

Engaging Clinicians in Quality Improvement through National Clinical Audit

Commissioned by: Healthcare Quality Improvement Partnership

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Completed: January 2014

Published: October 2014 (first edition)

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Acknowledgements

Thank you to all those who have helped support this project and helped to develop this report. Thanks go in particular to Nick Black, Robin Burgess, Kate Godfrey, Jane Ingham, Danny Keenan, Helen Laing, Martin Marshall, Yvonne Silove, Liz Smith, Mandy Smith, and John Soong as well as the participants who kindly gave up their time.

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Foreword

Large scale clinical audit programmes in England are a national treasure but an underutilised one. Building on many years of experience, national clinical audits and registries have become increasingly sophisticated in the ways in which they collect, analyse and feedback data. They have been developed by clinicians delivering front line care, working with the Healthcare Quality Improvement Partnership (HQIP), and others. They are well organised and adequately funded. They are distinguished from other forms of clinical audit by their national coverage and hence the ability to benchmark performance. In general they are prospective and on-going, collecting patient level data. Their value has been recognised and the audit programme will soon extend to more than 60 audits. There is an appetite for many more such audits and registries particularly as the consumers of healthcare become more sophisticated and require more assurance that investigations and treatments proposed are being carried out to an acceptable standard. And yet, despite all of this, their potential as a resource to support systematic improvements in the quality and safety of patient care is still not fully realised. People like to quote the mantra that if you don't measure you can't improve, but measurement on its own is clearly not enough. Indeed, measurement without improvement wastes money and wastes effort.

We have sought to explore what are the barriers preventing our national audits and registries from having more of an impact in various areas such as improvement of the services audited and the assurance of the quality of our services including assuring patients and commissioners that they are involved in clinically effective and safe services. This report, commissioned by HQIP and delivered by Improvement Science London, has explored some of these issues and what needs to be done differently in the future.

Few can doubt the commitment of clinicians, managers and system leaders, working with the public, to adopt a more systematic approach to improving patient care in the NHS. This paper has brought to the fore several important barriers as to why national audits and registries have not had a greater impact and what steps need to be taken to get the full value from this endeavour. HQIP is committed to implementing the recommendations made and will be developing a plan to address those within its control and work to influence others where the recommendations fall outside HQIPs remit.

Jane Ingham, Chief Executive Officer, HQIP

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Executive summary

National clinical audits are a rich source of information about the quality of care provided in NHS organisations. They are large-scale data sets using information collected locally by clinicians, which can be used to support the assessment and improvement of services.

The Francis Inquiry report highlighted the need for trusts to focus more on the quality of their services. However, while many people recognise the value of national clinical audits, they are not being consistently used to facilitate quality improvement in healthcare services.

This project was initiated to better understand the barriers and facilitators in using national clinical audit to support local quality improvement in clinical practice and to recommend ways to present and promote audits so that they are used more widely for improvement purposes.

Views were sought from a range of audiences including clinicians and clinical audit staff, and the suppliers and commissioners of clinical audit. Thirty participants contributed their views through interviews or focus groups conducted in 2013.

Key findings

In summary

- There is a need to clarify the content and purpose of clinical audits so that local healthcare providers understand the relevance and importance of audit and can use this data to make improvements to services
- Support with how to analyse and interpret data and present findings to others in user-friendly ways would help people to engage better with audit findings
- Incentives to drive improvement could act as both barriers and facilitators. Recognition of good practice was seen as a powerful motivator while financial incentives and named consultant data received mixed responses
- The right resources, knowledge and skills are needed to encourage engagement. Events were useful for learning and sharing best practice. Dedicated time to interpret and act on findings together with clinical audit team input were important
- Organisational structures, governance, staffing and culture all had a strong influence on the take up of clinical audit and on whether data was used to encourage improvement
- More could be done to engage clinical leads with HQIP. Participants would like to see greater involvement of clinicians and input from patients in the design and reporting of audits

Three broad areas stand out from the analysis. Firstly those responsible for delivering audit activities need to overcome some very practical barriers, like improving the technical capabilities of staff to make use of data, and creating time and space for them to contribute to the interpretation and use of information. Second, better communication is required so that everyone who works in health care understands how audit data can and should be used to improve the quality of their work and the quality of care that patients receive. And third, it is important to strategically align audit to other facilitators of improvement, such as education and training programmes, payment mechanisms and regulatory activities and to make quality improvement part of national clinical audit.

Technical and practical issues

Analysis, interpretation and presentation

The following factors can facilitate engagement with national clinical audit for improvement:

- Simple, transparent descriptions of methodology for data analysis
- Understanding of variation, 'like for like' comparisons, 'adjusted' indicators, etc
- Consistent, effective presentation and prompt output. Delayed and infrequent releases of data are cited as important barriers
- Guidance on interpretation and identifying priorities for improvement
- 'User-friendly' outputs: principles for good data presentation and reporting formats and styles for a variety of stakeholder audiences were given

Resources, knowledge and skills

Important factors for engaging with national clinical audit included the following:

- Tailoring outputs to suit skills and abilities and need as well as and improving skills to understand, analyse, interpret and present data
- Lack of time was cited as a significant barrier by clinicians and clinical audit teams
- Overwhelmingly positive feedback was given for events, in particular conferences and workshops were seen as a useful and important way of developing knowledge and skills
- Objectives for events included engagement with participants, increasing awareness of audit, disseminating results, discussion and action planning, presenting best practice, an academic or educational component, or a combination of these.

Communication

Content and purpose

Justifying the measures collected and linking them clearly to the rationale and standards would improve credibility and ease of use, as well as promoting engagement and improvement.

The following factors can be barriers to engagement with national clinical audit for improvement:

- Lack of clarity of purpose and lack of focus on improvement
- Varying perceptions of why and how national clinical audit drives improvement
- Mistrust of the data and the audit's intention, benefits, and relevance to clinical practice.

Engagement

- Clinical audit teams were largely happy with their engagement with HQIP, while suppliers felt more could be done by HQIP to bring them together, and clinical leads were much less engaged. Commissioners were cited as key stakeholders who should receive focus going forward
- Participants called for greater involvement of clinicians, those with expertise in quality improvement and input from patients in designing and reporting national clinical audits

National and local alignment to quality improvement

Motivations and incentives

Mixed responses to a range of motivators and incentives suggest that they are variably perceived as both barriers and facilitators:

- The value of financial incentives to drive improvement received a mixed response
- Some individuals used results to support applications for clinical excellence awards.
- Recognition linked to competition was cited as a powerful motivator
- Public disclosure, and in particular consultant level data, was a contentious issue

Structures, systems, staffing, and culture

Engagement with clinical audit for improvement can be driven by the following:

- Strong leadership: appetite for undertaking audits is largely driven by internal culture and staff engagement
- Good relationships between clinical leads and teams/audit staff, and with the medical director
- Feedback: communicating results to clinical leads and teams, and identifying good news stories for positive media reporting
- Additional support from suppliers (who had differing engagement and dissemination strategies).
- Specialist resources: clinical audit teams' core competences and responsibilities are being diluted as they are stretched to cover broader remits. This is impacting negatively on the ability to support quality improvement
- Joined-up approaches: perceived duplication, onerous data collection, and repetition in types of data requested were highlighted as issues reaching wider than national clinical audit
- Consistent structuring of governance processes. Inconsistencies and variability regarding processes, reporting and subsequent actions taken could be barriers to engagement

Recommendations

The following recommendations suggest ways that clinical audits could be presented and promoted better in order to encourage their use to support quality improvement activity in health services.

Commissioners of national clinical audit

These recommendations are aimed at HQIP and NHS England:

- Commissioners should consider developing an overarching strategy that places national clinical audits in the context of a strategic vision for quality improvement
- When commissioning new national clinical audits and reviewing contracts, consider a balance of data on clinical effectiveness, patient experience and safety
- Workshops or events at HQIP annual conferences would help target audit suppliers and clinicians to share best practice
- Stimulate engagement through a communications strategy that focuses on creating broader awareness of HQIP's remit and reach and the role of national clinical audit for quality improvement
- Further work could be done to evaluate the effectiveness of specific mechanisms and drivers (financial incentives, using data for appraisals and clinical excellence awards, workshops) for using national audit for improvement

Suppliers of national clinical audit

These recommendations are aimed at suppliers of national clinical audit:

- Include clear objectives about quality improvement and make these explicit when reporting
- Consider a more compelling rationale for data collection, highlighting its purpose and how to use the data for local improvement or in systems. Link to evidence-based standards and differentiate data for non-evidence-based targets from descriptive data for contextual information
- Consider ways to provide real-time feedback to support continuous improvement as well as providing datasets that can be manipulated for local analysis
- Support data outputs with opportunities for local clinicians to discuss findings, share best practice, and compare performance and planning for improvement. For example, workshops or events at annual conferences
- Consider formalising the user involvement of clinicians and patients in design and reporting

Both commissioners and suppliers of national clinical audit

These recommendations are aimed at commissioners and suppliers of national clinical audit:

- Consider a dual approach to interpreting data, mainly to:
 - Ensure data is analysed and presented in meaningful way, with adjustment
 - Support the user population to gain skill sets to interpret the data, identify what needs to be done and implement change. (The shortage of key skills in data analysis available to trust boards and management teams was also highlighted in the Keogh Review)
- Explore how to streamline data collection methods and combine processes and systems with consideration to broader informatics work and the context in which national clinical audits sit
- Consider a range of methods to support the work, including events, networks, and the appropriate allocation of resources. (The benefits of collaborative learning through quality improvement networks were highlighted in the Berwick Review)
- Strengthen communications strategies for HQIP and national clinical audit providers in order to improve engagement, stimulation and recognition of good practice. Consider collaboration on the development of a communications and engagement strategy with input from clinical, quality improvement and local audit leads. It should focus on:
 - Dialogue with clinical leads, commissioners and medical directors as well as media
 - The role of national clinical audits and using data for local improvement
 - Celebrating improvements and providing support to manage local and national media

Provider organisations

These recommendations are aimed at provider organisations and Trust Boards:

- Support clinical audit teams and clinicians to undertake national clinical audit work with a greater focus on ensuring adequate skills and resources, particularly time, are available
- Support clinicians and audit staff to develop skills in collection, interpretation and presentation of data, as well as quality improvement, change management, and clinical leadership
- Ensure appropriate processes are in place to use national clinical audit proactively in improvement as well as reactively. Compare processes of using national clinical audits to trusts known to be performing well
- Encourage trusts to share best management practice and integrate it within their quality agenda

Front-line staff

These recommendations are aimed at clinicians and audit teams:

- Clinicians should have greater ownership of and engagement with national clinical audits. These may be fostered by increasing understanding of local and national approaches to improving quality and the role of audit in the broader development of knowledge and skills for measurement and improvement of quality from undergraduate training onwards
- Clinicians should explore available resources to support them in using national clinical audit for improvement including publications, events, and meetings. They should use forums to learn from and share good practice with colleagues both within their organisations and across others
- Clinicians, audit staff, and managers need to integrate more to take ownership of and engage with audit. Relationships between the medical director, clinical audit teams, and clinical leads are particularly important

Background

Healthcare Quality Improvement Partnership (HQIP) centrally develops and manages a programme of national clinical audit projects each year through the National Clinical Audit and Patient Outcomes Programme (NCAPOP). This programme has been managed by HQIP since 2008 with funding currently provided by NHS England and the Welsh Government. HQIP currently oversees around 30 national clinical audits each year through NCAPOP. There are also separately funded national clinical audits. Many national clinical audits are backed by Royal Colleges or professional bodies and have support and engagement from the relevant voluntary organisation that represents patients' interests.¹

The primary output of all national audits is the findings for local trusts which give healthcare providers benchmarked reports on their performance.² Most national clinical audits have been developed in an important area of healthcare where it is felt that national results are essential to improve practice and standards. National clinical audit is designed to improve patient outcomes across a wide range of medical, surgical, and mental health conditions. Its purpose is to engage healthcare professionals in systematic evaluation of their clinical practice against standards and to support and encourage improvement in the quality of treatment and care.³

Many national clinical audits fulfil several purposes, including the ability to gather large-scale, ongoing data sets to measure patient outcomes over time, or to provide comparative benchmarked data to assess the performance of organisations delivering care, or a combination of these. Many national clinical audits also function as registers, but to be in scope of guidelines for national clinical audit they must involve measurement against standards. Both audits and registers can also be called clinical databases. HQIP highlights that because of the multitude of functions of audit, views on what constitutes quality in a national audit depend somewhat on its purpose.⁴

In order to be recognised as a national clinical audit, HQIP states that it should meet all of the following criteria:¹

- National (England) coverage achieved or intended
- Main focus on quality of clinical practice
- Measures practice against clinical criteria/guidelines and/or collects outcomes data
- Applies the audit cycle and/or monitors clinical/patient outcomes data in an ongoing way
- Is prospective, i.e. does not include retrospective reviews of adverse outcomes such as confidential enquiries
- Includes patients in their governance and takes data from patients themselves

The NCAPOP audit projects provide local trusts with a format by which to collect audit data. The projects analyse the data centrally and feedback comparative findings to help participants identify necessary improvements for patients. These national audits often consist of one or all of three parts:

- Organisational audit (providing information on organisation and structure of care such as facilities, skill mix of staff, referral systems, access to services)
- Clinical audit (providing information on process of care and outcomes, measuring against evidence-based standards)

- Patient survey (on patients'/service-users' experiences and perceptions of care; to enable measurement of the structure, process and outcomes of care thereby providing a holistic view)¹

These national clinical audits provide a rich information resource to clinicians and organisations about their services, provide the ability for individuals, teams and organisations to assess their performance over time to measure their care against national standards and guidance, and enable comparisons against others to benchmark their own practice and performance in order to identify areas to improve services. They also allow patients to question the quality of care provided and to exercise choice. In addition, they provide commissioners and regulators with an understanding about the quality of care provided.¹

Although participation is not mandatory for all national clinical audits, as part of their Quality Accounts NHS Trusts in England are required to report on their participation in national clinical audits. Boards are required to report on which audits they participate in and how they are using national audit findings to improve the quality of care. Despite this, there is evidence to suggest that national clinical audit is not being used extensively. Involvement in national clinical audits and use of the information has posed challenges for some organisations.

