

NATIONAL ADULT CARDIAC SURGERY AUDIT

SELF-ASSESSMENT SURVEY: “AUDIT OF AUDITS” INDIVIDUAL WORK STREAM REPORT

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Centre for Healthcare
Improvement




Report prepared for

HEALTHCARE QUALITY IMPROVEMENT PARTNERSHIP

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The Audit of Audits was commissioned by HQIP, funded by NHS England. The development and reporting was undertaken by the Centre for Healthcare Improvement and Research (CHIR) based at Imperial College, supported by an advisory group including external experts.

	<p>The Healthcare Quality Improvement Partnership (HQIP) is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing and National Voices. Its aim is to promote quality improvement, and in particular to increase the impact that clinical audit has on healthcare quality in England and Wales. HQIP holds the contract to manage and develop the National Clinical Audit Programme, comprising more than 30 clinical audits that cover care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual audits, also funded by the Health Department of the Scottish Government, DHSSPS Northern Ireland and the Channel Islands.</p>
	<p>The Centre for Healthcare Improvement and Research is part of Imperial College London and based at Chelsea and Westminster NHS Foundation Trust. It aims to build on the work of the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care (CLAHRC) Northwest London to develop an international centre of excellence supporting the sustained improvement to healthcare systems; delivering improved patient outcomes, experience and value. Comprising of clinicians, academics, analysts, quality improvement experts and healthcare managers, the Centre seeks to develop and apply improvement science principles to accelerate the speed at which healthcare research findings are implemented into frontline healthcare.</p> <p>A major component of CHIR is the evaluation of research or improvement initiatives with a focus on data accuracy and utilisation. CHIR informed the development and design of the questionnaire.</p>
	<p>The Imperial College Academic Advisory Group (ICAAG) have expertise in national audits as well as assessing clinical outcomes with experts in the analysis of large datasets, both in primary and secondary care. In addition, Healthcare Quality Quest provided valuable guidance to the Group early in the process when the audit questions were being developed.</p>

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1. Introduction

This 'Audit of Audits' is one way in which HQIP aims to facilitate the sharing of best practice in the design and delivery of national clinical audits (NCAs) undertaken in England.

We are now pleased to provide you with your audit-level report for your individual work stream. This report compares your audit work stream to 54 other national clinical audit work streams, identifies good practice within your work stream and provides advice for improvements to design and delivery.

One report has been generated per completed self-assessment form, therefore if you provided separate information on multiple work streams within your audit, you will receive separate reports for each. In the future we will consider how reporting might be combined to give a more coherent overarching picture of audit programmes with multiple work streams, and welcome your feedback on this.

In this report, your data is indicated using the following marker: .

The objectives of the Audit of Audits are as follows:

- i. Assess NCAs to:
 - Identify the current range of design, delivery and impact
 - Identify individual project issues and provide advice and support as required
- ii. Provide transparent and accessible information on NCA quality to the professional and patient community.
- iii. Align HQIP commissioning to ensure that quality is further enhanced by reflecting best practice consistently in all commissioning and monitoring activities
- iv. Use the information obtained to inform both commissioning decisions for the NCAPOP and also, in time, the inclusion of audits on the Quality Accounts list
- v. Promote on-going discussions between NCA delivery teams around the factors which contribute to quality, and in particular how best to maximise the capacity for NCAs to drive quality improvement

The delivery of the Audit of Audits is divided into three phases. This report forms part of phase 2. The table below shows the timing of other Audit of Audit activities.

	Description	Milestones
Phase 1: Development October 2013 – March 2014	Testing the approach and obtaining baseline data	Consultation on questionnaire and pilot (October – December 2013) National data capture (February to March 2014)
Phase 2: Quality Improvement April 2014 – December 2014/January 2015	Providing feedback to audits; Initiation of project-level improvement where needed; Aligning HQIP commissioning and contract management processes with explicit best practice	Analysis and national report development (May to July 2014) Audit level report development (July to August 2014) Audit level reports to each audit for checking and clarification (September to November 2014) National and individual audit reports published on HQIP website (December 14/January 2015)
Phase 3: Quality Assurance After January 2015	Using the audit results to contribute to commissioning decisions and the selection of audits for the Quality Accounts list.	

2. Methods

Development of the self-assessment survey

Imperial College Academic Advisory Group (ICAAG) worked with HQIP and Healthcare Quality Quest Limited to develop an initial survey template with guidance for NCAs to self-assess. This was achieved by the synthesis of existing literature and a consensus approach through iterative meetings with ICAAG, HQIP and national experts. This guidance was used as the basis to develop an online survey, with small scale testing and wider consultation. The survey was reviewed by five existing NCAs and made available through broader public consultation of all NCAs in October 2013. The survey was modified following feedback and the final version approved by NHS England and the National Advisory Group for Clinical Audits and Enquiries (NAGCAE) in December 2013. Based on this work the online self-assessment survey was developed using an open source platform Qualtrics® and was tested prior to the national launch in February 2014.

Content of the self-assessment online survey

The self-assessment online survey (see Appendix 2) contained three sections:

- i) Audit scope (section A: questions **1 to 6**) covered the following key areas:
 - Main audit contact name and contact details
 - Health or social care sector(s) covered by the audit
 - Geographic coverage
 - NHS Outcomes Framework domains covered
 - Audit funding
 - Intended period to collect individual patient data between April 2014 – 31st March 2015
- ii) Structure and governance (section B: questions **7 to 20**) assessed the main areas listed below:
 - Management and membership of NCA Board
 - Frequency of meetings and minutes of the Board meeting taken
 - Audit Documentation in place
 - Information Governance
 - Types of quality of care measures (structure, process and outcome) and source of evidence for measures
 - Sampling strategy
- iii) Design, conduct of delivery and impact of NCAs (section C: questions **21 to 53**) gauged the following:
 - Improvements in structure, process or clinical and/or patient outcomes demonstrated over time at a local or National level
 - Learning and spread of good practice
 - Types of organisations that used the NCA data to drive improvement
 - Ascertainment (recruitment) rate for the NCA and types of data sources used
 - Geographical coverage
 - Data Quality plan (definition and recording of data variables; data acquisition; existing data sources used; data quality for validity; reliability and statistical methods used for analysing and comparing variation)
 - Patient safety
 - Dissemination of NCA findings

Eligibility

NCA and Patients Outcomes Programme (NCAPOP) are audits commissioned and managed by HQIP. All NCAPOP audits were required to complete the self-assessment survey. NCAs that are independently funded and managed outside of HQIP (non-NCAPOP audits) were invited to participate but participation was not obligatory.

The self-assessment form for audit scope, structure and governance (sections A and B, respectively) were designed to be completed by all NCAs. To be eligible to participate, each NCA must i) operate in England, ii) intend to collect patient level data in 2014-15 and iii) plan to report comparative performance of providers.

The design, conduct of delivery and impact section of the self-assessment form (section C) was to be completed if the NCA met the following criteria: i) completion of two audit cycles, ii) both cycles included patient level data and iii) an audit report had been published after April 2012.

NCAs that solely collected organisational data were **ineligible**.

A total of forty three NCAs were invited to complete the on-line self-assessment survey by HQIP starting in February 2014 and to be completed by 28th March 2014.

Completion of the self-assessment online survey

NCAs were advised to collate and validate all information required for each question prior to online submission by their team. It was recommended that the self-assessment survey be completed by one individual, using a single computer port (single IP address), with appropriate knowledge and overview of the audit. Once online data entry had commenced, a time limit of 14 days was applied to complete the survey. To ensure reliability and validity of data, data quality and verification checks were inbuilt to the Qualtrics® system. Question logic, where applicable, was part of the system design to improve data efficiency and quality. Required fields were included, as applicable, to ensure data completeness and validity. To guide the user completing the online self-assessment survey on HQIP's website links were provided with a downloadable version of the self-assessment survey, user guide and a glossary of terms.

At the conclusion of the survey individuals were prompted to complete a final submission. Once submitted, further edits were not possible. Immediately on submission a full printable version of the completed self-assessment survey was produced for each NCA. A hard copy of all of the completed sections signed by the Chair of the NCA Board was then submitted within 10 working days of electronic submission to HQIP.

A help desk was provided (Monday to Friday working hours only, from 3rd to 28th March 2014) where initial queries were assessed and, where possible, were answered initially by HQIP. NCAs with multiple work streams were asked to complete a form for each work stream. Four NCAs requested to complete a single form for their work streams as their data were collectable within the one form, which HQIP accepted. Technical queries were passed onto the information team at CHIR.

Quality Assurance and data completeness

Of the 43 NCAs invited, 42 completed the survey in full and one opted out (see Appendix 3 for a comprehensive list of all NCAs that participated). Twenty five of the 42 NCAs were commissioned and managed by HQIP and 17 were independently funded and managed outside of HQIP.

NCAs vary in their remit, design and structure. NCAs can collect data in a single condition (or procedure or pathway), while others are more complex and may collect data from more than one condition in a single

audit (or on more than one procedure or pathway). Hence, for the purposes of this analysis ICAAG made the decision to analyse each condition or pathway audit and defined within this report as a work stream. This was important when analysing section C which reports on the impact of individual audit work streams.

The data reported is based on the individual NCAs self-assessment responses. Validation is an important process but was beyond the remit for year one overall report but is part of the on-going work to support individual feedback.

From the 42 NCAs, 54 individual audit work streams were generated and included in the final analysis (see Figure 1). 32 NCAs reported a single work stream. Six NCAs with more than one related audits completed a total of 18 self-assessment forms representing the individual work streams. Four NCAs reported multiple work streams using a single self-assessment form.

All NCAs fully completed Section A, the audit scope. For structure and governance (Section B) data completeness for questions ranged from 87% to 100%. 28 NCAs were eligible to complete Section C, on the design, delivery and impact and the range for data completeness for this section was between 54% and 100%. All self-assessment forms were quality assured by two individuals (one person from HQIP and the other from CHIR) for duplicated or incomplete entries. A specific issue arose regarding data governance for four NCAs and this was then verified directly (between May and July 2014) with the relevant NCAs. Two work streams reported that they had Section 251 exemption but were not collecting identifiable data (one NCA clarified that this was a data entry error, and the other NCA had a Section 251 exemption for a different work stream within the same clinical audit). Two NCAs collected identifiable data but no Section 251 was in place; both subsequently clarified that they consented patients.



Figure 1
Schema demonstrating the NCAs (n=42) that participated in the self -assessment process by the number of the work streams (n=54) included in the final analysis.

Data analysis

The data from Qualtrics® were exported to Excel. Logical tests were used on nested questions, as well as for further classifications of answers. The six NCAs that completed a total of 18 self-assessment forms were analysed as 18 individual forms (Figure 1).

Questions that included an option for free text answers and comments were analysed separately to establish emerging themes. Two independent analysts carried out iterative rounds of coding manually to cluster the responses into meaningful categories. The data were then summarised for inclusion in the report.

