy – an imaging guide" [DH 2008].

For elective AAA repair:

- The Vascular Society of GB&I "Quality Improvement Framework for AAA" [VSGBI 2012]
- Standards and outcome measures for the National AAA Screening Programme (NAAASP) [NAAASP 2009]

For peripheral artery disease:

- The Vascular Society of GB&I. "A Best Practice Clinical Care Pathway for Major Amputation Surgery" [VSGBI 2016]
- National Institute for Health and Clinical Excellence (NICE). Guidance for peripheral arterial disease (CG147) [NICE 2012]
- National Confidential Enquiry into Patient Outcomes and Deaths. Lower Limb Amputation: Working Together 2014. [NCEPOD, 2014]

6.10. Case ascertainment

The number of cases entered into the NVR is compared to HES to calculate the case ascertainment rate. The rates for each procedure calculated in the 2018 annual report were:

- Elective infra-renal AAA repair – 90%
- Repair of ruptured AAA – 92%
- Carotid endarterectomy – 91%
- Lower limb angioplasty – 28%
- Lower limb bypass – 90%
- Lower limb major amputation – 60%

6.11. Data analysis

The methods used to clean and analyse the audit are described in Appendix 12 of the 2018 annual report at https://www.vsqip.org.uk/reports/2018-annual-report/

Outliers for mortality and stroke and/or death were calculated using funnel plots. The NVR has an outlier policy published on our website at https://www.vsqip.org.uk/resources/policies/nvr-outlier/

6.12. Data linkage

No data linkage performed as yet.

6.13. Validation and data quality

The original NVR datasets were piloted by a selected group of users, before they were made live in the NVR IT system in 2013.

Validation rules are built into the NVR IT system, which reduce the chances of errors being made at the time of data entry.

The statisticians analysing the NVR data carry out various data cleaning and duplicate checks, as part of the analysis process.

Domain 7: Outputs

7.1. The intended users or audience for the outputs

The audit designs and produces reports and other documentation for:

- General public
- Patients and carers
- Clinical commissioning groups or Health Boards
- Trust/hospital boards
- Clinical teams
- The Care Quality Commission
- Individual clinicians

7.2. Editorial independence

As an independently commissioned programme, the contents of the outputs are written by the NVR project team and quality assured by the clinical reference group through the governance processes described in previous sections.

7.3 The modalities of feedback and outputs

The NVR provides the following outputs:

- Annual report, including appendices in table and Excel format
- Infographics within the annual report and as stand-alone documents
- Appendices available through data.gov.uk
- Trust and consultant outcomes section of VSQIP website
- Trust and consultant outcomes via NHS Choices/MyNHS
- Selected metrics via HQIP/CQC NCAB project
- Selected metrics to GIRFT
- Other anonymised extracts of NVR data that have been requested through HQIP's DARS process

7.4 Recommendations

The NVR made 13 recommendations for hospitals, clinicians and commissioners in the most recent annual report. The link to the report is: https://www.vsqip.org.uk/reports/2018-annual-report/

7.5 Comparators and benchmarking

The NVR provides comparative performance data for NHS Trusts/health boards. Each trust has performance measured against other UK trusts.

The NVR also provides comparative performance data for individual consultants. Each consultant has performance measured against other UK consultants.

7.6 Motivating and planning quality improvement

The NVR supports participants in QI by:

- Providing online reporting facilities in real-time via the NVR IT System, such as summary tables and graphs.
- Providing guidance on how to use these online reporting tools.
- Publishing trust and consultant level information on the VSQIP website, stating how local performance compares to the national averages and standards.