The Francis Report from 2010 on Mid Staffordshire found serious deficiencies in the performance and resourcing of clinical audit and a lack of clinical engagement and leadership in clinical audit.⁵ The Francis Report from 2013 uncovered systemic failings in care and clinical governance and the culture was described as prioritising achievement of financial targets over patient care.⁶ The Trust failed to comply with recognised standards and was found not to be participating in many national clinical audits. The Keogh Review from 2013 reported on the quality of care and treatment provided by 14 hospitals that have had higher than average mortality rates over the last two years.⁷ The resultant report highlighted failures in clinical effectiveness, patient safety and governance. More importantly it highlighted the failure of hospital boards and leadership to use data to drive quality improvement, and recommended key areas for improvement including understanding and using data, addressing the shortage of skills in data interpretation in order to use data and intelligence more effectively to drive improvement. The Berwick Review highlighted that most healthcare organisations have little capacity to analyse, monitor or learn from patient safety and quality information.⁸

In 2013, the paediatric heart surgery unit at Leeds General Infirmary was temporarily closed due to worrying national clinical audit results for the hospital. On investigation it was discovered that the results submitted by the hospital were incomplete. This demonstrated the importance of submitting complete and accurate data to national clinical audits and the validation of data.

Organisations are under ever-increasing scrutiny to understand and improve the quality of the care they provide. National clinical audit is promoted to be a key mechanism for supporting this. However, while many people recognise the value of national clinical audits, they are not being consistently used to facilitate quality improvement in healthcare. HQIP has a remit nationally and locally to promote healthcare quality improvement and recognises that further work is required in this field. HQIP wants to gain more insight and understanding into some of the barriers and facilitators to clinicians using/not using national clinical audit to improve quality of care locally.

Aim and objectives

The overall aim of this project is to understand how to engage clinicians in the use of national clinical audit for local improvement in clinical practice. This will be achieved by developing an understanding of how clinicians use national clinical audit to drive quality improvement, and the nature of the barriers and facilitators to its use. This understanding will then lead to recommendations about ways to present and promote the audits so they are used more widely for improvement purposes.

In order to meet this aim several objectives were set as follows:

- Review existing literature to identify the evidence on using national clinical audit data in quality improvement from UK and international work;
- Understand the mechanisms by which national clinical audit is currently being used for quality improvement through reviewing good practice and to what extent it is occurring;
- Understand the barriers and facilitators to using national clinical audit data to improve clinical practice; and
- Examine how the current outputs of national audit data are communicated and review their strengths and weaknesses in relation to evidence and qualitative data gathered

Terms of reference for this report

This project has been carried out during the undertaking of a Fellowship in Improvement Science. This role was established in collaboration with London Deanery, Improvement Science London and HQIP. This year-long Fellowship commenced in January 2013 and the aim of this Fellowship was to provide a doctor in training with the opportunity to develop the skills necessary to work in the field of improvement science at the interface between research and quality improvement.

A component of the Fellowship was undertaking projects that would promote the relevance and application of these skills in clinical practice, with a key focus being to encourage clinicians and managers to make better use of scientific evidence and data for decision-making in order to improve the quality of clinical practice. It was agreed between HQIP and Improvement Science London to undertake a project led by an Improvement Science Fellow to focus on understanding the barriers and facilitators to engaging clinicians with national clinical audit for improvement.

Where participants' opinions are expressed as direct quotes, these appear in italics in this report. The text represents both the author's commentary and paraphrased summaries of participant opinions.

Methodology

Approaches

This project was composed of three parts: a literature review, a summary review of outputs from selected national audits, and qualitative interviews. The design and results of the literature review are reported in a separate standalone document.⁹ Selected outputs from NCAPOP audits were reviewed prior to undertaking the interviews in order to gain familiarity with the subject area being discussed and to inform both the literature review and review of selected national audit outputs which aided the design of the topic guide used for discussions.

The majority of project time was spent on the qualitative component of this project, and this element is the main focus for the purposes of this report. Given the aim and objectives of this project, a qualitative approach was the methodology of choice to gain clearer understanding of perceptions and explore any issues more deeply.

1. Literature review

The literature review was initiated to address the question: **What makes clinicians more or less likely to engage with or use large-scale clinical audit data for improvement?**

The review aimed to look at any facilitators or barriers to using large-scale clinical audit data in practice, including the presentation of data. It also sought examples of where clinical audit data have been used to influence quality improvement.

The review focused predominantly on published research literature and also included a rapid scan of grey literature (in the UK). The term 'large-scale clinical audit' was used, recognising that international examples may also be of interest but that there may not be projects run on a national scale as in the UK. Large-scale audit was defined as centrally funded and analysed data (on a national or regional scale), aiming to compare services to a pre-set benchmark or evidence-based quality/performance indicator. Hospital services were the key area of interest, though studies of primary care and other audits were also included. Both UK and international literature sources were eligible for inclusion. Five bibliographic databases were searched for studies published from inception to the end of August 2013.

2. Analysis of national audit outputs

A brief review of audit outputs was undertaken to gain familiarity with the subject area and to inform some of the content in the discussion. There was wide variation in data collection methods, analysis, frequency of feedback, method of feedback, publication of data and types of presentation.

The original proposal had intended to undertake sampling of existing NCAPOP audits and non-NCAPOP national audit together with a brief descriptive analysis of the output. The outputs were to be analysed against possible criteria to be developed through literature review, interviews and focus groups. However, during the course of this project it became apparent that this work was duplicating that of the group looking at the self-assessment framework for National Clinical Audits. As part of the work HQIP is carrying out to facilitate sharing of best practice and improvement in the design and delivery of the National Clinical Audits undertaken in England, a self-assessment framework has been developed to assess all current national clinical audits on their design, delivery and impact.¹⁰ The self-assessment framework covers a range of topics and some of the questions

included are of relevance to the way the national clinical audits provide outputs and how they support improvement. Once completed, it will be important to relate this project and its findings to that work.

3. Qualitative interviews

Design

Semi-structured interviews were chosen as the methodology to explore the barriers and facilitators to using national clinical audit for improvement. These were conducted either via telephone or face to face. Focus groups were considered but it was logistically difficult to gather sufficient numbers of participants from a range of organisations given the time scale for this project. However participants from one organisation were able to meet together so one pragmatic focus group was held.

A topic guide was developed which broadly covered the following discussion areas with provider organisations:

- Background and role
- Barriers and facilitators to using national data audits
- Examples of good practice
- Features of the outputs that supported using audits for improvement and potential barriers
- Specific examples where audits were being used and local processes

For further information see appendix.

Supplier organisations were also asked about their perceptions of barriers and facilitators to using national data audits for improvement; and about features of their audits and what they were doing to support quality improvement.

Participants and settings

Participants were sampled from the following groups, which were predefined at the start of the project. It was anticipated that by taking a diagonal slice approach, i.e. a mix of participants, that this would provide a broad range of views, namely:

1. Clinicians, clinical audit leads and medical directors
2. Clinical audit and clinical effectiveness team members and managers
3. Audit suppliers
4. Others including members of the National Advisory Group for Clinical Audit & Enquiries and HQIP Quality Improvement and Development team

Within each of the four groups participants were recruited using a convenience sample, including contacts through HQIP and audit suppliers, personal contacts in relevant areas, attendees at the HQIP national conference and snowballing from these contacts. It was felt that some of the participants identified would be likely to agree to participate having already shown interest in the subject. It is recognised that this method of sampling is prone to bias, and by nature is likely to attract those who are more engaged with the subject area. The potential impact of this is covered subsequently in the discussion. Thirty-seven people were approached across participant groups. It was felt that this would be a manageable number given the time scale.

Participants were selected from organisations geographically spread across England, and from both primary and secondary care settings. Participants were initially emailed or contacted by telephone to identify the relevant person, explain the purpose of the project and gain consent for an interview and to arrange a convenient appointment to conduct the interview.

Data collection and analysis

The data collection phase of this project was undertaken between September and December 2013. A pragmatic approach regarding the method and duration was adopted given the constraints on the availability of participants. Where practical and where consent was given, both face to face and telephone interviews were audio recorded. For both recorded and non-recorded interviews, detailed notes were taken. After several interviews had been conducted, emerging themes were identified. Subsequent interviews were conducted in light of this initial stage of analysis; therefore the analysis process was conducted on an ongoing basis with key themes revisited, in some cases until no new insights were gathered. After all interviews were complete, a thematic approach to analysis was undertaken. Given the time constraints for this project, a practical technique for transcription was used to produce condensed, summarised transcripts from the verbatim audio recordings.¹¹ Relevant quotes were identified, coded and organised into a series of categories and overarching themes. One person undertook the transcripts, field notes and analysis.

Project management

This project was shaped through consultation with the relevant stakeholders, including Jane Ingham, Chief Executive HQIP; Danny Keenan, Medical Director HQIP; Helen Laing, National Clinical Audit Lead HQIP; Yvonne Silove, National Clinical Audit Development Manager HQIP; Nick Black NAGCAE Chair; Martin Marshall, Lead, Improvement Science London; Mandy Smith, Quality Improvement Facilitator HQIP; Liz Smith, Quality Improvement Facilitator HQIP; John Soong, Quality Improvement Research and Training Fellow, RCP and NW London CLAHRC. Monthly meetings were held to shape the project and rolling feedback was provided on key themes emerging from the research.

Findings

Results from the literature review

A rapid review of literature was undertaken to understand what is known from empirical research about how clinicians use large-scale audit data to drive quality improvement. Twelve bibliographic databases were searched for published and unpublished literature. The full texts of over 300 studies were screened but many concentrated on reporting the findings of national audits rather than the use of the findings for improvement. Forty-four studies contained examples of using audit data to aid improvement or described potential barriers and facilitators to using large- or small-scale audit data in practice. Although some of the relevant key findings from the literature review have been reported here, the literature review is a separate stand-alone document.⁹ Some key findings were extrapolated from smaller-scale audits but these were mainly from primary care audits.

Several studies identified that national audit has contributed to improvement in quality of care and outcomes. Examples of studies that examined the use of audit data for improvement highlighted some of the factors that may have contributed to the success of audit both in the UK and abroad. These largely followed a pattern, which centred on systematic targeted feedback with opportunities for discussing and understanding the meaning of results. Specific examples shown to contribute to improvements included:

- feeding back of audit findings using direct contact with heads of departments¹²
- feeding back data in a timely way, with comparisons made to similar sized units, supported by a multi-professional regional care network which used audit to facilitate the development of agreed standards and promote a culture of regular evaluation¹³
- peer review programmes¹⁴ implementing a comprehensive and active dissemination strategy of national audit data¹⁵ and
- using a national conference to disseminate results¹² and discuss potential implementation activities¹⁶

A Cochrane review found that the impact of audit depends on both baseline performance of the organisation and how the feedback is provided.¹⁷ However, in some cases there was a complex set of interventions so it was difficult to be conclusive as to what may have had the effective impact in improvement and the methodological quality of the studies was variable.

A number of studies explored barriers and facilitators to participating in national audit. The primary intention of this project is to focus on how to improve engagement with using national audit data for improvement and therefore it is beyond the scope of the work to focus heavily on this area. However, there were some key findings that draw out themes common to this work, and authors of a study concluded that participation in large-scale audit is influenced by attitudes towards audit in general and it may be relevant to understand why people engage with using national clinical audit for improvement.

The key facilitators found here were:

- a motivation to compare with other units nationally
- a belief that national audit data can drive improvement
- a strong desire to generate information to use effectively at a local level

Findings from a study from regional audits in primary care suggested that attitudes, communication and aspects of internal culture such as team-working and decision-making were also important contributors. The authors concluded that identifying cultural factors within organisations might help to target external assistance needed.