3. Findings from Self-Assessment Online Survey

Overview of audit demographics and your NCA work stream

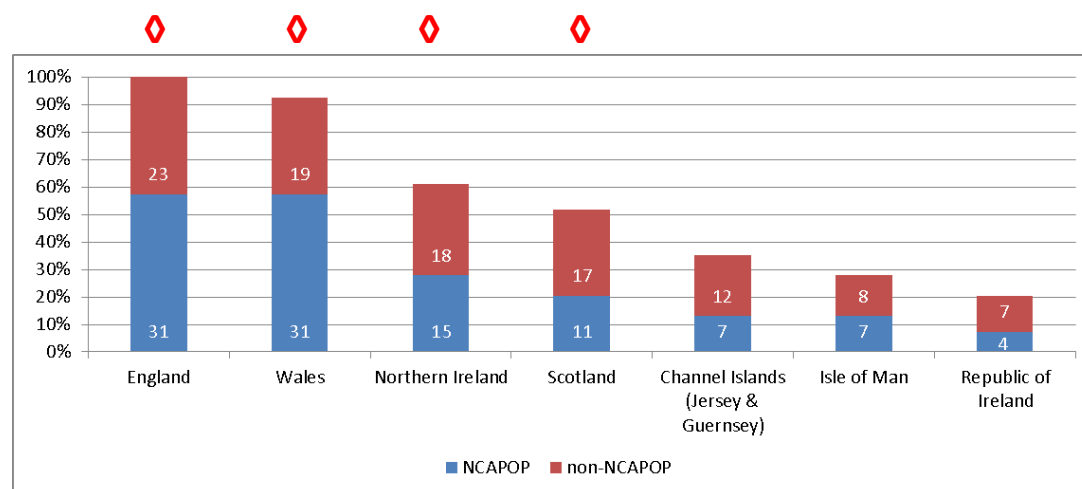
The responses provided by your work stream are catalogued in comparison with the 53 other self-assessment form survey respondents. Your study is commissioned as part of the National Clinical Audit and Patients Outcomes Programme (NCAPOP). A majority of the respondents were NCAPOP audits or work streams, with 31 of the 54 being commissioned as such.

Geography

The geographical coverage of your work stream is shown in Figure 2 below.

Figure 2 (Question 4)

Geographical areas covered by NCA work streams (%).



Across the survey, all 54 NCAPOP and non-NCAPOP work streams cover England and most also cover Wales. There is variable coverage in other regions, though it is noted there is a greater proportion of non-NCAPOP audits for each individual area outside of England and Wales (this includes the 11 work streams covering the Republic of Ireland).

Health or social care sector

The care sector of your work stream is indicated in Table 1 below.

Table 1 (Question 3.2)

Health or social care sector(s) covered (%) by NCA work streams (n=54).

Health or Social Care Sectors covered	n (%)
Secondary Care only	24 (44)
Secondary Care and Tertiary Care	13 (24)
Secondary Care, Mental Health Trust, and Community Care	3 (6)
Secondary Care and Community Care	2 (4)
Primary Care only	2 (4)
Tertiary Care only	2 (4)
Secondary Care and Primary Care	1 (2)
Secondary Care and Mental Health Trust	1 (2)
Secondary Care, Community Care, and Primary Care	1 (2)
Secondary Care, Community Care, and Social Care	1 (2)
Secondary Care, Community Care, and Tertiary Care	1 (2)
Secondary Care, Community Care, and Private Provider	1 (2)
Secondary Care, Primary Care, and Tertiary Care	1 (2)
Secondary Care, Tertiary Care, Rehabilitation, and Pre-hospital Care	1 (2)

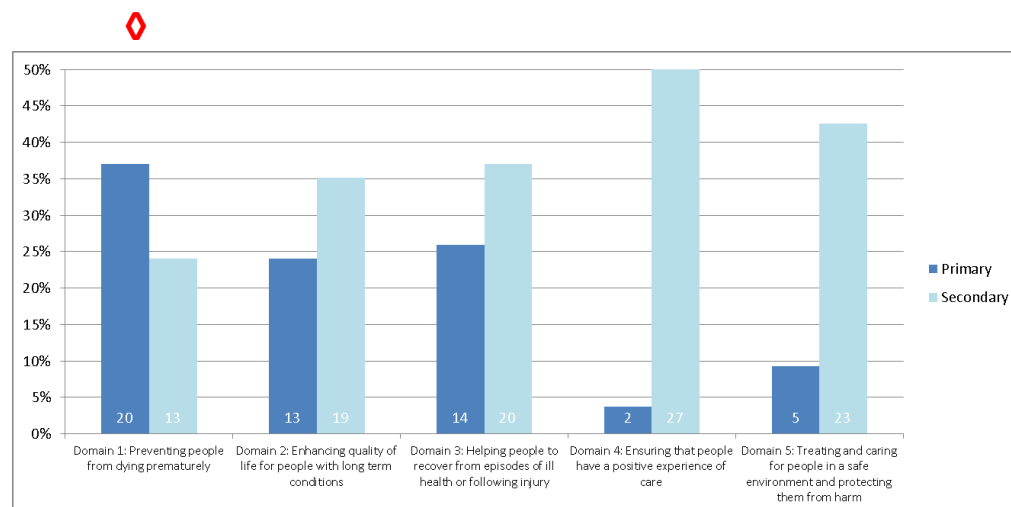
50 of the 54 (93%) work streams related to patient groups in secondary or secondary and tertiary care. Fewer crossed organisational boundaries, with only 13 bridging secondary care with another domain, such as primary, social, or community care. Only five work streams were directly involved in primary care.

NHS Outcomes Framework domains

Your primary NHS Outcomes framework domain is indicated in Figure 3 below.

Figure 3 (Question 4.1-2)

Primary and secondary domains covered by NCA work streams (%). For primary domain (n=54) a single response was required. For secondary domains covered, multiple responses were allowed, hence the total is greater than the number of work streams (54). The primary domain is indicated by the red ♦.



Overall, domains 1-3 were most frequently selected as the primary domain. This is balanced by a more evenly highlighted secondary domain with domains 4 and 5 being commonly selected.

Reporting units of analysis

The units of analysis used in reporting for your work stream are shown below in Table 2.

Table 2 (Question 6.2)

Units of analysis for reporting by NCA work streams (n=54).

Units of analysis	n (%)	
Commissioning Group	13 (24)	
Region/network	25 (46)	
National	53 (98)	◇
Individual Clinician	9 (17)	◇
GP Practice	3 (6)	
Team	7 (13)	
Ward	4 (7)	
Department	8 (15)	
Hospital	38 (70)	◇
Trust	32 (59)	
Other	8 (15)	

Across all work streams, there is varied reporting at local, regional, and national levels. There is a wide range at more local units of analysis (clinician, team, ward, department, hospital, or trust: 17%, 13%, 7%, 15%, 70%, 59%) though this may relate directly to the nature of the care being delivered in the work streams. 53 of 54 (98%) of the work streams intend to report nationally.

Audit structure and governance

Audit Board

44 (81%) of the 54 work streams stated that they had an NCA Board (or equivalent). Table 3 below outlines the NCA Board representation of your work stream.

Table 3 (Question 9)**Composition of Board Membership for those audits with a board (n=44).** *For definition, please see glossary, Appendix 4.

Board Membership	n (%)	
Clinical Lead	44 (100)	◇
Representative from participating units	39 (89)	◇
Methodologist (e.g. epidemiologist)	42 (95)	◇
Clinical Audit Professional*	31 (70)	◇
Patient/Carer/Service User Involvement*	35 (80)	◇
Public Involvement*	15 (34)	
Management (data and project)	42 (95)	◇
Relevant professional societies or equivalent bodies	41 (93)	◇
Other	13 (30)	

Your NCA Board meets four times per annum. Minutes are produced and circulated internally, as well as put in the public domain. 40 (74%) of the 54 NCAs have boards (or equivalent) that reported meeting at least three times per year, while 13 of the 54 work streams met twice per year and one reported meeting once per year. Nine (17%) of the 54 of work streams reported that their minutes were publicly accessible.

Audit protocol and documentation

The audit documentation and protocol in place for your work stream is listed in Table 4 below.

Table 4 (Question 12)

Accompanying Audit documentation (n=52). Note: Two work streams did not respond to the criteria listed, with two additional work streams not responding as to their quality improvement approach.

Audit documentation in place	Yes, in audit protocol n (%)	Yes, but NOT in audit protocol n (%)	No n (%)
Improvement driven aims and objectives	27 (51) ◇	14 (26)	12 (23)
Methodological plan clearly presented	24 (45)	23 (43) ◇	6 (11)
Statistical analysis plan clearly presented	8 (15)	30 (57) ◇	15 (28)
Quality improvement approach	19 (37) ◇	18 (35)	14 (27)
Project plan including audit design	25 (47)	24 (45) ◇	4 (8)

40 (74%) of the 54 work streams had an audit protocol (as defined in the glossary, Appendix 4) with only 17 having a publicly accessible version. There was a spread of responses as to which documents were or were not within the protocol, with no formal documentation for some aspects of some NCAs, such as quality improvement approach and statistical analysis plan. For your work stream there is an overarching audit protocol in place and it is not publicly available. The Methodological plan, Statistical analysis plan, and Project plan including audit design should be put in the audit protocol and made publicly available.

Quality of Care measures

The quality of care measures by your work stream are shown in Figure 4 below, with the evidence source for these measures indicated in Table 5.

Figure 4 (Question 16-18)

Quality of care measures listed by each work stream (n=52). Note: One work stream did not specify measures, and one was excluded as it only collected a patient reported experience measure (PREM) (and was not categorised into one of the domains).

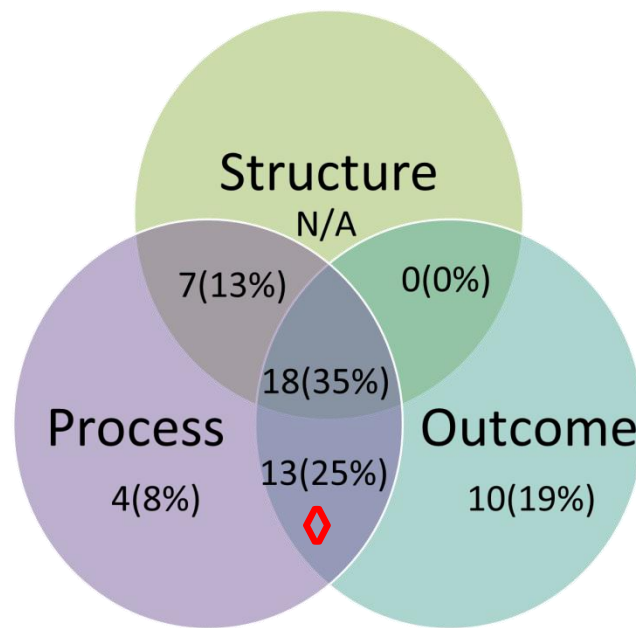


Table 5 (Question 16-18)

Evidence based standards used by NCA work streams. Multiple responses were allowed hence the total is greater than the number of the 52 work streams that specified the source for the standard used for their measures.

Source for the standards used	Structure (n)	Process (n)	Outcome (n)
NICE	36	83	55
SIGN	8	15	12
Other UK S/G	33	66	43
European S/G	3	15	20
International S/G	5	12	18
Recent research (E)	9	13	21
Other	26	59	43

Your NCA did not collect structure measures.

The following process measures were listed with the evidence source clearly identified for each measure:

- Length of stay
- LIMA usage

The following outcome measures were listed with the evidence source clearly identified for each measure:

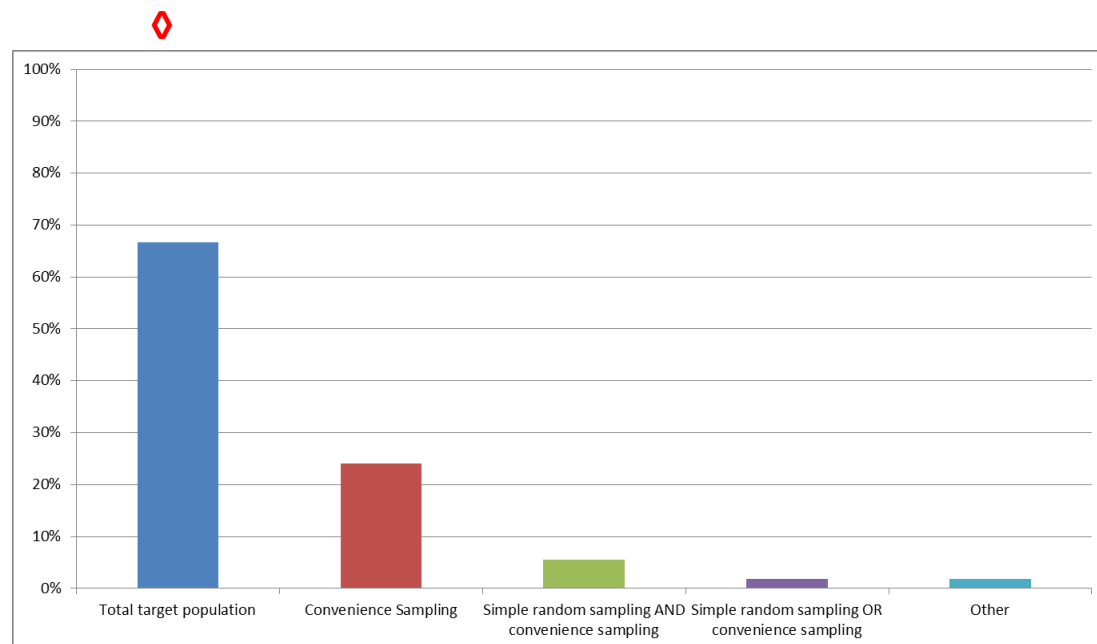
- In-hospital mortality
- Long term mortality
- Return to theatre
- New post-operative neurological dysfunction
- Post-operative infection

Sampling strategy

The sampling strategy of your work stream is indicated in Figure 5 below.

Figure 5 (Question 19-20)

NCA work streams (n= 54) collecting data on the total population or a sample of the population (%).



36 (67%) of the 54 work streams collected data on the total population with a third (18 work streams) using some form of sampling methodology. Convenience sampling was most common with simple random sampling approaches also being used.

Audit design, conduct of delivery and impact

28 of the 54 work streams were eligible to complete this section as the following criteria were met: i) completion of two audit cycles, ii) both cycles included patient level data and iii) an audit report was published after April 2012.

Priorities

22 of the 28 work streams identified priority areas for improvement. The answers from the self-assessment were coded and themed, with your responses indicated amongst the themes below:

- Reducing clinical variation and adverse events
- Mortality (including premature death)
- Improving clinical coding
- Increasing screening rates
- Appropriate and timely admissions
- Developing PROMs
- Patient perception of procedure success versus clinician perspective
- Identifying priority topics for research

Impact

Mechanisms to support improvements by NCA work streams at a local and national level were answered in the self-assessment form and subsequently themed, with your examples indicated amongst the themes below:

A) Local Mechanisms

- Reporting data to individual consultants, workload activity, peer review, clinical lines of enquiries and for action plans
- ❖ ➤ Data were used for quality accounts, comparative analysis, benchmarking, process monitoring by SHAs, Commissioners and NHS Trust Board level
- Service provision, planning and reconfiguration
- Updating guidelines, protocols and introducing care bundles

B) National Impact - data used by the following groups

- Care Quality Commission for their reports
- NHS England 'Everyone Counts'
- ❖ ➤ NHS Quality Dashboards
- NHS Best Practice Tariff
- NICE
- National reviews

Your work stream is having an impact at a local and a national level.

Improvement over time

To assess whether improvements were shown over time by work streams responses were compared to previous responses (Question 22 compared to Question 16-18). For the purpose of this analysis work streams were excluded if the respondent stated improvement but the measure was not initially collected (a total of six exclusions). The improvement over time for your quality of care measures is shown below in Table 6.

Table 6 (Question 22 compared to Q16-18c)
Improvement in quality of care shown over time by NCA work streams.

Quality of care measures	Number of work streams collecting structure, process and outcome baseline measures (q16-18)	Of those work streams that collected structure, process or clinical and/or patient outcomes that demonstrated improvement over time (q22)
Structure	10/28	7/10
Process	21/28 ❖	18/21
Outcome	27/28 ❖	24/27 ❖

Your work stream reported improvement over time for outcome measures.

Improvement Plans

Plans described as in place to address priority areas by NCAs were themed, with your responses indicated amongst the themes below:

- Provision of the online results in real time to bench mark performance
- ❖ ➤ Monitoring of the right treatment at the right place at the right time
- Introduction of a care bundle
- Introduction of PROMS
- Empowerment of local clinicians and service lead to use local data to manage improvement
- Development of joint work or campaigns with national or professional bodies

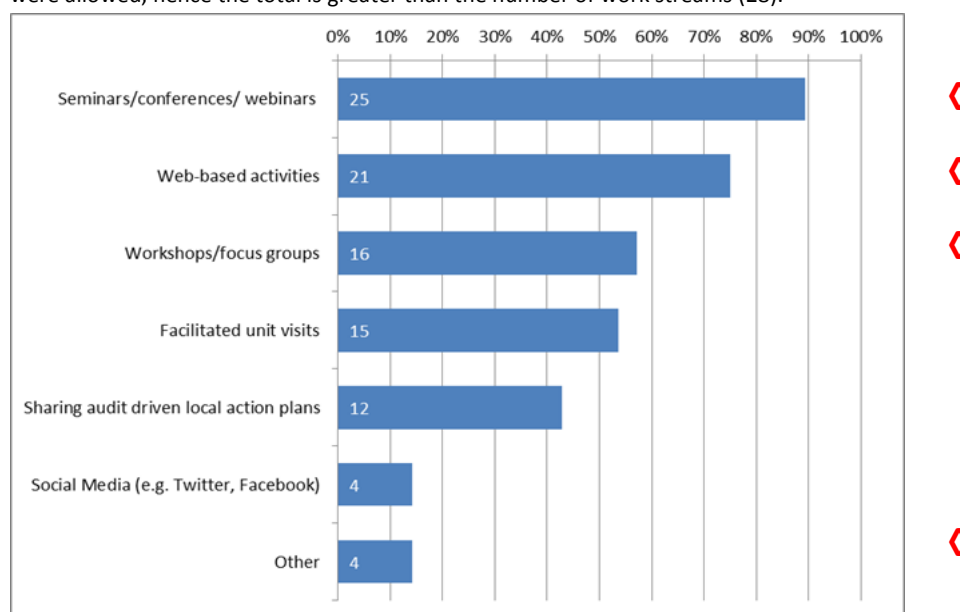
Publications and dissemination

Audit findings were disseminated in a number of ways including through peer and non-peer reviewed publications. In total, 119 peer reviewed publications were reported (from 2009 to 2014), and 59 non-peer reviewed (from 2007 to 2014). For your work stream ten peer reviewed publications and five non-peer reviewed publications were listed of the ten maximum for each on the self-assessment form.

The approaches used by your work stream to share learning are shown in Figure 6 below.

Figure 6 (Question 27.1)

Fora used (%) by NCA work streams to share learning and spread of good practice (n=28). Note: multiple responses were allowed, hence the total is greater than the number of work streams (28).



For other fora used you listed: Database manager 'buddying'.

A broad range of approaches were described to support shared learning of the NCA work and the spread of good practice. Most described the use of established fora such as seminars, conferences, webinars and web based activities. A minority (14%) used social media. Other ways of sharing learning were local champions, quarterly newsletters and peer support. Some fora were used for sharing learning and spreading good practice for your work stream.

Organisations using your data

The organisations using the data from your work stream are shown in Figure 7 below.

Figure 7 (Question 28)

Organisations (%) using data from NCA work streams to drive quality improvement (n=28). Note: multiple responses were allowed, hence the total is greater than the number of work streams (28).



For other organisations you listed: Cardiac surgery CRG

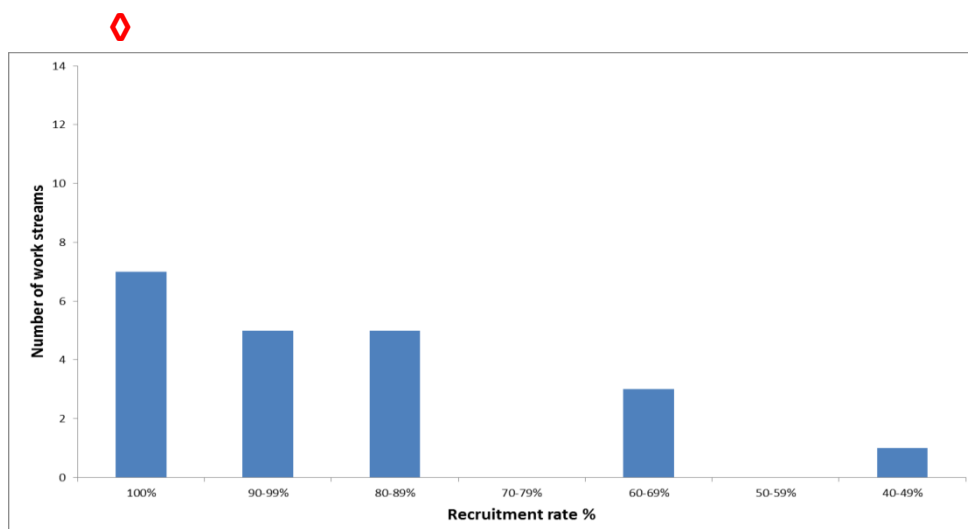
The NCA data was reported to be used by other groups, not necessarily linked to the delivery of the NCA, to support quality improvement. Many of the organisations listed were using your work stream data to drive quality improvement forward.

Ascertainment/Recruitment rate

The patient recruitment rate reported by your work stream is shown in Figure 8 below.

Figure 8 (Question 29.1 and 33)

Patient recruitment rate (%) reported by work streams (n=21) for audits based on the whole population, not a sample. Note: NCAs reported the number of eligible patients (q29.1) and the number of patients actually recruited (q33)



7 (33%) of 21 work streams reached their target patient recruitment rate of 100%, whilst 5 work streams reached 90-99%, 5 reached 80-89% and 3 work streams 60-69%. One work stream reported a recruitment rate of 49%.