The main barriers to participation were cited as:

- lack of dedicated time
- poor information technology
- lack of funding and lack of technical support

Interestingly, public reporting was also cited as a barrier as it is thought that this may encourage a blaming culture and hinder clinicians from participating. Having a staged move towards open reporting was suggested as a way of minimising risk. Involvement of clinicians relies on them having confidence in the results of national audits and actively wanting to compare their results.¹⁸

The review identified 24 studies with some relevant specific information about the potential barriers and facilitators to using audit data for quality improvement.

Several studies highlighted factors that were likely to be facilitators in using national audit for improvement. Ongoing engagement was found to be an important factor in one study. The implementation strategy of a large-scale audit in the Netherlands included multi-disciplinary audit meetings and specific training, which were both found to be successful in engaging clinicians to use the results for improvement, with discussions being framed in a non-judgemental way.¹⁹ One study described concerns related to content and presentation, about the robustness of the data and the difficulty of interpreting the results, and added to this was uncertainty about definitions and methodology. These concerns were allayed through the introduction of control charts to distinguish 'normal' practice, and reminder letters were sent to increase participation and thus raise confidence in the robustness of the process, which reportedly led to renewed confidence in the audit programme and resulted in some changes in clinical practice.²⁰ Also related to presentation of the data, another study found that national audits presenting data in histograms and examples of approaches used, accompanied by a commentary and reference to relevant articles, were found to be well-received and extensively used, with participants commenting positively on the provision of audit results with practical feedback.

Barriers were summarised in one study, in which managers and clinicians were interviewed about the benefits and drawbacks of publishing outcomes of data from an audit group in Scotland. They found that the national audit indicators had a low profile in hospitals and were rarely used to inform quality improvement or identify best practice. Reasons cited for this included a lack of confidence in the indicators, perceived problems with the quality of data, time delay between collecting data and reporting, limited dissemination, weak incentives to take action and a focus on process rather than outcomes.²¹ Although useful, this and other studies identified were over a decade old; but they may well indicate a pattern of behaviour that continues to exist.

The key findings from the evidence suggest that there is a paucity of good quality information specifically evaluating the best ways to engage and support clinicians to use the findings of large-scale and national audits to improve healthcare services. One study was unable to demonstrate that

local ownership of data resulted in improvement,²² and another study found that the mechanism of feedback of audit findings in Scotland did not make a difference as to whether clinicians were subsequently more likely to comply with audit standards. They compared a printed report alone to a report plus an action-planning letter, and a report plus face-to-face facilitated action planning. Clinicians were interviewed and reported no difference in effectiveness between these strategies but did report being frustrated by the lack of capacity to implement change. The study did not follow up to examine what changes were actually made, focusing only on intention.²³

The literature review revealed a small number of studies, some of which were not very recent, of variable methodological quality, using different methods, in some cases without evaluation, yielding often inconsistent results about what is effective to facilitate improvement, not found to be effective, or factors found to be barriers, suggesting a range of factors are likely to be at play. Some authors acknowledged that given the complexity of the interventions and the methodology employed it was difficult to attribute improvements to specific factors associated with the audits. Very few studies employed an RCT methodology, which is one sometimes used to understand effectiveness. It is apparent that this whole area requires further research.

Results from the interviews

The remainder of this section will focus on the findings from interviews that formed the qualitative component of this project.

Participants

The qualitative component of this project encompassed semi-structured interviews and a focus group. Participants were sampled from four groups. In total, the views of 30 participants were captured through interviews and a focus group. Of those approached by email (37), five did not respond and two responded positively but were unable to schedule time for the interview in the window required. All in the first group were clinicians, clinical audit leads and medical directors. Interviews ranged from 20 to 90 minutes in duration and were a mix of both face-to-face and telephone interviews. The participants came from a range of geographical locations across England.

Type of participant	Number of participants (some fell into more than one group)
Clinicians, clinical audit leads and medical directors	10
Clinical audit and clinical effectiveness team members and managers	7
Audit suppliers	13
Others including members of the National Advisory Group for Clinical Audit & Enquiries and HQIP Quality Improvement and Development team	4

Table 1. Types of participants

Some of the participants fell into more than one participant group. Ten of the participants were clinicians (including one primary care doctor, two nurses and one medical director) and seven

participants were from local clinical audit teams. Four participants were from the National Advisory Group for Clinical Audit & Enquiries and HQIP Quality Improvement and Development team. Thirteen participants, a mixture of clinicians and non-clinicians, were involved as 'suppliers' of the National Hip Fracture Database (NHFD), Sentinel Stroke National Audit Programme, National Institute for Cardiovascular Disease Outcomes Research (NICOR), Surgical outcomes and two newly developing national audits on Chronic Obstructive Pulmonary Disease (COPD) and Chronic Kidney Disease (CKD). Discussions covered a range of audits (both National Clinical Audits and non-NCAPOP audits) and although HQIP's remit is for NCAPOP audits, there were also elements to be learnt from non-NCAPOP audits and these have been included in the findings.

All responses are anonymised and where possible indications of the source of any particular comments have been removed; however it should be noted that the response range and size means it may be possible to identify the source and this was discussed with the participants at the time of gaining consent to participate. It should also be noted that the number of participants in some of the groups was quite small.

Attention is drawn to the fact that some of this work is focused on perceptions, and whether or not these perceptions are justifiably held is a source of discussion that could be picked up outside of this project. Although the report will offer evidence in this respect where possible, those acting on the report must form their own view on this. The primary role of this work is to report the findings and what perceptions exist; right or wrong. The fact that people believe something to be true is often just as powerful in influencing their attitudes and behaviours as the truth itself. Given the nature and varying duration of the sessions not all topic areas were covered in all interviews and the topic guide underwent iterations based on responses obtained over time.

Themes

The following section outlines the main findings from the qualitative part of this project. In analysing the data the following codes, themes and categories emerged.

The three key high-level themes were identified around barriers and facilitators to engaging with national clinical audit for local improvement, which were: **relevance**, **resources** and **engagement & communication**. For each category the key findings have been reported along with detailed results and quotes for each of the sub-level codes.

Theme	Category	Code
1. Relevance	Content and purpose	Data collection vs. audit Audit vs. improvement & Improvement vs. judgement Evidence-based standards vs. aspirational targets Relevance Mechanism for improvement
	Analysis	Methodology Comparisons – case mix, adjustment Uncertainty Data vs. information
	Presentation	Timeliness Interactivity/IT systems Customisation Interpretation Good practice
	Awareness	National Clinical Audit HQIP
	Incentives and motivations	Recognition, competition, clinical excellence awards Regulatory – appraisal/revalidation, Quality Accounts Financial – BPT, resource allocation Public disclosure Audience Ownership
2. Resources	Knowledge and skills	Education, training and ability Interpretation of data Presentational skills Change
	Experience	Leading improvement/change
	Access to skills	Interpretative and analytical Engagement
	Participation in learning	Events Conference Workshops Peer groups/networks Sharing best practice
	Organisational	Staffing of clinical audit teams Buy-in from Boards and Medical Directors Culture and organisations Leadership
	Guidance and tools	HQIP Professional bodies and audit suppliers
	Time	Duplication Prioritisation Data collection
3. Engagement & communication	Communication and reporting	Between clinical audit leads and clinical teams Between clinical audit leads and local audit team Between suppliers and trusts External reporting
	Assurance and governance	Reporting to boards and internal processes
	Dialogue	Between HQIP and local audit teams Between HQIP and clinical leads Between HQIP and suppliers

	Between HQIP and other stakeholders
Involvement	Design and reporting

Table 2. Themes from analysis

Theme one: Relevance

The following section describes the key findings for the categories that make up the ‘relevance’ theme. This includes content and purpose, analysis and presentation of national clinical audits, awareness, and incentives and motivations.

Content and purpose
<p>Key findings: Some national clinical audits that lack clarity of purpose and lack focus on improvement can create a barrier to engagement. Perception varies of the purpose for and mechanisms by which national clinical audit drives improvement. Discussion included mistrust of data, of the audit’s intention, of the perceived benefits, and of relevance to clinical practice and improvement. Overall, a clearer justification of measures linked to the rationale and standards would be welcomed. This would be likely to improve credibility and ease of use, which were seen as important to engagement and facilitating improvement.</p>
<p>1.Data collection vs. audit Some participants questioned the purpose of the national clinical audit. It was described by some as a ‘data collection exercise’ rather than an ‘audit’.</p> <p><i>‘Some so-called “national audits” are not audit and should be badged as data collection. Audit is activity that asks: are we doing what we are supposed to be doing?’</i></p> <p><i>‘It’s in the name: “National Hip Fracture <u>Database</u>” or “Intensive Care National Audit and <u>Research</u> Centre”.’</i></p> <p>There was discussion over the use of the term audit, as participants seemed to have differing views and understanding of this term.</p> <p><i>‘The NHFD is a database not an audit. It is not auditing practice, it is defining what is happening. It allows me to audit my practice.’</i></p> <p>Some asked that where an audit request was for descriptive or contextual data, unrelated to standards or targets for clinical care, this should be made more explicit, to help with interpreting the data. Some participants were critical of the outputs of national clinical audits, mentioning that it was often difficult to understand which areas to focus on in the reports, because with so much data being requested and provided it was difficult to identify which bits were ‘audit’. Where audits were not focused on supporting improvement but on providing data, i.e. for purposes of a registry, some requested that this should be made more explicit.</p> <p>One participant suggested that audits should provide a justification of the purpose of each piece of data being collected and how it could or should be used. Several participants cited the SSNAP and ED audits as good examples of presentation that distinguishes between types of data.</p> <p><i>‘Some audits make it very clear which is standards and which is data. We can only really use the stuff for standards for benchmarking. A lot of the other data isn’t useful.’</i></p>

2. Audit vs. improvement and improvement vs. judgement

Some participants questioned whether the purpose was to make performance comparisons across organisations as a way of externally benchmarking, or whether audits could or should be used to support improvement and change internally within organisations. The approaches did not appear to be mutually exclusive, but some felt there was less emphasis on supporting the former than the latter. Reasons for this opinion included data not being released regularly enough or in a timely manner to monitor impacts of changes made, and that the format of reporting meant it was difficult to evaluate organisational performance and see how it had changed over time, therefore the audits did not seem to support improvement in this way. Participants also commented on the lack of statistical process control charts.

'How can the audits be used to aid improvement if it's not clear what should be done or how, and without timely data not possible to know how or if a difference is being made?'

3. Evidence-based standards vs. aspirational targets

There was variation between the ways that audits reported, some clearly identifying evidence-based standards and linking data back to those standards while others appeared to report data without a justification for the purpose, or used targets that did not appear to be linked to evidence-based standards. Some clinical effectiveness managers, who were responsible for summarising data from the audits in their trusts, suggested that audits should distinguish care standards from 'aspirational' targets. Several participants described how they have to go back to original NICE guidance and 'map' audit findings back to the standards of care.

'It's helpful when the audits request and present data that's based on standards drawn from NICE quality standards where possible and that this is made obvious in the reporting. The stroke audit definitions are always clear.'

'National audit on epilepsy did not match up to NICE clinical guidance.'

'In the BTS audit, there are pages of data – some of it is interesting but of the many data items requested, only three directly relate to guidelines.'

One participant commented on good engagement and the usefulness of certain audits in which – despite the fact that their own organisation was performing poorly – the standards and comparisons were seen to be relevant and meaningful as they provided best practice targets.

'The stroke audit standards are well recognised – even if we aren't doing as well as we should against them they are well recognised and agreed. It makes us engage more with them even if our performance isn't great.'

'Some of the standards included are of less clinical or practical importance, so clinicians will be less interested data on that.'

4. Relevance

Many participants questioned the rationale for including some of the data. They requested that each piece of data collection should be justified, to aid engagement and understanding of the purpose, with guidance on how to interpret and use the data. Participants queried the relevance of the audits' content to their clinical practice, as well as the validity of the standards being audited. There was variation in perceived relevance across the national audits that were discussed during the research process.

'Can't understand the rationale for collecting some data; it's not always relevant to agreed standards. Time is limited so there should be a justification for each piece of data requested.'

'You need to make audit relevant. If people feel they are being measured on something that isn't relevant they won't be interested.'

One participant highlighted national clinical audit's different audiences, who have differing focus and purpose, such as doctors (who use it for improving practice and judging performance), patients and the public (for choice), providers of organisations (for benchmarking), and academics (for research). Trying to balancing the needs of all these stakeholders results in outputs not tailored enough to one specific audience need, in this case to clinicians who want to use the audit outputs to support improvement.

'Trying to be many things to many people and may not always succeed.'

A clinical effectiveness manager said that clinicians do not always engage well with audit data because they see themselves practising differently (in some cases better) than audit data suggests. Therefore some clinicians questioned the relevance of the content to their organisation and their patients. This observation was widely echoed by others.

'Some of the so-called "national standards" are aspirational, which is fine, but don't benchmark us on them. If we are a good organisation, we may not be doing that, we may be doing something different that's better. Clinicians don't take notice if we are bottom of the pile if we don't do that anyway.'

'Some audits have nothing to do with real life practice'; and one clinician stated that 'We hear "measure what matters to clinicians and to patients" a lot but I'm not sure that this happens in audit.'