24 (86%) of the 28 work streams collected data on the total population which was consistent with the previous response in Section B Question 19. Of these 24, a total of 21 (88%) work streams specified both the total number of eligible patients/service users for their work stream and the actual numbers of patients recruited. Where there was a difference between eligible and recruited number the main issues identified included that some NHS Trusts or General Practitioners did not submit their data on time, coding issues, and resource implications for collecting data or poor data entry. Your patient recruitment rate was 100%.

Data management

The data sources used to calculate ascertainment/recruitment rate by NCAs are shown in Table 7 below. Your work stream did not use any data sources to calculate ascertainment/recruitment rate.

Table 7 (Question 35.1)

Data sources used to calculate ascertainment / recruitment rate for those collecting data on the total population (n=19). Multiple responses were given hence the total is greater than the number of work streams (28).

Data sources (n=19)	n (%)
Hospital Episode Statistics	17 (89)
Surgical logs	1 (5)
Theatre management systems	3 (16)
Case note review	1 (5)
Primary care databases	0 (0)
Community care databases	0 (0)
Mental Health databases	0 (0)
Other:	8 (42)








Of the 24 work streams collecting data on the total population 19 used existing data sources to calculate ascertainment/recruitment rate. 17 of the 19 used Hospital Episode Statistics (HES) data for this purpose. Other sources included cancer registries, quarterly review of hospital submissions, and the Patient Episode Database for Wales. One work stream noted that HES data did not distinguish between two types of heart attack but future work was underway to investigate HES further as a source for case ascertainment.

To minimise the data collection burden on participating sites and improve data consistency, 25 of 28 NCA work streams had a responsible individual identified for data collection at participating sites and 19 (68%) work streams acquired data electronically. Of the remaining nine, six work streams had a plan in place to move to acquiring data electronically. Your work stream had a responsible individual identified for data collection at participating sites. Your work stream had an electronic data collection platform at participating sites.

Data definition and recording

The data acquisition and definition of your work stream is show in Table 8 below.

Table 8 (Question 38 to 39.2)**NCA work streams responses to defining and the recording of data variables.**

Data Acquisition	Yes n (%)	No n (%)	
User manual is available	24 (86) 	4 (14)	
Data acquisition system uses integrated electronic prompts to guide data entry	22 (79) 	6 (21)	
Diagnostic ICD codes used	20 (71)	8 (29) 	
Clear data definitions for each variable (structure, process and outcomes)	27 (96) 	1 (4)	
	Yes n (%)	No n (%)	n/a (n)
OPCS (procedural) codes used	12 (60)	8 (40)	8 
Continuous data recorded as a numeric value	18 (86)	3 (14) 	7
Where multiple readings are required, there is clear instruction about which reading is recorded	12 (100) 	0 (0)	16

24 of the 28 work streams provided instructions in the form of a user manual for participating units which included a data dictionary that defined variables and their measurement. 22 of the 28 work streams used an electronic system to acquire data with integrated electronic prompts to guide data entry. Your work stream provided a user manual, which included a data dictionary that defined variables and their measurement, and your work stream provided a data acquisition system with integrated electronic prompts to guide data entry to all participating units.

The total number of core data variables collected from 26 of 28 work streams ranged from 2 to 291 (median 43). Two work streams commented that the collection of core data variables depended on the procedures carried out as many dataset items were only relevant to specific procedures or treatment pathways. For the 18 work streams reporting additional variables this ranged from 0 to 850 (median 28.5) variables. Your work stream collected 70 core data variables essential for analysis and reporting and 164 additional data variables for extended analysis.

For coding, the International Classification of Diseases (ICD) was used by 20 (71%) of 28 work streams. Where valid, the Classification of Interventions and Procedures (OPCS) was used by 12 work streams. Your work stream uses the ICD (though not used for the dataset, as it is clinically led) for coding.

18 (64%) of the 28 work streams responded that they recorded continuous data as a numeric value. Where multiple readings were required, all respondents provided clear instructions about which reading to record. Your work stream did not record continuous data and provided clear instructions for multiple readings.

Existing data sources

Existing sources of data may be used as an integral data source for the audit, as a dataset for audit enrichment, or as a validation dataset. Existing sources of data for your work stream were as used as shown in Table 9 below.

Table 9 (Question 41.0.2)

Hospital or National established data sources used as an integral source for audit, enriching and validating the audit dataset by NCA work streams (n =28).

Established data sources	Integral data source for audit n	Dataset for audit enrichment n	Validation dataset n
Patient Administration systems	17	1	1
Theatre management systems	10	0	0
Hospital Episode Statistics	9	8	9
Pathology systems	9	1	0
Histology systems	7	1	0
Office of National Statistics	7	12	6
Surgical logs	5	0	0
Commissioning systems	1	0	1
Incident reporting systems e.g. Datix	0	0	0
Cancer registries	0	2	1
Other	3	1	0

Existing sources of data were used as part of the audit (as opposed to data verification alone) by 21 (78%) of 28 work streams. Other sources used included a local electronic patient record system.

Outliers

The patient safety and outlier identification policy of your work stream is shown in Table 10 below.

Table 10 (Question 45- 49.2)

Processes and systems in place to ensure patient safety issues or outliers are identified and addressed. Note: Table allowed multiple responses hence the total is greater than the number of work streams (28).

a) Patient Safety and Outlier Identification	Yes n (%)	No n (%)	no response n
Identifying outliers	22 (79)	6 (21)	
Processes and systems place to ensure patient safety/ issues or outliers are identified and addressed	20 (95)	1 (5)	7
Outlier policy in place	22 (100)	0 (0)	6
Policy conforms to DH/HQIP guidance for timeliness of response	19 (90)	2 (10)	7
NCA Board (or Partner Organisation) advises and supports local units in addressing any patient safety issues when identified	13 (65)	7 (35)	8
b) Identifying outliers using a particular method (n=22)			
Funnel plots	21 (95)		
Other SPC methods	5 (23)		
Other methods	4 (18)		

22 (79%) of the 28 work streams identify outliers, with the majority (21 of the 22 work streams) using funnel plots. 20 of the 22 work streams stated there were robust systems and processes in place to ensure patient safety issues or outliers were identified and acted on. The outlier policy for 19 (86%) of the 22 work

streams conformed to Department of Health/HQIP guidance, and for 13 (68%) work streams the NCA Board (or Partner Organisation) supported local units in addressing any patient safety issues when identified. Your work stream identified outliers with an outlier policy though this policy did not conform to DoH/HQIP guidance. The NCA Board (or Partner Organisation) did not support local units in addressing patient safety issues identified.

The methods used by the NCAs to display data and assess variation in performance within the NCA work streams included tables and charts, specifically using funnel plots, run and control charts. Other methods included caterpillar plots, radar charts, box and whisker plots, geographic mapping and Kaplan Meier survival curves. In your work stream, funnel plots were used to identify outliers.

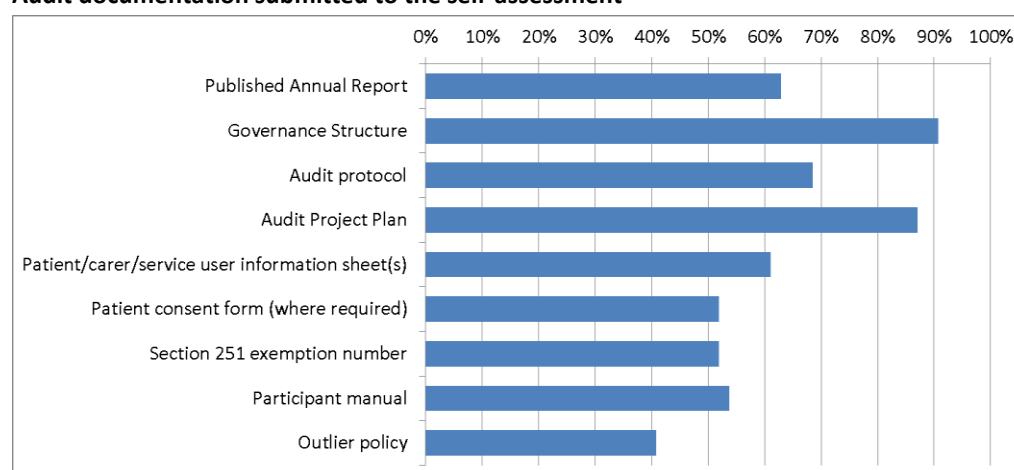
20 (71%) of the 28 NCA work streams risk adjusted their outcome measures of which 16 used a validated risk adjustment model, including your work stream. Three used an unvalidated risk adjustment model and one work stream did not specify.

Components of the audit met:

Work streams were asked to submit the following documents (see Figure 9) which forms part of the individual assessment process.

Figure 9

Audit documentation submitted to the self-assessment



For NCA work streams completing section A and B only, user manual and outcomes and process measures were assessed. For NCA work streams also completing section C, the annual report, outcomes and process measures were assessed.

Overall Summary

- a. Measures:** Appropriate and well-defined measures with identified evidence sources were indicated for outcome Quality of Care Measures. Only two process measures were reported. There were no structure measures reported.
- b. Completeness:** The sampling strategy aims to collect data on 100% of the patient population. The reported recruitment rate was 100%. The annual report, however, did not specify exactly how the 100% rate was established. It is also noted that data for individual hospitals, especially with regard to mortality, was reported as not being complete.
- c. Governance:** Range of representation on the Board is very broad. Minutes of the board meetings are publicly available. An overarching audit protocol is in place, although this is not in the public domain. The methodological, statistical and project plans are not included in the main protocol document.
- d. Outlier Policy:** Systems and processes are in place to ensure the identification and addressing of outliers, including the use of a validated, risk-adjusted model.
- e. Patient/User Engagement:** Patient/carer/service user information sheets are available and there is patient/carer board representation. There is no reported dissemination of findings to patient/user groups.
- f. Impact:** The audit indicates impact at local and national level. Improvements over time are reported for outcome, but not process measures. The annual report does note the continuing fall in mortality relating to cardiac surgery, although this is not consistent year-upon-year. The annual report does exhibit some degree of thoughtfulness about the future scope and use of the audit, although more definite plans for improvement are not enumerated.

Appendix 1: List of Figures and Tables

Page 9: Figure 1

Schema demonstrating the NCAs (n=42) that participated in the self - assessment process by the number of the work streams (n=54) included in the final analysis.

Page 10: Figure 2 (Question 4)

Geographical areas covered by NCA work streams (%).

Page 11: Figure 3 (Question 4)

Primary and other domains covered by NCA work streams (%).

Page 14: Figure 4 (Question 4.1-4.2)

Combination of quality of care measures collected by NCA work streams (n= 52) and themes for structure, process and outcome measures.

Page 15: Figure 5 (Question 16-18)

NCA work streams (n= 54) collecting data on the total population or a sample of the population (%).

Page 17: Figure 6 (Question 19-20)

Fora used (%) by NCA work streams to share learning and spread of good practice (n=28).

Page 18: Figure 7: (Question 27.1)

Organisations (%) using data from NCA work streams (n=28) to drive quality improvement.

Page 18: Figure 8 (Question 28)

Patient recruitment rate (%) reported by work streams (n=21).

Page 22: Figure 9

Components of the audit met (n=54).

Page 11: Table 1 (Question 3.2)

Health or social care sector(s) covered (%) by NCA work streams (n=54).

Page 12: Table 2 (Question 6.2)

Units of analysis for reporting by NCA work streams (n=54).

Page 13: Table 3 (Question 9)

Composition of Board Membership for those audits with a board (n=44).

Page 13: Table 4 (Question 12)

Accompany audit documentation (n=52).

Page 14: Table 5 (Question 16-18)

Evidence based standards used by NCA work streams.

Page 16: Table 6 (Question 16 to 18c compared to Question 22)

Improvement in quality of care shown over time by NCA work streams.

Page 19: Table 7: (Question 35.1)

Data sources used to calculate ascertainment / recruitment rate.

Page 20: Table 8 (Question 38 to 39.2)

NCA work streams responses to defining and the recording of data variables.

Page 21: Table 9 (Question 41.0.2)

Hospital or National established data sources used as an integral source for audit, enriching and validating the audit dataset by NCA work streams (n =28).

Page 21: Table 10 (Question 43-49.2)

Processes and systems in place to ensure patient safety issues or outliers are identified and addressed.

Appendix 2: Self-assessment survey

SELF-ASSESSMENT FORM FOR NATIONAL CLINICAL AUDITS

Electronic questionnaire



The Healthcare Quality Improvement Partnership (HQIP) under contract to NHS England, has been tasked with facilitating the sharing of best practice and supporting improvements in the design of National Clinical Audits (NCAs) in England. This assessment form will be used in an 'audit of audits' to support the improvement in the quality and impact of these projects.

The audit process:

The responses received in this audit, along with submitted evidence, will be evaluated by an expert team commissioned by HQIP. For each NCA, areas for improvement as appropriate will be identified along with the associated time frames for these to be implemented. Summaries of the feedback will be publically accessible via the HQIP website.

Eligibility:

NCAs are eligible to submit an assessment form if:

- The audit intends to achieve participation by all eligible providers in England
- Participation includes the collection of individual patient data from 2014/15
- The audit reports or intends to report comparative performance of providers

Ineligibility:

This self-assessment process does not apply to a NCA that solely collects organisational data

Completing the form:

The form is divided into three sections: A, B and C.

All National Clinical Audits (NCAs) must complete **Sections A and B**.

Section C must be completed by all NCAs meeting **ALL** of the following criteria:

- Completed 2 audit cycles (i.e. audit and re-audit).
- Both cycles contain patient data.
- Most recent report published after 1st April 2012.

All fields in all required sections are mandatory. Submissions with incomplete fields will not be accepted. Incomplete submissions will be noted as such and scored accordingly.

This self-assessment should be completed by one individual, using a single computer port (single IP address), with appropriate knowledge and overview of the audit. All information required prior to on-line submission should be collated and validated by the team (the PDF form can be used to collect specific information manually if necessary, this is available at www.hqip.org.uk/nca-quality-assessment). Once on line data entry has commenced, a time limit of 14 days will apply. Cookies will recognise the internet protocol (IP) address allowing the individual to continue to complete the form from the last data entry point.

Note Question 55 will remind the individual to complete a final check of the questionnaire prior to submission. Clicking on the forward button will take you to a survey summary of your answers. You may download and print this for your records and verification. Changes may still be made at this point by clicking the back button.

Clicking on the forward button again from that page will then submit the form. **AFTER THAT, NO FURTHER CHANGES CAN BE MADE.** Immediately on submission a final summary of your

responses will appear in the survey window **and must be printed or saved** at this time as it is not retrievable once the individual has logged out.

NCAAs with more than one work stream, must complete a form for each stream. If a single individual is completing more than work stream they should complete one stream at a time. It is not possible to complete more than one form at a time from the same IP address.

Further information and support:

For further information on the development of this self-assessment form, or how the data you provide will be used, please visit www.hqip.org.uk/nca-quality-assessment.

SECTION A

Q1 SECTION A:

ALL QUESTIONS IN THIS SECTION MUST BE ANSWERED BY ALL NCAs

Self-Assessment for NCAs for planned activities to be undertaken between
01.04.14 to 31.03.15.

This form is to be signed by Chair of the NCA Board

NCA name

(Please select your audit name. If your audit is not listed, please select and provide your FULL audit name)

☐ E.g. HQIP "Audit of Audits"

Q1.0.1 Other (please specify)

Q2 Host audit organisation

This is the main contract holder responsible for the audit.

	Host Audit Organisation
Organisation Address Data Protection Act Registration Number	(free text)

Q2.1 Audit website (For example: www.hqip.org.uk)

Q2.2 Main audit contact name and contact details (i.e. the person who is taking day-to-day responsibility for the audit) Please note that contact information will be made public via HQIPs Quality Accounts Resources

	Main audit contact details
Name Email Address Telephone Number	(free text)

Q3 Chair of NCA Board

(A hard copy of all of the completed sections must be signed by the Chair of the NCA Board with ultimate responsibility for the NCA. A wet signature copy should be provided within **10 working days** of electronic submission)

	Chair of NCA Board
Name Date(dd/mm/yyyy)	(free text)

Q3.1 Please upload electronic signature

Q3.2 Health or social care sector(s) covered by the audit (please tick all that apply)

- ☐ Secondary Care
- ☐ Mental Health Trust
- ☐ Community Care
- ☐ Primary Care
- ☐ Social Care
- ☐ Tertiary Care
- ☐ Other (please specify)

Q3.2.1 Other (Please specify)

Q4 Geographic coverage

This refers to an intention to acquire data from all relevant service providers in the following areas; (Please tick all that apply)

- ☐ England
- ☐ Wales
- ☐ Scotland
- ☐ Northern Ireland
- ☐ Republic of Ireland
- ☐ Channel Islands (Jersey & Guernsey)
- ☐ Isle of Man

Q4.1 NHS Outcomes Framework domains covered

Please select primary domain. If you are unsure what the audit's primary domain is, please see current quality accounts resource for guidance.

- ☐ Domain 1: Preventing people from dying prematurely
- ☐ Domain 2: Enhancing quality of life for people with long term conditions
- ☐ Domain 3: Helping people to recover from episodes of ill health or following injury
- ☐ Domain 4: Ensuring that people have a positive experience of care
- ☐ Domain 5: Treating and caring for people in a safe environment and protecting them from harm

Q4.2 Please select other domains covered in the NCA

- ☐ Domain 1: Preventing people from dying prematurely
- ☐ Domain 2: Enhancing quality of life for people with long term conditions
- ☐ Domain 3: Helping people to recover from episodes of ill health or following injury
- ☐ Domain 4: Ensuring that people have a positive experience of care
- ☐ Domain 5: Treating and caring for people in a safe environment and protecting them from harm

Q5 Audit funding

Please select only one. (Participant refers to the participating healthcare service or provider)

- ☐ NHS England funded (NCAPOP audits)
- ☐ Publically funded (non-NCAPOP audits)
- ☐ Professional body (no cost to participants)
- ☐ Subscription or levy funded (non-NCAPOP audits: participants pay fee)
- ☐ Other (please specify)

Q5.0.1 Other (please specify)

Q6 Will patient recruitment/data acquisitions take place between 1st April 2014 – 31st March 2015? To qualify for inclusion into quality accounts, audits will need to be collecting data during this time period.

- ☐ Yes
- ☐ No

Q6.1 When does the audit intend to collect individual patient data between 1 April 2014 – 31 March 2015?

Please select all that apply (excluding data acquired by linkage). If the audit is continuous, please select all.

- ☐ April 2014
- ☐ May 2014
- ☐ June 2014
- ☐ July 2014
- ☐ August 2014
- ☐ September 2014
- ☐ October 2014
- ☐ November 2014
- ☐ December 2014
- ☐ January 2015
- ☐ February 2015
- ☐ March 2015
- ☐ ALL

Q6.2 Unit of analysis

At what unit of analysis will the audit be reporting? Please tick all that apply

- ☐ Individual clinician
- ☐ GP practice
- ☐ Team
- ☐ Ward
- ☐ Department
- ☐ Commissioning Group
- ☐ Hospital
- ☐ Trust
- ☐ Region/network
- ☐ National
- ☐ Other (please specify)

Q6.2.1 Other (Please specify)

SECTION B

Q7 SECTION B: ALL QUESTIONS IN THIS SECTION MUST BE ANSWERED BY ALL NCAs

	Date (dd/mm/yyyy)	Not applicable
a. Most recent annual report publication date		<input type="radio"/>
b. Date of first patient recruited/data acquisition in the most recent annual report		<input type="radio"/>
c. Date of last patient recruited/data acquisition in the most recent annual report		<input type="radio"/>

Q7.1 Please upload annual report

Management of NCA

The NCA Board or equivalent should involve Organisations or Bodies (stakeholders) with a declared and legitimate interest in the NCA. All aspects of the governance, design and conduct of the NCA is monitored by the Board. Membership should include the following listed below:

- Clinical Lead
- Representative from participating units
- Methodologist (e.g. epidemiologist) actively involved in the design of the audit
- Clinical Audit Professional
- Patient/Carer/Service User Involvement
- Public Involvement
- Management (including project and data) Stakeholders
- Relevant professional societies or equivalent bodies
- Commissioning
- Voluntary organisations

Terms of reference, including roles and responsibilities for NCA Board members are in place.

The NCA Board should meet regularly and minutes should be

- i) produced
- ii) circulated internally
- iii) publically available

Q8 Do you have a NCA Board?

- ☐ Yes
- ☐ No

Q8.0.1 Please upload a document that describes the governance structure for NCA

Q8.0.2 If no, please specify other governance structure

Q9 Which members or groups are actively involved in the NCA Board?

	Yes	No
a. Clinical Lead	<input type="radio"/>	<input type="radio"/>
b. Representative(s) from participating units	<input type="radio"/>	<input type="radio"/>
c. Methodologist(s) actively involved in the design of the audit	<input type="radio"/>	<input type="radio"/>
d. Clinical Audit Professional	<input type="radio"/>	<input type="radio"/>
e. Patient/Carer/Service User involvement	<input type="radio"/>	<input type="radio"/>
f. Public Involvement	<input type="radio"/>	<input type="radio"/>
g. Management (including project and data)	<input type="radio"/>	<input type="radio"/>
h. Relevant professional societies or equivalent bodies	<input type="radio"/>	<input type="radio"/>
i Other (please specify)	<input type="radio"/>	<input type="radio"/>

Q9.0.1 Other (please specify)

The NCA Board or equivalent should meet regularly.

Minutes of the NCA Board should be:

- i) produced**
- ii) circulated internally**
- iii) made available to the public**

Q10 How often does the NCA board or equivalent meet (per annum)?

- ☐ One time
- ☐ Two times
- ☐ Six times
- ☐ Three times
- ☐ Twelve times
- ☐ Four times
- ☐ Eleven times
- ☐ Ten times
- ☐ Nine times
- ☐ Eight times
- ☐ Seven times
- ☐ Five times
- ☐ They do not meet
- ☐ other please specify

Q10.0.1 other (please specify)

Q11 Are written minutes of the meetings produced, circulated internally and published in the public domain?