Some questioned more broadly whether there was agreement on what constitutes 'best practice' and if the data collection and audit content reflected this in all its colours.

Related to this is the questionable validity for everyone of NICE guidelines (which were also discussed). Some participants felt that lack of involvement in and (more importantly) lack of consultation over the use of guidelines and of data collected for audits can lead to poor engagement in using both or either.

'Are we sure we even agree on what we are supposed to be doing? Not everyone agrees with NICE.'

'What we should be doing is not discussed, it's imposed.'

Commenting on the relevance of data collected, some participants criticised the relevance or practical application of recommendations.

'Recommendations need to be realistic. Often they are not.'

'The national audits are good for identifying what needs to be done but not so good to see if you're making a difference.'

One audit supplier conceded that there is a general tendency to generate more data collection than is required or useful.

'The burden of data collection is high. We ask for a lot of "interesting to know" data.'

'We need to push back on what is collected and why it is collected.'

Clinicians called for clarity on the aims and benefits to their patients and to themselves.

'You need a clear statement of purpose; justify why this topic is being audited, in the way that it is, in the time that it is.'

'In cases where improvement isn't the driver, it doesn't mean it's wrong but the audit should be explicit about this. If it is focused on improvement there needs to be clear standards.'

Data quality is generally thought to be one of the first steps to engaging clinicians to use the national audits for improvement. Interestingly, this theme was discussed less frequently than expected. However one clinician stated that in order to engage this audience to use audit for improvement the data needed to be seen to be relevant and of high quality in order to form a sound basis on which to make informed decisions.

'It's our responsibility to get it right.'

There was also a call for more audits focusing on primary care.

'Considering a large amount of care is delivered by GPs there should be more audits focusing on primary care.'

One supplier described how the audit collection tool has customisable fields so that users can collect locally relevant data that can be used to aid local improvement. Users have felt this to be very helpful for specific improvement projects and changing local policy. This data is not fed back nationally but is used instead to look at local variation. The clinicians have ownership of these sections.

The content of audit was also discussed, with one participant highlighting how audit has typically focused on effectiveness, neglecting the two other important areas of safety and experience. Very few audits were described as collecting patient-reported experience measures.

5. Mechanisms for improvement

Several participants commented positively on the role of national clinical audit in improvement. Interestingly, various views were expressed about the mechanism of how national clinical audit can be used for quality improvement. Most people cited a main purpose for using clinical audit data, although using it for more than one purpose was also possible.

The majority focused on the ability to use the data to identify areas for improvement based on comparisons against standards, while others talked about the ability to benchmark and learn from those performing highly given the 'right' interpretation. Some talked about the audit itself being an improvement intervention. There is evidence to suggest that audit data is being used

as a teaching/learning tool to improve outcomes or drive change without actual 'audits' being undertaken.

'They provide access to a wealth of data – it gives us a real opportunity to look at what we are doing and how well.'

'We get the big picture from the national audit data. It complements what we know locally.'

'It's a massive database, it gives us so much information. It definitely has pushed trusts to perform better.'

'We were below average for a standard and we've changed the pathway to include this area as routine now.'

'Being an outlier is very powerful, especially when it's a positive thing. We feel really chuffed and strive to continue.'

'National audit data can be very useful. The most useful bits are the key recommendations.'

Looking at secular trends in data or using their data to monitor changes over time seemed mainly to be done at a local level, rather than directly through the national clinical audits themselves.

'We make use of the data daily, weekly, monthly.'

Some participants talked about using the audit itself as a management tool to prompt clinicians about guidelines at the point of care when managing patients and entering data.

Many participants commented on the value of learning from organisations that were performing well. Examples of good practice are shown in confidential enquiries, and in some national audits, and participants requested more of this type of data.

Feedback was found to be a powerful motivator. One participant described how receiving feedback about the quality of care was a motivator to improve. Others echoed this aspect.

'It does focus your mind when you get a letter to make changes. You really had to try hard to justify why you would carry on.'

'People always want to be first.'

Another talked about the importance of feeding back findings to the clinical teams who are responsible for making change happen, as:

'Without that happening, national audits are pointless.'

The ability to link data was cited as important to drive improvements in care, particularly in patients with multiple co-morbidities that may feature in more than one clinical audit.

One participant described the work that had been undertaken to define the clear model for

improvement with extensive involvement from clinicians and patients.

There was much discussion about the role and mechanism of national clinical audit in improvement and the activities it supports.

'The NHFD doesn't actually "do" audit. It's a complex data analysis at a patient level, which gives you the basis to do your own audit. The ASAP Sprint audit, now that's an audit that will change practice.'

'What is making the difference? SPRINT audits are.'

'We use the data for our business planning cycles.'

'Site visits of top performing trusts.'

'We've used the data to get businesses cases to improve the service. Consultants were keen to use the audit data to get a growth in resources.'

One participant questioned the mechanism of national clinical audit to drive improvement, as it is traditionally seen as identifying areas for improvement rather than being a quality improvement tool in itself:

'Using audit to drive improvement through monitoring and identification or using audit itself as a quality improvement tool.'

Some participants described using a combination of both national and local audit to achieve a more tailored and relevant mix for their organisational setting:

'When audits deliver the best outcome this is through a combination of both national and local audit.'

Some felt strongly that more research should be undertaken to identify the triggers for engagement:

'More needs to be done to understand the mechanisms by which people will engage in audit.'

Some of these topics are picked up subsequently in this report.

Analysis

Key findings:

A consistent call for simple and more transparent description of data analysis methodology, to increase confidence in its validity and assist interpretation. It is important to understand variation, 'like for like' comparisons, 'adjusted' indicators, and to give clear indication of what constitutes a 'significantly' different result where variation is seen. This may improve clarity, understanding and the perceived validity of the findings, and lead to more effective data use.

1. Methodology

Although there were a variety of views on the level of detail required for analysis and the amount of interpretation that people found useful, the majority of participants agreed that

simple explanations were required to help understand and engage with the data, raise confidence and trust in it, or make valid comparisons. Some clinicians and clinical audit managers often found it difficult to understand the methodology behind the analysis, leading to frustration in understanding outputs and sometimes to mistrust of the results. This resulted in a lack of engagement.

'You can't always work out how the maths has been done. The methodology is opaque and unclear. When you ask them they say "don't worry" or don't give you an answer.'

Suppliers agreed that their role was to communicate the methodology clearly.

'The duty we have is to communicate data in a way that they understand and give them the explanations and tools to do so.'

Where methodology lacked transparency this was seen as a barrier to engagement.

'Transparency is so important for engagement.'

'Data cleansing and analysis issues make people question the validity of the data.'

2. Comparisons

Participants were keen to make regional comparisons with organisations located geographically nearby as well as with those that were identified as 'similar' organisations in terms of size of population, or 'peer group' comparators. This provided them with more useful data than 'non similar' organisations.

'What can we learn from those doing it well? Are they like us? What are their characteristics? Those that are good may only be small hospitals. You're not always comparing like for like.'

Many participants commented that the outputs of the national audit reports, with organisations listed alphabetically as static tables in pdf documents, made comparisons of performance difficult. As a result, some were curating and summarising audit reports and producing their own local reports using data on national averages and other relevant organisations to make more meaningful comparisons with their own organisations' performance.

'I look at the big report and distil down a two-page summary to include what are the standards, what are the organisations' results, what are the national averages, how are peers performing in local and 'peer' groups, and the RAG rate to prioritise actions.'

National audits that reported data in a spreadsheet format with the ability to filter were praised as being more useful for organisations to produce local summaries. There was widespread agreement that this was needed to support comparisons being made to understand participants' own performance relative to others. This was seen as integral to understanding where to focus efforts and resources for improvement.

There were varied views about which type of provider should be responsible for providing local summaries, ranging from audit suppliers to clinical effectiveness teams and to lead clinicians. There was disagreement about whether this was within the remit of the audit provider, as there may be a conflict of interest between local requirements and the objectives of the

national clinical audits.

'A good national audit from the provider's point of view may not be a good audit from the local audit view.'

Some participants asked for data to be reported at different levels, including CCG, to provide to commissioners. One participant requested that data be separated out by site, as comparisons at trust level were less helpful where a trust spanned several organisations or sites; for example, where there were three A&Es in one organisation. Some participants were uncertain as to whom they should be comparing themselves and requested additional support with understanding this type of data.

'For some national audits it's difficult to separate out care by organisations.'

Some participants questioned how valid the comparisons were for benchmarking between organisations.

'The problem is the definitions aren't always clear. The standards say that patients should be admitted to a stroke bed within four hours, but some centres are designating A&E trolleys as stroke beds.'

3. Case mix and risk adjustment

Although there was general discussion about making valid comparisons and comparing like with like for benchmarking, case mix and risk adjustment were less directly mentioned. Some participants described knowing which trusts had similar patient demographics to their own in order to make meaningful comparisons for benchmarking. More specifically people commented on how useful adjusted mortality was as an indicator.

'Risk-adjusted mortality has changed things.'

'Having case mix-adjusted SMR gives us really useful information.'

'Case mix adjustment has been extremely important for validity of findings; it has helped prevent some performance issues.'

'Where the data is or isn't risk adjusted, people may not know what that means: we need more explanation around this type of data.'

Technical aspects were more prominent for academics than for the front-line teams.

'Everyone should be doing some adjustment and reviewing it regularly.'

4. Uncertainty

How to present statistical uncertainty in a meaningful and understandable way – when there appears to be wide variation in the way that uncertainty is presented in audits, if at all – was also questioned. These discussions occurred mainly with academics and some clinicians. Similarities were drawn to outside healthcare settings such as learning from communication and marketing and displaying performance data in the education sector. Some questioned how much input 'end users' have had with how results were presented and uncertainty communicated.

The importance of understanding uncertainty was highlighted but there was less emphasis placed on confidence intervals and uncertainty from many of the front-line clinical and audit staff.

'We need to present confidence intervals in a few different ways so people can get it.'

'We need to make sure the comparisons are being done in a fair way.'

'Important when there are small sample sizes.'

'Some formats make it difficult to display uncertainty.'

5. Data vs. information

Many participants discussed the difference between providing data and interpreted information, defining data as unprocessed facts and figures and information as data that has been interpreted to have meaning for the user. Audits varied widely in the extent to which participants perceived information to have been interpreted. This seemed to be a factor for some organisations who undertook further analysis, interpretation and presentation locally themselves.

Participants commented on how helpful it is when audits provide interpretation of the results, compared to those in which a perceived lack of interpretive analysis exists, and how this impacts on using the data.

'Comes out as general reports rather than tailored information.'

'Helping people pick out signal from noise.'

Many participants felt the data in itself was less useful than interpreted information.

'Sometimes we feel like, "here's your report, now just get on with it".'

'Some give you too much data, which you can't make any sense of. We get blinded by data.'

'Drowning in data.'

Where analysis was being done locally there was also variation in who was responsible for it. In some places this was done by the clinical lead; in other places clinical effectiveness teams created summaries or clinical audit staff supporting clinical leads appeared to be dependent for analysis on a number of factors such as local expertise and resources.

Some trusts ensured that this formed part of their standardised process for using national clinical audits for improvement, embedding the process in their clinical effectiveness governance processes.

As this topic is relevant to both analysis and presentation, comments on interpretation feature further in the presentation section.

Presentation

Key findings:

There are significant variations in presentation and outputs between audits. Time lag and infrequent release of data are cited as significant barriers to improvement. Participants highlighted and differentiated the usefulness of annual reports to evaluate overall performance and of local data in real time to look at trends and impact of changes. There were consistent opinions on how the data could be more usefully interpreted and presented (although a few participants cautioned against being too prescriptive).

Interpretation and identifying priorities were frequently cited as areas that facilitate using national clinical audit for improvement. It seems that striking the right balance between giving people the freedom to customise and interrogate their outputs, and providing them with tailored information that is understandable rather than un-interpreted data, requires more consideration.

Principles for good data presentation and reporting formats and styles for a variety of stakeholder audiences were discussed, including consideration on how the same presentation might be interpreted by a range of readers with varying abilities. A range of outputs with more 'user-friendly' formats were suggested.

1. Timeliness

Timeliness and frequency of reporting were commented on extensively.

Different types of audit were compared and criticisms of different types of audit were highlighted.

For continuous audits there is a perceived lack of time to implement changes, whereas with snapshot or cross-sectional audits, results become irrelevant and have a long lag time before being published.

'There is no time to actually do the improvement or see the impact it's having. If you submit data in September 2011 and it reports in August 2012, you'll be needed to submit the next lot of data again in October. How are you supposed to use the data to make improvements with such a short window?'

There was significant variation in time to access data, some audits having real-time availability (within two hours) compared to a long time lag for outputs from annual reports (often more than 18 months later). The timing and frequency of output influences the ability to act on findings – these were often cited as issues that need to be addressed.

'It would be good if it could come out sooner. We are most of the way through 2013 and the 2012 data isn't out yet.'

'Not good enough. We still don't know our mortality rate from 2011. From an improvement perspective that's nonsense. It's too late.'

'When you are producing results that late, it's being used for "reward and punishment" rather than learning.'

'Most of the national audits have the potential to produce quite useful information for change, but the feedback is often delayed and selective.'

'Real-time data is much more useful.'

'We use the data a lot if we see a rise in numbers or a drop off. Having the real-time component is so useful.'

Local teams often relied on collecting their own data and using it to drive improvement rather than waiting for the annual reports.

'We have a business intelligence person who exports all the data from Excel into Access, therefore we can keep tracking our results and interpret in a more timely way.'

Although lack of timeliness was cited by many as a barrier to using the data for improvement, many praised the ability to use the data to feedback on overall performance. Some talked about the different uses of the types of outputs, with annual reports being more suitable for external benchmarking and real-time data being more useful for looking at internal impact and changes.

'In between the release of the annual reports you can go on and specify a period of time and look at it yourself.'

2. Interactivity and IT systems

Participants described the range of outputs, from static pdf reports emailed to stakeholders to databases that can be interrogated. Some of the audits had databases that can be accessed 24 hours a day to give a snapshot of performance and understand impact immediately. Reporting of national clinical audits varied widely, with one supplier describing how patient level data is posted nightly and can be viewed online. Clinicians praised this system of online access to data in a timely way.

'I regularly export my data from the database to do local analysis. It's useful to be able to take this and show commissioners, as they don't have access to the data. It helps us engage commissioners.'

Many talked about a preference for online or electronic reporting as it often included the capability to interact with the data.

'Annual reports are difficult to read in paper form but online they are more useful. You tend to be able to do more with them.'

Some participants were critical of archaic software systems used to upload data, with one participant describing the use of Lotus notes as 'antiquated'. One supplier of audits called for a restructure of data collection and presentation methods using more modern IT systems than those currently in use. Others questioned the variation in data collection systems and whether this could be made more uniform across the audits.

'A single web entry method for data collection is what we should be aiming for.'

Other suppliers mentioned plans for upgrading IT platforms to make the data available in a more timely manner, allowing customised comparisons and making the information easily

accessible to support improvement by allowing easier comparisons between organisations for benchmarking and making comparisons over time.

Prospective audits both in primary and secondary care, with data collected and viewed at the point of care rather than retrospectively, were heralded as important for driving improvement. In these audits completion of some of the data fields prompted clinicians to make changes in their practice immediately and intervene, when they may not have done so once the patient had completed their episode of care. In particular, primary care audits were highlighted as good examples of this. One audit supplier described how some of the data entry fields had electronic prompts and guidance attached in the data collection tool, extending it into a decision-making or clinical management-type aid to prompt the clinician to consider a particular treatment recommended in the guidance. This included a feature to print out the recommendations and discuss them with the patient.

Using national clinical audit more 'actively' for quality improvement was discussed by both suppliers and clinicians. However, this type of practice did not seem widespread and appears dependant on the timing of data collection and the type of system used.

Some of the systems for displaying and producing the information were criticised, while some audits were praised for their information systems.

'If you choose the option "self-print", it doesn't come out in the proper format so it makes it hard to use.'

'Easy to use, the audits have had to speed up the servers.'

One participant suggested making use of technology by linking data collection to analysis thereby reducing the need for spate analysis to be undertaken.

'Data collection could feed immediately into the analysis so you could pre-populate the tool with findings.'

3. Customisation

Customising outputs that provide the ability to make comparisons of local or similar peer groups for benchmarking was found to be important. Many participants talked about customising the data for various purposes and those audits with the ability to manipulate the data were seen to be more useful than those that did not have this feature.

'When you can't interact with the data there is no meaningful benchmarking.'

'I need to know how I'm doing against others close by, but if they aren't very good it's important to know how I compare to others nationally too.'

The supplier's role in producing customised, tailored reports or summaries for organisations was discussed. Locally customised reports were requested (although there were mixed responses to this) and seemed dependant on a number of factors: the availability of necessary skills, and the capacity to undertake this customisation in organisations where the clinical effectiveness teams did not produce local summaries of findings, or where clinical leads were unable or unwilling to do this.

Being able to customise the data oneself, or being provided with 'personalised' data, was cited

as important by many participants. The National PROMs programme reports were cited as good examples of being able to customise reports, from inserting the organisation's name to viewing interactive presentations and being able to manipulate data to produce relevant outputs. While some felt that local customised analysis should be provided by suppliers, others stated that, given the right tools, they should take ownership of it themselves.

'All reports come out as general reports rather than providing tailored data for our needs.'

'It's much more useful to have the local analysis. I want to know how I'm doing and I don't want to have to wait. It isn't up to the audits to decide what local analysis looks like, we know what's useful for us. You need to decide locally for yourself what you want to look at. What I want isn't necessarily what the bloke down the road wants.'

'With the BTS audit you can't run a report to compare two organisations, and it can't let you compare at that level. You don't get to learn enough from the report.'

'We produce our own in-house summaries.'

4. Interpretation

Many participants discussed the importance of interpretation of data in providing useful information.

Many participants requested greater clarity and guidance in the reports about which areas to focus on.

'The reports are so full of data, you just want to know the key elements and how they relate to recommendations.'

'We just want to know the three top things we need to do next year; we can't do everything in one go so some way of knowing where to start would be helpful.'

'Bowel cancer audit and stroke audit are both good at signposting.'

'Ten key performance indicators which benchmark your trust against the national picture as a table at the back of each report.'

However, they added that this needed to be balanced with language and tone that are not too directive, prescriptive or judgemental in order to encourage local flexibility. One participant also highlighted that when producing derived data, i.e. data that has been analysed or summary data, there is still a need to provide the raw data behind the interpretation for those who want it.

Consistent messages in interpretation and presentation were highlighted and summarised well by one participant.

'You need a short summary presentation showing at a national level to show benchmarking, locally/regionally and also individualised results with a level of interpretation with the ability to drill down to the meaning without having to trawl through data, clearly identifying the standards and which areas might be the most important to focus on.'

'A "superficial" summarised presentation is enough to satisfy most audiences. You have to remember that clinicians, both doctors, nurses and others, as well as managers, need to be able to understand this stuff.'

'We just want to know what we need to do to get better.'

One supplier of national clinical audit described how they use 'help notes' within the outputs of the audit to describe what each column of data collection means, what to do with the information and what to prioritise.

'Present data in an engaging way, not patronising, and not saying "you don't do X, Y, Z properly".'

Several people talked about the level of interpretation that should be provided, which should be easily understandable.

'Need a lay explanation in every setting. There should be a duty to put everything really clearly into lay terms, a duty to communicate data in a way that is understood and giving them the tools to do it.'

5. Good practice (accessibility and presentation of content)

Many participants cited examples of good and poor presentation. Many of these were clinical audit staff who were able to draw comparisons of presentation across national clinical audits that they frequently access.

Electronic reports were found to be much more useful than paper ones.

'Quite hard to read, have to scour through all the pages to find one key indicator. An electronic report would be preferable to paper because at least it makes searching through easier.'

One participant commented that many audits provide overly complex visual displays, making it hard to interpret graphical data. In particular large bar charts were found to be 'unwieldy'.

'You can't compare yourself to anyone easily.'

One supplier stated that the aim should be to increase the amount of information displayed visually as long as it is kept simple and provides clear messages.

Consistency of presentation was also frequently cited, as were requests for numbers and percentages, as many trusts had to do manual calculations of these.

'Making data presentation more uniform would be very helpful. Yes there is variation and this could be tweaked, but there are lots of commonalities and that would give national audits more of a face to say, "this is what we are and this is how we present things".'

'Consistency in explanations and standard formats, but a range of formats.'

Funnel plots like the PROMs programme reports were cited as a good way to present data.

Other examples cited for presenting outliers include Dr Foster.

The stroke audit reports were frequently praised for their clarity and simplicity of presentation by clinicians, audit teams and other suppliers. Others were less easy to read, such as the renal registry report.

Although Excel spreadsheets were found to be less aesthetically pleasing as outputs, they were frequently praised for their ability to manipulate and filter data, making them more useful to support improvement.

Several participants mentioned the value of statistical process control charts in presenting trend analysis and advocated local use of this presentational format.

'Before and after is no good, it needs to be continuous displays with control limits which demonstrate improvement.'

One supplier talked about plans for presentation of data with the upgrading of their IT platform:

'We will have more dashboards and the ability to look at trends in time. The monthly data will be mainly tables and the annual reports will have funnel plots.'

Improved guidance for prioritising areas to focus on were mentioned by several participants. One talked about a grading system, for example A, B, C, D, E, with A being the most important and later grades being more 'nice to know'.

One participant described the challenge of presenting data in composite form:

'Composite scores are more difficult to interpret and can mask problems in one area; it creates a another level of ambiguity and ignores uncertainty.'

Several participants talked about evaluating visual formats to find the best ways of communicating and presenting data:

'More work needs to be done to understand the best ways of communicating and presenting data. Is it tables and numbers, is it visual dashboard to understand what modes of presentation are understood and retained, perhaps drawing on expertise from psychologists to understand more about comprehension and retention as well as marketing.'

'More work needed to understand which bits of the audit reports are the most useful, who is accessing what bits and why, what is being looked at or downloaded online.'

Awareness

Key findings:

There is variation in awareness of HQIP and of national audit with national clinical audit.

1. National clinical audit

Given the sampling method used, participants were more likely to be engaged with using national clinical audit than those that did not participate.

However, some clinicians admitted having very little awareness until recently, or mentioned colleagues who also lacked awareness. Confusion between local and national clinical audit was also highlighted.

'My awareness of national clinical audits was practically zilch. And I'm someone who does improvement.'

'Some of my colleagues don't know the first thing about them.'

'I didn't really know about national audits and I'm somebody who does improvement. Some understanding around audit "naïve".'

2. HQIP

Regarding HQIP specifically, there was high awareness among local audit teams but much lower awareness among clinicians. Some perceived HQIP to be more focused on data collection than on improving patient care and supporting implementation.

Incentives and motivations

Key findings:

Wide-ranging views were held regarding motivators and incentives. In particular, there were mixed views on the value of financial incentives to drive improvement, particularly at a systems level (for example the Best Practice Tariff in the NHRD). On a personal level, some participants did use audit results to support applications for clinical excellence awards. Recognition linked to competition was cited as a powerful motivator. Public disclosure, and in particular individual consultant level data, was a contentious issue which some actively supported while others considered it 'damaging'. As for other findings, the mixed responses suggest that a range of motivators and incentives may be perceived as both barriers and facilitators. One participant summarised this, saying 'You need to be able to engage the good, bad and indifferent and you need a different approach to each, therefore tailored strategies are important'.

1. Recognition

Recognition as a motivator was discussed in various ways and there were a range of views on this aspect.

'Different people are motivated by different things. Doesn't everyone want to be the best?'

Competition between organisations and peers in particular, with rivalry between neighbouring organisations, were all cited as significant drivers for clinicians, as was personal reputation. This was sometimes without explicit reference to the quality of care.

'Just as big an incentive as money are the results of data. It's a pride thing. You don't want to be bottom of the pack.'

When organisations were performing well, external reporting of results was cited as an important motivator, in particular media broadcasting and having positive results picked up by the press. This type of recognition was felt to be helpful in inspiring and engaging teams and organisations to continue to improve.

'Competition is the best motivator there is.'

One participant questioned the correlation between performance and engagement:

'Do those with poorer results engage less with the findings and the process?'

In a different aspect of recognition, a few participants mentioned using their results to support applications for clinical excellence awards, in particular those using the NHFD.

2. Regulatory and governance

Some clinicians described using the results of national clinical audit for appraisals to show improvement in clinical outcomes and for revalidation. This use seemed to vary, being more common in some specialities such as the NHFD, and rare in others.

'The data forms a large part of appraisal data.'

Reporting on national clinical audit in quality accounts was mentioned as a driver for engagement by some, particularly as a way of demonstrating the quality of services provided to the public. There is a degree of polarised behaviour between organisations who are embedding this into a process, while others seem to take a less engaged approach and provide only mandatory information where needed.

'Some trusts don't have an interest beyond quality accounts.'

'Where trusts are now reporting their involvement in national clinical audit on a public facing website, there is better engagement.'

3. Financial incentives

There were mixed views on the value of financial incentives to drive improvement, with a widely cited example of the Best Practice Tariff in NHFD. Examples were also drawn from CQINs in the Enhanced Recovery Programme. Many felt that for the NHFD, the use of BPT has been positive in driving improvements and raising the profile of the audit.

'Money is important. The most dominant thing that HQIP did was the tying up of the money. It ensured absolute engagement.'

However some felt other factors were just as important as motivators.

'Finance is only one incentive.'

One participant discussed how national clinical audit is being used to make a case for resource allocation, where the use of 'poor' performance is being used to attract additional resources within organisations by using reputation and finance as motivators. Some felt that this was positive, encouraging investment to support improvement; others felt that attracting resources

takes the focus away from the issue of quality.