	Produced	Circulated internally	Public domain
Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Q11.1 Please provide date of last minutes recorded (dd/mm/yyyy)

Audit protocol is available

An audit protocol is publically available and provides guidance and comprehensive details about the NCA to the local units (of analysis).

The following sections listed below are included:

- Project plan including audit design
- Improvement driven aims and objectives
- Methodological plan (including statistical analysis plan)
- Quality improvement approach
- Patient information sheet
- Patient consent form (if applicable)

Q12 Is there an audit protocol and is it publically available?

	Audit protocol is available	Audit protocol is publically available
Yes	<input type="checkbox"/>	<input type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>

Q12.0.1 Please upload your audit protocol

Q13 Does the NCA documentation include the following?

	Yes in the audit protocol	Yes but NOT in the audit protocol	No
Improvement driven aims and objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methodological plan clearly presented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statistical analysis plan clearly presented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality improvement approach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Patient information sheet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Patient consent form (if applicable)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project plan including audit design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13.0.1 Please upload project plan

Information Governance

Systems and processes are in places which are consistent with best practice in information governance and compliant with required legal frameworks, including:

- Section 251 of Health and Social care Act, 2006,
- Data Protection Act, 2003
- Guidelines for Good Clinical Practice, 1998

Q14 Does the NCA collect patient identifiable data?

- ☐ Yes
- ☐ No

Q14.1 Do you have a patient information sheet?

- ☐ Yes
- ☐ No

Q14.1.1 Please upload patient information sheet**Q14.2 Do you have a patient consent form?**

- ☐ Yes
- ☐ No

Q14.2.1 Please upload patient consent form**Q15 Do you have exemption under section 251 of the Health and Social Care Act 2006?**

- ☐ Yes
- ☐ No

Q15.0.1 Please state section 251 exemption number**Quality of care measures**

Structure, process and outcome (clinical and patient) measures should be prioritised by their capacity to support quality improvement. Quality of care measures are evidence-based, important to measure and report, feasible to collect and relevant to improvement of the quality of patient care.

Q16 Are structure measures collected?

- ☐ Yes
- ☐ No

Q16.1 Please list up to five main quality measures related to structure and the evidence source for each (please give name of validated measure where possible).

Measure is based on the following standards (S), guidelines (G) or evidence (E)

Please select all that apply

	Evidence						Other	
	NICE	SIGN	Other UK S/G	European S/G	International S/G	Recent research (E)	Other (Please specify)	Comments (optional)
Structure measure 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Structure measure 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Structure measure 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Structure measure 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Structure measure 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Q17 Are process measures collected?

- ☐ Yes
☐ No

Q17.1 Please list up to five main quality measures related to process and the evidence source for each (please give name of validated measure where possible).

Measure is based on the following standards (S), guidelines (G) or evidence (E)

Please select all that apply

	Evidence						Other	
	NICE	SIGN	Other UK S/G	European S/G	International S/G	Recent research(E)	Other (Please specify)	Comments (optional)
Process measure 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Process measure 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Process measure 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Process measure 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Process measure 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Q18 Are outcome (clinical and/or patient) measures collected?

- ☐ Yes
☐ No

Q18.1 Please list up to five main quality measures related to outcome and the evidence source for each (please give name of validated measure where possible).

Measure is based on the following standards (S), guidelines (G) or evidence (E)

Please select all that apply

	Click to write Column 1						Click to write Column 2	
	NICE	SIGN	Other UK S/G	European S/G	International S/G	Recent research (E)	Other (Please specify)	Comments (optional)
Outcome measure 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Outcome measure 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Outcome measure 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Outcome measure 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Outcome measure 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Q19 Sampling strategy

Sampling strategy is explicit and is representative of the target population

Please specify the sampling approach used for the NCA.

- ☐ a. Total target population (100%) (e.g. Everyone diagnosed with asthma / or undergoing an intervention such as carotid artery stenting)
- ☐ b. Simple random sampling (e.g. Random 5% of everyone diagnosed with asthma or 5% of everyone receiving an intervention such as carotid artery stenting)
- ☐ c. Stratified random sampling (e.g. Random 5% of all males and random 5% of all females diagnosed with asthma or random 5% of males and 5% of females undergoing an intervention such as carotid artery stenting)
- ☐ d. Convenience sampling (e.g. "ease of sampling" - all asthma patients who attend Dr X outpatient department or patients undergoing carotid artery stenting who attend Mr Y outpatient department OR every one attending Monday asthma clinic or Monday surgical clinic for carotid artery stenting)
- ☐ e. Other (please specify) (e.g. rapid cycle sampling, purposive sampling)

Q19.0.1 Other (please specify)

Q20 If a sample of a patient population has been used, please explain the rationale for deciding the sample size per unit of analysis (e.g. power calculation) (100 words). (If applicable, please specify a page number explaining this strategy from annual report)

SECTION C

**SECTION C APPLIES ONLY TO NCAs THAT HAVE COMPLETED AND REPORTED A
MINIMUM OF TWO AUDIT CYCLES**

NCA Impact

The impact of the NCA should explicitly reflect an intention to drive improvement in quality of care and/or patient outcomes.

Q21 Have you completed 2 audit cycles?

- ☐ Yes
- ☐ No

Q21.1 Do both audit cycles include patient data?

- ☐ Yes
- ☐ No

Q21.2 Has the most recent audit report been published after 1st April 2012?

- ☐ Yes
- ☐ No

Q22 Has the NCA demonstrated improvements in structure, process or clinical and/or patient outcomes over time?

	Yes	No
Structure	<input type="radio"/>	<input type="radio"/>
Process	<input type="radio"/>	<input type="radio"/>
Outcomes	<input type="radio"/>	<input type="radio"/>

Please specify examples of how the NCA has stimulated initiatives to improve patient care or clinical outcomes, at:

- 1) Local level**
- 2) National level**

Q23 Example at local level (e.g. provided data for revalidation)

Q23.1 Example at national level (e.g. supplied data to Care Quality Commission or NHS Electronic Dashboards)

Q24 Has the NCA identified priority areas for improvement in patient care?

- ☐ Yes
- ☐ No

Q24.1 Please outline the highest priority areas identified.

Q24.2 What plans have been made to address the priorities listed above?

Q25 Please provide a maximum of ten publications (peer reviewed) based on the current NCA

	Title	Author(s)	Journal	publication date (dd/mm/yyyy)
1)	free text	free text	free text	free text
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

Q26 Please provide a maximum of 10 publications (non-peer reviewed, e.g. published reports or professional journals) based on the NCA

	Title	Author(s)	Journal	publication date (dd/mm/yyyy)
1)	free text	free text	free text	free text
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

Q27 Learning and spread of good practice should be supported and encouraged. Has the NCA encouraged learning and spread of good practice between units?

- ☐ Yes
☐ No

Q27.1 Please specify all fora used.

	Yes	No
a. Workshops/focus groups	<input type="radio"/>	<input type="radio"/>
b. Seminars/conferences/ webinars	<input type="radio"/>	<input type="radio"/>
c. Facilitated unit visits	<input type="radio"/>	<input type="radio"/>
d. Sharing audit driven local action plans	<input type="radio"/>	<input type="radio"/>
e. Web-based activities	<input type="radio"/>	<input type="radio"/>
f. Social Media (e.g. twitter, Facebook)	<input type="radio"/>	<input type="radio"/>
g. Other (please specify)	<input type="radio"/>	<input type="radio"/>

Q27.1.1 Other (please specify)**Q28 Have any of these organisations used the NCA data to drive improvement in the quality of healthcare? (e.g. spread of good practice)**

	Yes	No	Don't know
a. Local managers/clinicians (e.g. service redesign)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Commissioners (e.g. use of financial incentives Contracts, CQUIN etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Professional Bodies and National Societies (e.g. performance management)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Public Involvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Regulators (e.g. Care Quality Commission/Monitor/General Medical Council/ Nursing and Midwifery Council)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Government / Department of Health / National Health Service England (e.g. through policy initiatives/ Outcomes Framework)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. NHS Litigation Authority (e.g. risk management)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q28.0.1 Other (please specify)

Ascertainment (recruitment) rate for the NCA is specified

A methodological approach for establishing ascertainment (recruitment) rate is in place. This may be from established clinical systems such as surgical log or other types of data sources e.g. national registries

Q29 Please complete the following for the most recently reported round of data collection: Is the total number of eligible patients / service users for the NCA known?

- ☐ Yes
- ☐ No

Q29.1 Please specify total number of eligible patients

Q29.2 Is the NCA based on the whole population (i.e. not a sample)?

- ☐ Yes
- ☐ No

Q30 Is the NCA based on a sample as opposed to the whole population?

- ☐ Yes
- ☐ No

Q30.1 If a sample of a patient population has been used, was a check made to ensure the sample is representative?

- ☐ Yes
- ☐ No

Q30.2 How was this done?

Q31.1 Were there any potential biases identified within the sampling strategy?

- ☐ Yes
- ☐ No

Q31.2 Please specify potential biases identified

Q32.1 Please specify the target sample size

Q33 Please specify the actual number of patients recruited

Q34 Was the difference between eligible and recruited number of patients (ascertainment (recruitment) rate) reported in the annual report?

- ☐ Yes
- ☐ No

Q34.1 Please explain reasons for failure to recruit all eligible patients (word limit 100)

Q35 Are other data sources used to calculate ascertainment / recruitment rate?

- ☐ Yes
- ☐ No

Q35.1 Please specify types of data sources

	Yes	No
a. Hospital Episode Statistics	<input type="radio"/>	<input type="radio"/>
b. Surgical logs	<input type="radio"/>	<input type="radio"/>
c. Theatre management systems	<input type="radio"/>	<input type="radio"/>
d. Case note review	<input type="radio"/>	<input type="radio"/>
e. Primary care databases	<input type="radio"/>	<input type="radio"/>
f. Community care databases	<input type="radio"/>	<input type="radio"/>
g. Mental Health databases	<input type="radio"/>	<input type="radio"/>
h. Other (please specify)	<input type="radio"/>	<input type="radio"/>

Q35.1.1 Other (please specify)**Q36 Geographical coverage**

Please specify evidence of extent of coverage by region (defined here by former Strategic Health Authorities/Academic Health Science Network) of the NCA

	Number		
	i) Number of eligible units	ii) Number of units participating at beginning of the audit	iii) Number of units participating until the end of the audit (i.e. did not drop out)
a. East midlands			
b. East of England			
c. London			
d. North east England			
e. North west England			
f. South central			
g. South east coast			
h. South west England			
i. West midlands			
j. Yorkshire and the Humber			
k. Other (please specify)			
l. Other (please specify)			

Q36.1 If the NCA cannot be reported using the above table, please upload appropriate table showing your geographical breakdown

Data Quality Plan:

- Definition and recording of data variables
- Each core variable that is essential for analysis and reporting is clearly defined (such as those listed below) to improve the clarity of definition and reliability of recording for each data variable.
-

Demographics can include: -

- Unique identifier (NHS number) -
- Patient demographic (date of birth e.g. DD/MM/YYYY, postcode) -
- Administrative information (outpatient, inpatient, emergency) -
- Principle diagnosis and co-morbidities using ICD codes
-

Process can include: -

- Procedural intervention using OPCS codes -
- Prophylaxis measures -
- Adherence to guidelines e.g. care bundles
- Outcomes can include -
- Short term outcome e.g. re-admissions or 30 day mortality -
- Long term outcome e.g. survival or revision rates for surgery

Q37 Please specify the data variables for the most recently reported round of data acquisition.