Although the majority agreed that there were positive aspects to financial incentives, in particular focusing on areas of care that may be neglected, one participant explained that once financial targets for 'performance' had been reached, this could discourage further improvement. It could also encourage focus on processes rather than on outcomes or the bigger picture of continuous improvement. This could also lead to less local autonomy. The adverse impacts of financial incentives were highlighted.

'Although it is usually done well for the hip fracture and there have been big improvements nationally, this can be detrimental to the patient as 36 hours to theatre might be too quick if they aren't ready.'

'The biggest incentive is money. Once on board they become unincentivised.'

Another participant highlighted issues with financial association with audit data, describing a pilot they had been involved in:

'It failed because clinicians did not see the relevance. There was lack of ownership and engagement and a focus on process and not what is clinically important. If something is statistically significant, but not clinically significant, say 93 vs. 95, should this be associated with a difference in payment?'

One participant cited an international example where clinicians were paid a fee to participate in the national clinical audit, in part because the incentive mechanisms differ and there are no revalidation requirements.

4. Research

Involvement in and opportunities for research are important motivators for some clinicians and this was mentioned by a few. One participant also mentioned the importance of national clinical audit in a process:

'This should be seen as part of the spectrum of knowledge generated from research being translated into improved outcomes.'

5. Public disclosure

Public reporting of the findings was discussed, as well as reporting consultant level data. There was less discussion than expected, although several participants mentioned making data public as a mechanism for driving improvement.

'All data should be publically disclosed. Data should be readily available to the public. All decisions should be backed up by data.'

'Making the result public leads to much bigger changes, not least because there is media leverage. However, you need to present the context not just one figure in isolation.'

'There is a huge potential for the public to drive quality more but there is little attention to the public voice. Trust levels comparison formats aren't very user accessible for some audits. This needs to be further explored, particularly whether to standardise the formats of outputs for the public. This should be driven nationally.'

Data validation in relation to publishing data was also discussed:

'Publishing outliers before the data validation has been done can be damaging.'

'It depends on how it's presented. I've been flagged a few times. Being able to comment and validate if identified as an outlier is important.'

There were mixed responses regarding named consultant level data. Some supported publication of consultant level data, feeling it was necessary to drive improvement while others said it would be 'damaging' and might discourage participation. A discussion ensued about presented consultant level data including outcomes being attributable to individuals (where care is provided by a multi-disciplinary team), as this creates its own set of associated problems.

'The surgeons do the technical, I do the rest. Mortality is influenced by post op care. The management of a patient is a team effort; this could discourage working collaboratively. We shouldn't get caught up with a name, at the end of the day we all have a responsibility.'

'It is not straightforward in some cases as many people are responsible for the care. It could drive people apart by naming them, rather than bringing them together to take responsibility for the whole pathway. It could create disincentives and poorer care, like rolling complex patients over to the next day's list, which may stop clinicians taking patients under their care.'

'There is such variation in practice that you wouldn't be comparing like with like if you attribute all the data to either a consultant or orthogeriatrician. Some orthogeriatricians take all patients under their care at 72 hours, others stay under surgeons.'

'If you go down to individual consultant level you need a power calculation, a few years of data to have a big enough number. You also need to be clear about what the confounders in the data are. It needs to be fair. Team-based reporting is seen as more appealing at the moment.'

However there were some who felt that it was important to provide data at consultant level.

'Someone should be nominated responsible for that patient. Healthcare is for the people.'

'Need to disclose data to the public that is relevant to their health.'

6. Ownership

Although not widely discussed, the issue of ownership and its importance elicited a range of views about what happens in practice, as described in these quotes:

'If there are people who aren't interested in doing something, you can't make them. They need intrinsic motivation. Otherwise it's like wrestling a pig.'

'People have no right not to engage with these programmes.'

'The data has to be used by the people whose data it is. There needs to be ownership. I don't think it's about spoon-feeding.'

'Instead of data disappearing off into a black hole, everyone is involved. It's because it's their data and their patients we're talking about.'

Theme two: Resources

The following section highlights the key findings for the theme 'resources'. This includes knowledge and skills, experience, access to skills, participation in learning, organisational factors, guidance and tools, and time.

Knowledge and skills

Key findings:

Skills and ability were considered significant. People held differing views about tailoring outputs to suit abilities and needs vs. improving skills to understand, analyse, interpret and present data. A participant summarised the different skill sets that are required when using audit for improvement, which include: stimulating and engaging communication skills, technical skills for measurement, assessment, analytical and interpretative skills, and skills for the 'doers' in change and quality improvement. It was apparent from the discussions that many people did not distinguish between these different skills.

1. Education, training and ability

Some participants highlighted the need for knowledge and skills to be developed among clinical staff, through formal education and training, particularly in interpretation of data, quality improvement, and managing change. One participant mentioned training through seminars or workshops, another commented on the need for changes to undergraduate curriculums. There did not seem to be consensus on the most appropriate time or method.

A few highlighted that assumptions are often made about the level of people skills required to understand and use audit data for improvement.

'When you present data back you assume some understanding of how you use data to drive change.'

'We should be giving people a higher level interpretation of the data, not assuming they have the knowledge or skills to do this themselves.'

Suppliers talked about the challenges of ensuring different audiences were catered for, as national clinical audit data is used by a range of stakeholders and not just clinicians and audit teams. These include patients, commissioners, Information Centres and other organisations, who have influence on policy decisions, not only local improvement. The various stakeholders were reported to have different purposes for and abilities in interpreting data, particularly within professional groups.

'Clinicians – that's wider than doctors. Does everyone have the same level of understanding?'

Several highlighted the specialist skills required:

'The level of skills and knowledge needed to manage quality assessment and improvement are underestimated. We can all run our own bank account; that doesn't make us directors of finance. Just because we are doctors and nurses, it doesn't mean we can manage quality.'

'I'm not a statistician.'

2. Interpretative skills

Participants focused strongly on knowledge and skills relating to interpretation of data. Several participants across the groups commented on the ability of clinicians to interpret the data. Many commented on the need to improve the outputs of audit to aid interpretation and therefore increase the likelihood of using the data for improvement. Many reflected the view that the information should be tailored to meet people's current skill levels. It was thought that some clinicians might be afraid to say that they don't understand what the data is showing, while others openly admit difficulty.

'I'm not sure everyone understands the reports. They should be presented better.'

'We should assume users have no analytical capacity at all and cannot undertake any secondary analysis. This is the level we should be aiming at.'

'I'll admit I find them dry and difficult to understand.'

In contrast, others felt that improving skills should be focused on more than the outputs of the report.

'I don't think you should compromise on data outputs. You should educate people and develop their skills to be able to interpret it.'

Some clinicians felt that if the outputs were aimed at 'educated patients' this would fulfil the needs of the majority, and further technical details could be provided if required. Simpler presentations were requested by some, while others were keen for more technical detail in the methodology and format for reporting findings.

Several trusts talked about how the responsibility for interpreting and summarising the data lay with clinicians. One trust talked about local summaries of data being produced by clinical leads, while another trust described input by junior doctors and how this was helping to drive clinical engagement with national audits and develop skills.

'It's a good way of engaging them, they are pretty proactive here. Junior doctors want to be involved in audit. It's good for their CVs. It's good for doctors to become familiar with this.'

It was suggested that recommendations be more clearly differentiated in terms of who they apply to and their varied audiences. The stroke audit was cited as a good example, producing tailored outputs with interpretations for specific audiences.

'Is this for the networks, the NHS as a whole, chief executives, nurses, doctors, CCGs? It would be helpful to know who some of this is aimed at instead of having to trawl through and try and work it out.'

Suppliers also talked about expertise and skills within their organisations.

'We have clinicians to help us, but they are doing things in their own time. We need more analytical capacity.'

'More clinically-led analysis and relevant data interpreted in a way that is most useful.'

3. Presentational skills

Clinicians commented on the importance of being able to transform raw data into a visual format for local presentations and pull information from the annual reports into summary presentations in order to engage their teams and organisations with the findings. Some cited a lack of capability in presentational skills, and some criticised the formats and the difficulty of transforming them into presentations. Suggested improvements for suppliers included providing guidance or tools for exporting customised data from Excel to PowerPoint. The onus seems to fall on suppliers to facilitate these improvements to aid efficiency and consistency.

'I'm sure there are people who write things in Excel; that could export relevant data for an organisation into PowerPoint which is much more useful for presentations.'

As for interpretive skills, there seemed to be variations in requirements, with a few participants highlighting that they needed to improve their own skills to manipulate data themselves and the majority suggesting that relevant data be extracted and produced in visual format for them. Some felt that data should be provided in lots of different ways to suit all needs.

4. Change and improvement

Several participants talked about the need to improve skills and knowledge for managing change and how to implement improvement.

'You can present the data in the best way but if they don't know how to go about doing something with it you'll never see an impact.'

'We want to know what they have done and how they have gone about it.'

'People need training in action planning and quality improvement skills, it's not something that people just know how to do. People who are in positions to make change should be given the skills to do so.'

'People need to know how to go about change, the tools to use, and approaches to change management. And not just the technical aspects to change, it's about the relational aspects too.'

'When you present data back you assume some understanding of using data to drive change.'

Understanding how others made improvements was also important and many participants talked about the value of learning from organisations that were performing well. Examples of

improvements in confidential enquiries and some of the national audits such as MINAP were described as useful by participants. More of these were requested, highlighting the need for audits to focus on using the data for improvement, not just to provide information.

Experience

Key findings:

The process of change and improvement was described by some participants; however clinicians did not much express the importance of having experience of leading change.

1. Leading improvement/change

Clinicians commented on experience of leading improvement in the context of understanding how others had been successful in making improvements, learning from peers at events or visits. Participants commented less on the importance of one's own experience of leading change and improvement. A small minority described processes by which they had led change but rarely commented on the importance of having gained experience. One participant mentioned what had worked well when leading change, citing more 'social' than technical aspects of change relating to engagement by staff and patients. Other participants (non-clinicians) highlighted the value of experience of leading change.

'Setting up improvement on the basis of audit is hard work. You need to have the right combination of experience.'

Access to skills

Key findings:

Organisations that had clinical audit staff with analytical and interpretive skills claimed significant engagement with the data being used for improvement was due to supporting clinicians in understanding and using it.

There was great local variation in resources dedicated to interpretation.

Skills to manage change, communication skills for feedback and dissemination, and skills in project management and producing implementation plans featured less prominently in discussion.

1. Interpretive and analytical

Several participants talked about the value of having access to analytical and interpretive skills, in particular clinical audit staff that could provide this support. One trust employed a clinical person with an analytical background, specifically appointed to support the national clinical audit as well as education research aspects. They were able to do bespoke data analysis in a timely way.

'Someone like me can do the analysis in-house rather than sending off data and waiting for it to come back three months later.'

'You need a combination of good clinical knowledge and analytical skills. This person needs to become embedded into the team rather than kept at arm's length.'

2. Engagement

Suppliers discussed skills in engagement and communication and talked about the value of having clinical experience in their organisations. Several people mentioned the importance of

having suppliers with clinical skills to understand the jargon and develop a rapport with front-line clinicians, which has aided improving engagement.

'They know we really understand what they are talking about. It helps when questioning the data and for validation too.'

'Clinicians are happier to speak to someone who they can speak to at the same level.'

Participants also talked about needing more capacity for engagement and for implementation, without separating the two skill sets. One participant talked about the model of implementation consultants used by NICE.

'NICE has 7–8 implementation consultants, giving them a large resource support engagement.'

3. Change

Expertise in managing change and skills in improvement were cited very rarely by local clinical or audit staff. A few clinician participants talked about the need for skills in managing change, in a way that seemed external to them, but they did not describe accessing or sourcing these skills, suggesting that this was unknown. They did not explicitly refer to transformation and service improvement teams or improvement organisations.

Participation in learning

Key findings:

Learning and sharing and methods for this were frequently discussed. Different objectives were cited for events that included engagement with participants, increasing awareness of national clinical audit, dissemination of results, discussion and action planning; and those that included presentation of best practice with exemplars of improvement and sharing of resources, an academic or educational component, or a combination of some of these.

Overwhelmingly positive feedback was given for different types of events to support learning and sharing, in particular face-to-face events such as conferences and workshops. These types of events were widely regarded by clinicians and audit teams as being very informative, useful for sharing best practice, sparking curiosity to understand variation, driving competition, networking and providing an opportunity to showcase own work.

Conferences and workshops were also cited as highly successful in supporting local improvement, understanding data, understanding variation and looking at ways in which others practise. Face-to-face meetings were the preferred method to virtual webinars, particularly by those using events for their more relational elements (such as networking, hearing how change was brought about) rather than technical elements (regarding the data). Suppliers also cited the opportunity to learn and share from others on presentation, dissemination and supporting improvement. Allocating more resources to support these activities was advocated.

1. Events

This section covers comments about events in general. Different types of events were described by participants, ranging from organisation meetings, regional meetings and workshops, national conferences hosted by the organisations themselves, and by suppliers, professional bodies and HQIP. Participants were asked about the types of events they preferred. Some advocated the need for understanding more about people's preferences:

'Suppliers of audit could take a number of different formats to stimulating engagement, national or regional meetings, online webinars.'

'People need to be supported to use the outputs. We need to know more about what works, is it workshops, webinars?'

Many clinical audit staff and clinicians highlighted the benefits of face-to-face meetings in order to meet others and network. Clinicians spoke very positively about attending events for several reasons, including the opportunity to showcase and learn from best practice, to meet other clinicians and gain peer support. They also served as a motivator to change practice.

'Events offer a real opportunity for showcasing.'

Participants were questioned about the use of virtual events such as webex and webinars. While some were positive about these, having had experience of using them in other areas particularly to discuss technical issues and get support on an individual and tailored basis, others cited logistical issues with access and availability.

'You need to be able to access the latest version of Internet Explorer, which our trust doesn't have. Sometimes you need to download software or be sitting near a microphone or telephone with the computer. We often aren't able to do that.'

Suppliers described various different types of events that they held and the benefits they perceived.

'Events bring people together to network, to discuss lessons learned and to share their own experiences.'

'The more you run events like this and engage them, the more they take ownership.'

'The regional meetings that we have hosted have been very useful from feedback we have received. We have national speakers and six slots for local speakers to demonstrate how they've changed practice. It gives people an opportunity to discuss what they are struggling with. We run them free and have over 100 participants at each.'

'We run workshops for inputters and collectors to improve quality and accuracy of data.'

One supplier mentioned a write-up of lessons learned from road shows and a willingness to share with other suppliers. It appeared that where suppliers were responsible for several national clinical audits, there could be a lot to learn between those audits due to variations in practice even within the same suppliers, as well as across different supplier organisations.

However, participants – particularly suppliers – talked about the lack of resources and capacity to organise events. Other participants highlighted the need for resources to be specifically allocated to these types of activities, rather than them being seen as ‘nice to do’ add-ons.

2. Conferences

The comments that have been described relate generally to events including conferences. Some participants, in particular clinical audit managers, more specifically saw the HQIP national conference as useful and important. The conference was seen as a missed opportunity by clinicians and others: in particular several commented on the clash with other quality improvement and clinical leadership events which should have been key audiences for the HQIP conference. Some clinicians were not even aware of the conference or its relevance to them.

‘Very few clinicians attend. It may be because of time or the agenda.’

‘Who was invited? As a clinician I wasn’t on the list. Using the national conference in a better way should be a priority.’

Academic conferences were seen by suppliers as a key way of engaging clinicians. One participant stated:

‘Clinical medicine is largely driven by academics, therefore if you can get a space at an academic conference where you are taken seriously, this is an important driver for engagement.’

The value of events was also mentioned by suppliers who talked about HQIP’s role in bringing them together to learn from each other at events.

3. Workshops

These tended to be within the context of an educational component. Benefits included increasing skills in interpretation of data, and allowing the discussion of results in a supportive, non-judgemental way. One organisation described a high level of engagement when they ran a local workshop attended by clinical audit leads for their trust and services managers.

‘The medical director stayed for the whole meeting. Even the Chief Executive came.’

Regional workshops were seen as a good opportunity for networking. One participant talked about their future value:

‘They remain useful for now. Once everyone is doing well I’m not sure we’ll need them.’

4. Peers and networks

Peer visits, peer review, peer support, and networks were differentiated and cited as important for driving improvements by both suppliers and clinicians. The use of audit champions was also praised.

‘Peers are able to provide challenge and support, you know that they get it.’

The role of peer review was discussed specifically for addressing poor performance.

‘You need to understand what will make the “last” group engage. Think, “why should I take part, I’ll be bottom of the pile”. We need to encourage them to get better and

provide peer support and review where necessary.'

Clinical audit networks were cited as important in providing support for clinical audit teams but networks in general were described as being useful but under-utilised.

'We need to make more use of networks in making change happen.'

'Network of local providers to Hoover up good ideas and disseminate it out.'

5. Sharing best practice

Many participants talked about the high value placed on sharing best practice and the methods by which they did this, which included online resources in the national clinical audits and arranging visits to other organisations.

'It evoked hospital visits to enable spreading and sharing of practice. Local clinicians talk about how they went and looked at other hospitals. Many have come back and put in business cases and been successful.'

'We don't just need the data, we want to see business cases, checklist proformas, sharing between trusts, of how people have actually gone about making these changes.'

Suppliers also talked about the benefits of learning from each other and sharing best practice.

'We have a lot to learn from each other, we are trying to do similar things.'

Organisational

Key findings:

Organisationally, the role of clinical audit teams in national clinical audit is seen to be diluted as their responsibilities are being stretched to cover broader remits. This perceived loss of specialist resources in organisations is seen to be due to budget cuts, and is impacting negatively on the ability to provide support for interpreting and using national clinical audits for quality improvement.

Appetite for engaging in and undertaking audits is largely driven by existing internal culture and participants commented on the importance of engagement and the role of leaders to drive this process within an organisation.

1. Staffing of clinical audit teams

Several participants commented on the 'loss of resources and support from clinical audit teams', and described the diminishing role of the clinical audit teams, who are taking responsibility for a wider remit relating to clinical governance and clinical effectiveness. One clinical audit manager listed some of her responsibilities, which not only included national clinical audit, but also covered local clinical audit, mortality outlier reporting, quality risk profiles, training and approval of clinical audit, NICE guidance, local guidance, trust committees and new clinical procedures.

'Audit officers should be out there doing audit and supporting it, rather than doing

other things.'

'Clinical audit teams have had to take on bigger roles, clinical audit is seen as an add-on rather than core business.'

'Audit departments are becoming de-centralised and divisional due to cost savings. There is no longer oversight and sharing of learning across audits because of this.'

'The audit department has lost its direction. It's in the business of telling people what to do. It's become more reactive looking after so many audits and there is much less capacity to support clinicians.'

2. Buy-in from Boards and Medical Directors

The importance of engagement by the Medical Director was described by many participants, particularly clinical audit teams, as vital. Medical Directors were frequently cited as playing an important role in getting national audit to be used for improvement. In particular Medical Directors in several organisations were responsible for following up clinicians who were not engaging with action planning following the release of findings from the national audits. This was seen as an effective way of improving engagement.

'Our medical director is very engaged with national clinical audit. This helps with the process of engaging the clinical leads.'

Where the Medical Director worked closely in trusts with the clinical effectiveness department, with a clear responsibility and interest in clinical audit, this appeared to be a facilitator. However variations were highlighted by front-line staff and also by suppliers of audit. The importance of engaging non-executive directors was also highlighted.

'Boards are key, especially the NEDs. They can be key allies for audit and improvement.'

Related to this was the variation in processes for using national clinical audit, with some trusts making this a formalised process with mechanisms for feedback, action planning and accountability built into the organisation's governance structures.

Other trusts reported much less formalised or extensive processes. In part this related to the resourcing of the clinical effectiveness teams who seemed to support this process, and in part related to engagement from key people such as the chief Medical Director and whether they saw this as a priority.

'How trusts use their resources is down to the Board; if the Board is less interested in national clinical audit, there will be less of an organisational focus on it.'

'Ensuring quality is well managed is something that needs to be done at Board level by somebody with the right skills around technical measurement, and understanding of changes and complexities of an organisation, who is up to date with national policy and who understands commissioning and contract discussions.'

'How deep are the audit reports going into the organisation, and understanding which bits are being used is important. If one paragraph from the exec summary is being pasted into an email to the chief executive this doesn't suggest much engagement.'

3. Culture and organisations

Examples of supportive internal cultures within organisations were cited as important for driving change and improvement. One trust funded a big launch event that was attended by the Chief Executive and patients. Here patient stories were used to motivate staff to change practice, and over a period of three years the quality of care improved significantly which was prompted by poor performance in national clinical audit.

'Making change happen is hard, need to have the right skill mix and an organisational approach.'

Structural changes, system changes and changes in workforce and models of provision were all mentioned to some extent as having an impact.

'Mergers and demergers have made people unsure of their roles and responsibilities. It leads to confusion and things fall through the gaps.'

'No-one wants to work in an organisation where your capability is constrained. You need to have capacity freed up to be able to do this stuff properly. Unfortunately now is not a good time for this. CCGs could be productive in changing the culture.'

'Knowledge, belief and culture, accepting things could be better and then doing something about it is most important. It's hard to get this in some places.'

'There is often enthusiasm but no support from higher up in the organisation.'

3. Leadership

Participants rarely mentioned leadership directly. One consultant described how he led his trust from one of the most poorly performing trusts to one of the best performing. Through his leadership he engaged a steering group of stakeholders who were seen as opinion leaders, and involved patients at an early stage. Non-front-line staff seemed to highlight the need for leadership more than front-line staff did.

'You need a strong clinical lead who is motivated and interested with a good supply of enthusiasm.'

Guidance and tools

Key findings:

Participants at all levels, from suppliers to front-line staff, requested guidance in particular topic areas. Clinical audit staff praised HQIP's tools and guidance, while clinicians were less engaged. Tools from professional bodies and Royal Colleges were also highlighted. As in other areas, a balance between giving more direction in some areas and being too prescriptive needs to be achieved. There was an obvious lack of discussion about tools or guidance more generally related to quality improvement or change.

1.From HQIP

Feedback from clinical audit teams was that they found HQIP online documents to be very

helpful to their work, but there is very low awareness among clinicians regarding the breadth and depth of resources available from HQIP. Audit teams found the website useful. Several clinical audit staff mentioned HQIP guidance documents as being useful, for example on how to organise, recommend and implement measures for local change using national clinical audit. However, many clinicians and suppliers were unfamiliar with guidance or resources produced by HQIP and found the website hard to navigate, which may impact on engagement levels among these cohorts.

'I think what HQIP does is very good. They provide a useful calendar and database of all audit reports. The tool is really useful and helps to link to all the reports, which is a great help for preparing the quality accounts.'

One supplier mentioned that it would be useful to have guidance on reporting to the public. Another mentioned the summary guidance on the use of plain language that HQIP provided as being useful.

Requests for guidance for key roles that relate to driving improvement through audit included those for clinical leads as well as for non-executive directives who were cited as 'allies'.

'There needs to be more guidance about the role of the clinical audit lead. They are the key drivers in organisations.'

Although guidance was seen as useful many participants, clinicians and suppliers highlighted the need to balance this with not being too prescriptive and developing opportunities for people to learn for themselves.

2. Professional bodies and suppliers

Suppliers described new apps that were being developed to support the use of national clinical audit data for decision-making. The benefits of using such apps included timeliness, as it enabled accessing the data more frequently than waiting for a static report to be produced and disseminated, and also provided the ability to customise the data.

'Where is the information when you need it? How do you find it, how do you use it? The answers are not there in front of you. You need to make the information more easily available.'

'There are so many examples of using information technology. We should be looking at different platforms and sharing across audits to make things more uniform.'

One participant highlighted the need for Royal Colleges and professional bodies to develop communications packages, and tools and examples of good practice were cited in this respect.

'The Royal College of Psychiatrists runs a suite of projects with a tight focus; they provide supporting materials, resources and host workshops which people have said are really useful.'

'A slide pack where they tell you which data and which page of the report to drop the data in has been helpful.'

'Being able to log on and look at examples of business cases or templates has been very helpful to me.'

'We have a big section on resources that provides literature searches, business cases and we update this monthly. Many doctors and nurses talk about how useful this is.'

In addition one participant requested more directive guidance on who should lead audits:

'The NELA requires input from anaesthetics and surgery but there is no agreement on who should lead on it.'

No participants mentioned any examples or requests for tools or guidance more generally related to quality improvement or change, which seemed somewhat surprising.

Time

Key findings:

Resources, specifically time or lack of it, were cited as a significant barrier to using national clinical audit for improvement by clinicians and clinical audit teams. Several distinct themes emerged, including perceived duplication and onerous data collection. Repetition and a lack of joined-up approaches to types of data requested were also highlighted as wider issues than just regarding national clinical audit. 'Workaround' processes to ensure timely data capture were described, such as setting up local alternative and duplicative databases.

1. Duplication

Many participants cited examples of having to develop a system for local data collection to ensure they can review their data in a timely way, because the outputs of audits were not timely enough in some cases and data extractions weren't fed back to organisations. This resulted in significant duplication in data collection processes with an automated mirror of the uploaded data being kept by local trusts. This example was dependant on local skills and processes that had developed.

'We use internal spreadsheets and databases so we can keep on top of the data and have created a shared drive so all the consultants can access the data.'

'We have a specific database written that automatically takes data from the uploads.'

NICE assessments were perceived as duplication in workload, as NICE requests some similar information for baseline assessment against NICE standards.

Other requests for information were also seen as a duplication of workload and several participants requested a more 'joined up' approach, discussing how national clinical audits could also be used to help with data collection for other purposes.

'We are expected to provide so much similar data in different places. When audit data can be used for multiple purposes it's much more helpful.'

One supplier discussed how suppliers should work together more to create synergies to ease workload.

'Clinicians don't like being asked for a lot of work at the same point in time. We need to be more joined up.'