How many core data variables essential for analysis and reporting are used in the audit?

How many additional data variables are used for extended analysis?

Q38

	Yes	No
Is there a user manual available to participating sites which includes a data dictionary that defines variables and their measurement?	<input type="radio"/>	<input type="radio"/>
Does the data acquisition system use integrated electronic prompts to guide data entry	<input type="radio"/>	<input type="radio"/>
Are diagnostic ICD codes used?	<input type="radio"/>	<input type="radio"/>
Are there clear data definitions for each variable (structure, process and outcomes)?	<input type="radio"/>	<input type="radio"/>

Q38.0.1 Please upload user manual

Q38.1 which system is used for diagnostic coding (please specify)

Q39 Are OPCS (procedural) codes used?

- ☐ Yes
☐ No
☐ Not applicable

Q39.1 Which system is used for coding procedures? (Please specify)**Q39.2**

	Yes	No	N/A
Are all continuous data recorded as a numeric value? (E.g. Weight = 64kg, and not mapped to a category 60-70kg.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Where multiple readings are required, is there clear instruction about which reading is recorded? (E.g. patient's peak flow performed three times, with the best result recorded.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q40 Data acquisition

Data acquisition from existing sources is clearly identified and active steps have been taken to minimise the data collection burden on participating sites.

	Yes	No
a. Is there an identified individual responsible for the data acquired at the local unit (of analysis)?	<input type="radio"/>	<input type="radio"/>
b. Is there an electronic data acquisition platform for the national clinical audit?	<input type="radio"/>	<input type="radio"/>

Q40.1 is there a plan to acquire data electronically?

- ☐ Yes
☐ No

Q41 Are existing data sources used?

- ☐ Yes
☐ No

Q41.0.1 Does this response apply to all participating local units?

- ☐ Yes
☐ No

Q41.0.2 Existing data sources used

	You may select more than one			
	Integral data source for audit	Dataset for audit enrichment	Validation dataset	Other please specify
Patient administration systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pathology systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Histology systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Theatre management systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Surgical logs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Incident reporting systems e.g. Datix	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Commissioning systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hospital Episode Statistics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cancer registries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Office of National Statistics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Q42 Data Completeness

All core data variables should record data completeness

All core data variables should aim for 100% completeness

	Level of completeness
	(%)
1	
2	
3	
4	
5	
6	
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25	
26	

Data Quality

All coded variables require validation checks for coding of diagnoses and procedural interventions (e.g. endoscopy). Data should be validated via an alternative source.

Range of continuous variables should be checked.

Consistency between fields should be checked.

Q43 Please answer the following for validating data.

	Yes	No
Has the reliability of the data been ensured? (E.g. coding audit where different coders are given the same information to code).	<input type="radio"/>	<input type="radio"/>
Are exceptional values flagged? (E.g. Blood pressure recorded diastolic 150 and systolic recorded as 15).	<input type="radio"/>	<input type="radio"/>
Are consistency checks performed? (E.g. prostate cancer cannot be recorded as female)	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>

Q43.1 Other (please specify)

Statistical methods for analysing variation in performance outcomes by units of analysis

Comparative performance between units should be described using cross-sectional or longitudinal methods appropriate to the aims.

Process for defining outlier units and / or assessing improvement over time should be given in the annual report.

Q44 a) What methods of data presentation are used to compare performance between units (of analysis)?

	Yes	No
a. Tables	<input type="radio"/>	<input type="radio"/>
d. Funnel Plots	<input type="radio"/>	<input type="radio"/>
b. Caterpillar plots	<input type="radio"/>	<input type="radio"/>
c. Run charts or control charts	<input type="radio"/>	<input type="radio"/>
e. Other (please specify)	<input type="radio"/>	<input type="radio"/>

Q44.1 Other (please specify)

Patient safety

Clear robust systems and processes are in place to ensure patient safety issues or outliers are identified and acted on promptly. A policy in keeping with DH/HQIP guidance in relation to outliers is in place.

Q45 Are outliers identified?

- ☐ Yes
- ☐ No

Q46 What methods are used to identify outliers between units (of analysis), please specify?

	Yes	No
a. Funnel plots	<input type="radio"/>	<input type="radio"/>
b. Other statistical process control methods e.g. run charts	<input type="radio"/>	<input type="radio"/>
c. Other please specify (e.g. Box plots, Q-Q plots)	<input type="radio"/>	<input type="radio"/>

Q46.0.1 Other (please specify)**Q47 Are processes and systems in place to ensure patient safety issues or outliers are identified and addressed?**

- ☐ Yes
- ☐ No

Q48 Please answer the following questions on outliers.

	Yes	No
a. Is there an outlier policy?	<input type="radio"/>	<input type="radio"/>
b. If yes to a, does it conform to DH/HQIP guidance for timeliness of response?	<input type="radio"/>	<input type="radio"/>
c. Does the National Clinical Audit Board (or Partner Organisation) advise and support local units (of analysis) in addressing any patient safety issues when identified?	<input type="radio"/>	<input type="radio"/>

Q48.0.1 Please upload outlier policy

Outcome measures should be risk-adjusted, preferably by a validated scoring system (if one exists), or list of adjustment variables given together with the rationale.

Q49 Are outcome measures risk adjusted?

- ☐ Yes
- ☐ No

Q49.1 What risk adjustments are applied to the outcome measures?

- ☐ a. Validated risk adjustment model
- ☐ b. Unvalidated risk adjustment model

Q49.2 Is the risk adjustment model publically available?

- ☐ Yes
- ☐ No

Data feedback by units of analysis

All data analyses are approved by the NCA Board and supports (where possible) continuous feedback of local data to: -

- Support improvements in care consistent with good practice.
- Permit local units (of analysis) to comment on their data prior to any publications.

Q50 What is the frequency of feedback per annum to individual local units (of analysis)?

- ☐ One time
- ☐ Two times
- ☐ Six times
- ☐ Three times
- ☐ Twelve times
- ☐ Four times
- ☐ Eleven times
- ☐ Ten times
- ☐ Nine times
- ☐ Eight times
- ☐ Seven times
- ☐ Five times
- ☐ Units have continual access to their own data
- ☐ Results are not fed back to units

Q50.1 Have the local units (of analysis) had the opportunity to respond to their data prior to any reporting publically?

- ☐ Yes
- ☐ No

Published Data

Data are disseminated and publically available in machine readable format (i.e. Comma Separate Variables or open dataformat) using data.gov or NCA website.

Q51 Are the NCA findings disseminated?

- ☐ Yes
☐ No

Q51.1 To whom are the NCA findings disseminated?

	Yes	No
a. Patient/user groups	<input type="radio"/>	<input type="radio"/>
b. Commissioning organisations	<input type="radio"/>	<input type="radio"/>
c. Provider organisations	<input type="radio"/>	<input type="radio"/>
d. Care Quality Commission	<input type="radio"/>	<input type="radio"/>
e. Other please specify	<input type="radio"/>	<input type="radio"/>

Q51.1.1 Other (please specify)

Q52 How are the NCA findings disseminated?

	Yes	No
a. Mail	<input type="radio"/>	<input type="radio"/>
b. Web	<input type="radio"/>	<input type="radio"/>
c. E-mail	<input type="radio"/>	<input type="radio"/>
d. Webinar	<input type="radio"/>	<input type="radio"/>
e. Teleconference	<input type="radio"/>	<input type="radio"/>
f. Symposium / conferences	<input type="radio"/>	<input type="radio"/>
g. Peer review journal	<input type="radio"/>	<input type="radio"/>
h. Other (please specify)	<input type="radio"/>	<input type="radio"/>

Q52.0.1 Other (please specify)

Q53 Are the data machine readable?

- ☐ Yes
☐ No

Q54 In addition, the following documents must be uploaded:

	Uploaded	
	Yes	No
1. The most recent (since 1st April 2012) published annual report. (Published means that findings of the NCA are in the healthcare and public domains.)	<input type="radio"/>	<input type="radio"/>
2. Governance structure	<input type="radio"/>	<input type="radio"/>
3. Audit protocol	<input type="radio"/>	<input type="radio"/>
4. Audit project plan	<input type="radio"/>	<input type="radio"/>
5. Patient/carer/service user information sheet(s)	<input type="radio"/>	<input type="radio"/>
6. Patient consent form (where required)	<input type="radio"/>	<input type="radio"/>
7. Section 251 exemption number	<input type="radio"/>	<input type="radio"/>
8. Participant manual	<input type="radio"/>	<input type="radio"/>
9. Outlier policy	<input type="radio"/>	<input type="radio"/>

Q55 Please check all entries for each applicable section prior to submission. Have you completed and checked your responses to the questionnaire?

- ☐ Yes
☐ No

Clicking on the forward button will take you to a survey summary of your answers. You may download and print this for your records and verification. Changes may still be made at this point by clicking the back button. Clicking on the forward button again from that page will then submit the form. AFTER THAT, NO FURTHER CHANGES CAN BE MADE.

Thank you for taking the time to complete the HQIP NCA Self Assessment Form

Appendix 3: List of NCAs that participated in the self-assessment process

Column A shows NCAs that participated in the self- assessment process and went on to complete section C* as the following criteria were met: i) completion of two audit cycles, ii) both cycles included patient level data and iii) an audit report had been published after April 2012.. Column B indicates the NCA commissioned and managed by HQIP (NCAPOP) and those independently run (non-NCAPOP). Column D shows the NCAs with multiple work streams that completed a single self-assessment form for each or combined their work streams into one self-assessment form.

A) NCAs that self-assessed Y/N *completed section C	B) NCAs commissioned and managed by HQIP (NCAPOP)	C) NCAs full Name and acronym	D) Single self-assessment completed for each multiple work stream Yes/No (combined)
Yes*	NCAPOP	1 Acute coronary syndrome or Acute myocardial infarction (MINAP)	
Yes*	NCAPOP	2 Bowel cancer (NBOCAP)	
Yes*	NCAPOP	3a. Cardiac Rhythm Management (CRM) - Ablation dataset	Yes
Yes*	NCAPOP	3b. Cardiac Rhythm Management (CRM) - Device dataset	Yes
Yes	NCAPOP	4 Chronic kidney disease in primary care	
Yes*	NCAPOP	5 Congenital heart disease (Paediatric cardiac surgery) (CHD)	
Yes	NCAPOP	6a. Diabetes (Adult) (NDA) - Foot Care	Yes
Yes*	NCAPOP	6b. Diabetes (Adult) (NDA) - NDA Core	Yes
Yes	NCAPOP	6c. Diabetes (Adult) (NDA) - NPID Pregnancy	Yes
ineligible	NCAPOP	6d. Diabetes (Adult) (NDA) – NaDIA	
ineligible	NCAPOP	6e. Diabetes (Adult) (NDA) – PEDS	
ineligible	NCAPOP	6f. Diabetes (Adult) (NDA) – Pumps	
ineligible	NCAPOP	6g. Diabetes (Adult) (NDA) – Transition	
Yes	NCAPOP	7a. Diabetes (Paediatric) (NPDA) – PREM	Yes
Yes*	NCAPOP	7b. Diabetes (Paediatric) (NPDA) - Prospective audit	Yes
Yes	NCAPOP	8a. Epilepsy 12 audit (Childhood Epilepsy) - Prospective Audit	No (combined)
Yes	NCAPOP	8b. Epilepsy 12 audit (Childhood Epilepsy) – PREM	
Yes*	NCAPOP	9 Falls and Fragility Fractures Audit Programme (FFFAP)	
Yes*	NCAPOP	10 Head and neck oncology (DAHNO)	
Yes	NCAPOP	11 Inflammatory bowel disease (IBD) National Clinical Audit of Biological Therapies	
Yes*	NCAPOP	12 Lung cancer (NLCA)	
Yes*	NCAPOP	13 National Adult Cardiac Surgery Audit	
Yes	NCAPOP	14a. National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme - Primary care audit	Yes
Yes	NCAPOP	14b. National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme - Pulmonary Rehabilitation	Yes
Yes	NCAPOP	14c. National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme - Secondary Care Audit	Yes
Yes*	NCAPOP	15 National Audit of Percutaneous Coronary Interventional Procedures	
Yes	NCAPOP	16 National emergency laparotomy audit (NELA)	

Yes*	NCAPOP	17	National Heart Failure Audit	
Yes*	NCAPOP	18.a	National Joint Registry (NJR) – Ankle	No (combined)
Yes	NCAPOP	18.b	National Joint Registry (NJR) – Elbow	
Yes	NCAPOP	18.c	National Joint Registry (NJR) – Hip	
Yes	NCAPOP	18.d	National Joint Registry (NJR) – Knee	
Yes	NCAPOP	18.e	National Joint Registry (NJR) – Shoulder	
Yes*	NCAPOP	19	National Vascular Registry	
Yes*	NCAPOP	20	Neonatal intensive and special care (NNAP)	
Yes*	NCAPOP	21	Oesophago-gastric cancer (NAOGC)	
Yes*	NCAPOP	22.a	Paediatric intensive care (PICANet) - main audit	No (combined)
Yes	NCAPOP	22.b	Paediatric intensive care (PICANet) - Transport and retrieval dataset	
Yes	NCAPOP	23	Prostate Cancer	
Yes	NCAPOP	24.a	Rheumatoid and early inflammatory arthritis - Clinical audit data capture	
ineligible	NCAPOP	24.b	Rheumatoid and early inflammatory arthritis - PROM/PREM	
Yes*	NCAPOP	25.a	Sentinel Stroke National Audit Programme (SSNAP) - main audit	No (combined)
Yes	NCAPOP	25.b	Sentinel Stroke National Audit Programme (SSNAP) - Community and transitional hospital data	
Yes	non-NCAPOP	26	Adherence to British Society for Clinical Neurophysiology (BSCN) and Association of Neurophysiological Scientists (ANS) Standards for Ulnar Neuropathy at Elbow (UNE) testing	
Yes	non-NCAPOP	27	Adult Bronchiectasis Audit	
Yes*	non-NCAPOP	28	Adult community acquired pneumonia	
Yes*	non-NCAPOP	29	Case Mix Programme (CMP)	
Yes*	non-NCAPOP	30.a	Elective surgery (National PROMs Programme) - Hip replacement	Yes
Yes*	non-NCAPOP	30.b	Elective surgery (National PROMs Programme) - Knee replacement	Yes
Yes*	non-NCAPOP	30.c	Elective surgery (National PROMs Programme) - Varicose vein	Yes
Yes*	non-NCAPOP	30.d	Elective surgery (National PROMs Programme) - Groin hernia	Yes
Yes	non-NCAPOP	31	Fitting child (care in emergency departments)	
Yes *	non-NCAPOP	32	Major trauma: The Trauma Audit & Research Network (TARN)	
Yes	non-NCAPOP	33	Mental health (care in emergency departments)	
Yes	non-NCAPOP	34	National Audit of Intermediate Care	
Ineligible	non-NCAPOP	35	National Audit of Seizures in Hospitals (NASH)	
Yes	non-NCAPOP	36	National Cardiac Arrest Audit (NCAA)	

Yes	non-NCAPOP	37.a	National Comparative Audit of Blood Transfusion programme - Audit of patient information and consent	
ineligible	non-NCAPOP	37.b	National Comparative Audit of Blood Transfusion programme - Audit of the management of patients in Neuro Critical Care Units	
Yes*	non-NCAPOP	38	Non-invasive ventilation – adults	
Yes	non-NCAPOP	39	Older people (care in emergency departments)	
Yes*	non-NCAPOP	40	Paediatric pneumonia	
Yes	non-NCAPOP	41	Pleural procedures	
Yes	non-NCAPOP	42.a	Prescribing Observatory for Mental Health (POMH) - QIP 12B: Personality Disorder	Yes
Yes	non-NCAPOP	42.b	Prescribing Observatory for Mental Health (POMH) - QIP 14A: substance misuse - alcohol detoxification	Yes
Yes	non-NCAPOP	42.c	Prescribing Observatory for Mental Health (POMH) - QIP 6D: Assessment of side effects of depot antipsychotic medication	Yes
Yes	non-NCAPOP	42.d	Prescribing Observatory for Mental Health (POMH): QIP 9c: Use of antipsychotic medication in people with a learning disability	Yes
Opted out	non-NCAPOP	43	Pulmonary hypertension (Pulmonary Hypertension Audit)	
Ineligible	non-NCAPOP	44	Renal replacement therapy (Renal Registry)	
Yes	non-NCAPOP	45.a	UK Parkinson's Audit – Occupational Therapy	No (combined)
	non-NCAPOP	45.a	UK Parkinson's Audit – Neurology	
	non-NCAPOP	45.b	UK Parkinson's Audit – Elderly Care	
	non-NCAPOP	45.c	UK Parkinson's Audit - Physiotherapy	
	non-NCAPOP	45.d	UK Parkinson's Audit – PREM	
	non-NCAPOP	45.e	UK Parkinson's Audit - Speech and Language Therapy	

Appendix 4: Glossary of terms for the self-assessment form

*Definitions added for this report

A Audit protocol	An audit protocol provides guidance and comprehensive details about the national clinical audit to the local units participating in the audit.
	<p>The following sections should be included:</p> <ul style="list-style-type: none"> • Project plan (including audit design) • Improvement driven aims and objectives • Methodology plan (including statistical methods) • Quality improvement approach • Patient consent form (if applicable) • Patient information sheet
C Core data variables	Essential data variables collected by all units (of analysis) participating in the audit and used in the final analysis and reporting of the findings.
Clinical audit professional	Clinical Audit Professional: a role that focuses on providing support for clinical audit at an organisational or clinical service level in an NHS organisation.
D Data acquisition	How audit data are obtained, which includes collecting and extracting from an electronic record or acquiring from another source.
Data completeness	All core data variables should record data completeness All core data variables should aim for 100% completeness
Data enrichment/linkage	A ‘value added’ process through which data enrichment or linkage from one or more sources is added to the existing audit data set to enhance the utility of the data.
Data reliability	The reliability of the data has been ensured (E.g. coding audit where different coders are given the same information to code).
Data validation	All coded variables require validation checks for coding of diagnoses and procedural interventions (e.g. endoscopy). Data should be validated via an alternative source.
E Eligibility for completing self-assessment form, section C	<p>The national clinical audit meet all three criteria:</p> <ol style="list-style-type: none"> 1. Completed two audit cycles 2. Includes patient data in both audit cycle 3. The most recent audit report has been published after 1st April 2012
Eligible number of patients	The number of patients that are eligible to be included in an audit. For time defined audits, this would be all eligible patients during the time period.
I Ineligibility for completing self-assessment form	National clinical audits are ineligible if they solely collect organisational data.
The International Classification of Diseases	The standard diagnostic tool for epidemiology, health management and clinical purposes. It is used to classify diseases and other health

(ICD):	problems recorded on many types of health and vital records including death certificates and health records.
L Local participating units (of analysis)	The unit for which the audit data are analysed, for example: individual hospital, NHS Trust, network, commissioning group, GP practice, ward, department or clinician. This is also known as level of granularity.
M Machine readable data	Data (or metadata) that is in a format that can be understood by a computer (i.e. Comma-separate values or open data format).
Manager (project and data)	A named person responsible for the operational running, project and data management of the national clinical audit.
N National Clinical Audit Board	The governance group (or equivalent) that has ultimate responsibility for all aspects of the audit.
O Office of Population Censuses and Surveys Classification of Interventions and Procedures	A procedural classification for the coding of operations, procedures and interventions performed during in-patient stays, day case surgery and some out-patient attendances in the National Health Service (NHS).
P Patient/Carers/Service User Involvement	People <u>with the condition</u> covered by the audit to involve and recognise their opinions and experiences of care.
Public involvement	Potential patients, carers and people who use health and social care services and people from organisations that represent people who use services.
Project plan	A description of the main stages in the audit, key deliverables at each stage, expectations of all participants in the audit and a detailed time frame for completion of each state of the work.
R Regions	Former Strategic Health Authorities (SHAs) in England (disestablished March 2013) or appropriate table showing geographical area covered e.g. Academic Health Science Networks, Clinical Commissioning Group.
S Sampling	<p>Total target population (100%) (e.g. Everyone diagnosed with asthma / or undergoing an intervention such as carotid artery stenting).</p> <p>Simple random sampling (e.g. Random 5% of everyone diagnosed with asthma or 5% of everyone receiving an intervention such as carotid artery stenting).</p> <p>Stratified random sampling (e.g. Random 5% of all males and random 5% of all females diagnosed with asthma or random 5% of males and 5% of females undergoing an intervention such as carotid artery stenting).</p>

Convenience sampling (e.g. “ease of sampling” - all asthma patients who attend Dr X outpatient department or patients undergoing carotid artery stenting who attend Mr Y outpatient department OR every one attending Monday asthma clinic or Monday surgical clinic for carotid artery stenting)

Other types of sampling could include rapid cycle sampling or purposive sampling

Q

Quality-of-care measure

The exact aspects of care that represent quality of care for the target group is measurable and may include:

- Structure, which assesses personnel, equipment, record systems or facilities; a resource that facilitates the provision of care or provides the capacity for care. *Examples may include the availability of a dedicated stroke unit, nurse and physician training, policy, guideline or care bundle in place*
- Process, which assesses how a diagnosis is reached and treatment, including communication with patients and others, is carried out; care or service provided for a patient by one or more healthcare professionals or services. *Examples may include waiting time, number of diagnostic tests, clinical assessment e.g. for frailty undertaken.*
- Outcome, which assesses the result of clinical care, improvement in patients’ behaviour or knowledge or patient and family satisfaction; what happens (or does not happen) to a patient in response to care or service provided. *Clinical examples may include measures for mortality rates, morbidity or adverse event. Patient outcomes may include quality of life, patient knowledge and understanding, compliance to treatment regimen.*

V

Validated risk adjusted model:

One for which a peer-reviewed publication describes analyses of either internal or preferably external validation on a similar population to that used in the audit.