2. Prioritisation

Several participants talked about 'trade-offs' in activities, and how participation in national audit impacted on other areas such as local clinical audit or clinical work.

'Some providers can't do local audit or improvement projects as they don't have the resources to. This reflects resources and time in trusts.'

'Resistant to form filling when it impacts on clinical workload.'

Several participants commented on prioritisation and engagement with national clinical audit and the importance of taking ownership in this respect.

'People have to own it or it seems a burden and they'd rather focus on something else.'

3. Data collection

Although data collection was not a main focus for this project it was discussed by a large number of the participants and cited as a barrier to engagement with audit.

'Too much information is requested, the data doesn't come from one set of case notes, someone else may have taken over the care.'

'180 fields of information are requested for each patient and some of the fields are massive.'

One participant involved in the supply of national clinical audit described how time-consuming data collection can be for organisations.

'We ask for too much data and spend too much time feeding the beast, which limits ability to reflect on the meaning of the data.'

'There is huge variation in the data entry requirements, the amount of data and the timing of submission. All these complexities can detract from getting on with the improvement.'

Theme three: Engagement and communication

The following section describes the key findings for the categories that constitute the 'engagement and communication' theme, including elements for reporting, assurance, dialogue, and involvement.

Communication and reporting

Key findings:

Relationships between clinical leads and teams, clinical leads and audit staff, and with medical directors were seen as important and valued. Feedback was cited as an important mechanism for driving improvement, in the context of communicating audit results to clinical leads, findings to clinical teams and good news stories for positive media reporting. Different suppliers had differing engagement and dissemination strategies. Many participants cited additional contact and support from suppliers, over and above the reporting of data, as useful and important.

1. Between clinical audit leads and clinical teams

Many participants highlighted the importance of feedback between clinical leads and the clinical teams for driving improvement.

'The key thing is feedback, very frequently. Any change we made, such as providing patients with an extra meal, we provided feedback on so people knew what a difference they were making.'

'It's all about feedback. We are using the data regularly to engage people.'

2. Between clinical audit leads and local audit teams

Relationships between clinical audit teams and local clinicians was more variable, and in part seemed to depend on the staffing resources allocated to the audit team, the model of working and governance processes within the organisation.

'Because national audits sit within clinical teams any broader learning tends not to get shared across the organisation.'

Many local audit team managers described how data is often uploaded by clinicians in isolation without the rest of the organisation being involved or aware of what has been inputted. Therefore when findings are subsequently disseminated, people are sometimes surprised as their basis or origin is unclear.

Some audit teams called for improved communication and formalised processes for reviewing the data within trusts. In contrast, many clinical audit teams were positive about the relationships they have with clinicians through the clinical leads. In many cases the Medical Directors were identified as the most important facilitators and as someone to approach when 'clinicians aren't playing ball'.

National Clinical Audit Awareness Week was also mentioned by one participant, who had set up engagement events at their local trust that had been successful and well attended by some of the clinicians in that trust.

3. Between suppliers and trusts

Some audits and suppliers were cited as better than others at engaging with trusts. The trusts that have to subscribe to be part of the audits sometimes received better levels of communication.

Some suppliers claimed that keeping up to date with the appropriate contacts within organisations was an issue. One participant recommended that suppliers should link up with the commissioning organisations or commissioning support units who are required to maintain up-to-date contacts. Suppliers would then need to engage with fewer organisations to maintain or refresh their contact lists.

One supplier has an open access help desk that provides support to end users of the audits including local clinical teams and clinicians. This was praised for being useful.

Some clinical audit teams reported difficulty tracking down audit outputs that had been sent out by suppliers.

'Sometimes the reports don't get sent to the current leads, they may get sent to people who have gone off to do something else. We need a set channel to get feedback.'

'Each audit provider keeps a record when they ask trusts to participate. They should request contact details for at least two people, that way it is more likely that the information will get through.'

Many participants said that additional contact and support from suppliers are useful and important, over and above the reporting of data.

'Just sending out information is not a very effective way of getting people to engage with it.'

'We are all striving for the same thing; building relationships between users and suppliers is so important. Clinical credibility with the users is very important.'

The level of contact between suppliers and front-line staff varied. Suppliers described factors that helped engagement with trusts staff, in particular with clinicians. One audit supplier highlighted a regular newsletter that is sent out, but stated that levels of engagement with this varied.

Other factors were also discussed as below:

'They tend to open up a bit more freely when they think that you get it. How can someone who has never witnessed care first hand understand the complexities of care, the multi-disciplinary nature and the challenges that clinicians face?'

'We need to be understanding of clinical and professional challenges, otherwise it's just a theoretical discussion.'

'We need to be more strategic about feeding back to clinical teams, to understand what they really want.'

4. External reporting

Some participants highlighted communications strategies for reporting findings of national audit results as an area that HQIP could improve.

People welcomed more extensive mechanisms to communicate findings through the media.

However, this was only discussed in light of positive performance.

'Last year we did well but there was no pick-up on the results in the press. HQIP could work harder with the press when reports go out.'

Assurance and governance

Key findings:

The way in which organisations structure their governance processes either facilitates or impedes engagement with audits. Many people highlighted inconsistencies and variability regarding processes, reporting and subsequent actions taken. Factors such as the hierarchical make-up of the internal organisation, its capacity and infrastructure feature predominantly in discussions.

1. Reporting to the board and internal processes

Responsibilities and internal processes for uploading data, receiving reports, local analysis and action planning and reporting varied hugely between organisations. Whether this was escalated up to Board level also varied.

Where there was capacity clinical audit teams supported lead clinicians with local interpretation, action planning and reporting to committees but this was not the case in all organisations. Some trusts ensured that this formed part of standardised process for using national clinical audits for improvement, embedding this process in their clinical effectiveness governance processes. In these cases clinical effectiveness staff summarised data and agreed actions plans, with clinicians regularly reporting on progress. For other organisations, consultants were responsible for exporting national audit data and producing summaries and action plans.

Local assessments of results and recommendations were reported back to the Board in various ways, many through a clinical governance committee that monitored actions and escalated where needed. However some organisations had less formal approaches and national clinical audit was not given as much prominence, or was used for quality accounts but little more.

'It's quite a controlled, managed through process.'

'It goes quite far up the train. Our trust is spot on. They want to know everything. It has an impact on our rating so of course they are interested.'

'Our responsibility is to deliver the best care. The trust also don't want to lose cases to another trust.'

Examples of reporting included the use of locally-developed templates in which results and recommendations are inserted.

'We ask the lead clinicians to assess their compliance to the recommendations and what actions they are going to take.'

'Comparing your trust against national standards and individual data compared to appropriate benchmarks. That's what Boards tend to want.'

A head of clinical audit across several hospitals talked about their process, describing how a clinical lead is designated for each of the national clinical audits, who is required to develop an

action plan which is reported to the clinical governance and quality committee, chaired by a Non-Executive Director. The findings and action plan go into an Annual Audit report of benchmarking, which feeds into the quality accounts.

'Boards should ensure that there are meetings with a set agenda for looking at the results of national audit.'

'The Boards need a one-page summary with visual display. It needs to be aimed at both managers and clinicians.'

'Audit and quality improvement should be accountable to the Board and the Medical Director.'

'Some boards are using the reports for assurance rather than encouraging improvement. It is often seen as a line or paragraph in another report, with 3rd, 4th or 5th level reporting to Boards. The message and importance can get lost. Things should start off at the top with a robust action plan monitored. We've seen recent reports of how important these things are, the Boards should be taking it seriously.'

'There is some really good practice and lots of variation in practice. In some organisations national clinical audits don't make their way to the Boards.'

'Variation and inconsistency can be dangerous.'

'There needs to be clear processes for escalation of issues and this need to go up to Board level.'

Dialogue

Key findings:

There were mixed responses, although views were similar within participant groups. Broadly speaking, clinical audit teams were largely happy with the engagement with HQIP, whereas suppliers felt more could be done by HQIP to bring them together, and clinical leads were much less engaged. Commissioners were cited as key stakeholders who should in future be the subject of focus.

1. Between HQIP and local audit teams

Several clinical audit staff praised HQIP for its communication, guidance, tools, support with events and helping to raise the profile of clinical audit.

'We are not just left to get on with it. Support from HQIP has been great.'

'We have had support from Mandy [HQIP QID Team] from HQIP to run events.'

'HQIP has really helped to reinvigorate audit and has improved the process. It is now seen as a priority for organisations.'

One clinical audit manager described how the HQIP recognition awards had motivated their trust.

'HQIP recognition awards are really good. They recognise good clinical audit and where improvement has been made.'

2. Between HQIP and clinical leads

One participant spoke positively about the importance of engagement with clinical leads.

'These people are the key to driving improvement and it's important that they are engaged.'

Despite front-line clinicians being seen as important for driving improvement, their communication and engagement with HQIP was criticised. It was suggested that HQIP could do more with clinicians or medical directors to implement change or quality improvement based on the findings of national audits, by sending invitations to conferences or other communications. The challenge of knowing who to contact was also highlighted.

'There's so much change in the system, it can be hard to keep up with. Job titles and people change all the time. When things are sent to the chief executive we know they often don't get cascaded. We need ways to improve communication.'

'More use needs to be made of electronic or modern media to communicate.'

3. Between HQIP and suppliers

Many participants described how HQIP could do more to bring suppliers together to form a community, sharing best practice across audits and learning from each other, as many are grappling with similar issues. For example, some suppliers questioned how to demonstrate evidence of improvement and measuring impact and said this would be something they could usefully learn from other suppliers.

'National audits need to join up more. We need to work together. Care is delivered in pathways to patients with multiple problems, we don't want silos playing out here.'

'HQIP should be doing more to tie national audits into each other.'

Suppliers can also be useful in providing up-to-date contact details for those involved in national clinical audit locally. This would be useful for HQIP when trying to engage with trusts. One suggestion for keeping databases current is by sharing lists.

'Lack of communication to the right people in the right way. Often the right people are not known. If the suppliers have up-to-date information about the clinical leads this may not be shared.'

4. Between HQIP and other stakeholders

Although several participants mentioned commissioners, they discussed them less than anticipated. Those who did called for greater engagement with commissioners in national clinical audit.

'If I was running HQIP I'd involve commissioners and the CQC more.'

'Quality leads of CCGs should be being engaged more.'

'CCGs are tasked with improving care, they need to play a role in this stuff.'

'Need to join up the system more so commissioners are more involved, understand what these audits mean and take things to task.'

Involvement

Key findings:

Participants called for greater involvement of clinicians, those with expertise in quality improvement and the inclusion of input from patients in designing and reporting national clinical audits.

1. Design and reporting

Overall participants felt that audits should be designed with more involvement from those who provide the service, those who are able to deliver change, and users of the service.

Several participants suggested giving clinicians a more formalised role with suppliers of national audit to advise on what is meaningful to be measured. Currently they are consulted variably by audits and the process relies heavily on 'goodwill' and people doing things in their own time.

Another supplier of audit described how they had set up and run user groups to deal with queries about reporting, and how the end users had been involved in the design of outputs from the outset.

Although no participants mentioned a formal role for patients, they did talk about involving patients in the design. One supplier commented on the need to co-design newly developing national clinical audits with patients to ensure that they measure what really matters to service users.

'There is a mismatch between "useful" standards and what NICE is stating should be done. Sometimes you have to balance what is pragmatic in clinical care with what is best practice standards. Clinicians should be more involved in what is being measured.'

'The way you set things up, use the data, windows into the data, should all be centred around the patient, reframing and directing the system around the patient.'

Several audits mentioned their user groups, and others talked about the importance of developing relationships with data inputters and audit end users to understand more about their needs.

'National audits aren't always geared around being friendly to those who whose them.'

People discussed involvement at different stages, with some audits involving users at the outset to shape the design, and others consulting with them once the design and reporting was underway to make changes.

The stroke audit described a user group that involved users who had had a stroke and engaged with communication specialists to design the outputs.

A national clinical audit supplier mentioned the benefit of involving patients in such events, highlighting the importance of patient stories when looking at the data. Another supplier talked about the value of having a public health doctor involved in their audit steering group, bringing both clinical and analytical skills into the mix.

Discussion

Although some of the findings are unlikely to be surprising, this report aims to bring together the evidence from existing literature and qualitative findings in a consolidated and systematic way that should be useful to HQIP and others responsible for delivering or using national clinical audit.

Three broad issues stand out from the analysis. First, those responsible for delivering audit activities need to overcome some very practical barriers, like improving the technical capabilities of staff to make use of data, and creating time and space for them to contribute to the interpretation and use of information. Second, better communication is required so that everyone who works in health care understands how audit data can and should be used to improve the quality of their work and the quality of care that patients receive. And third, it is important to strategically align audit to other facilitators of improvement, such as education and training programmes, payment mechanisms and regulatory activities.

Certain areas of the findings are more detailed than others, reflecting the diversity of opinions and the emphasis placed on particular categories. The findings provide a mixture of information on barriers and facilitators as well as highlighting examples of practice by clinicians, clinical audit teams and suppliers from which others can learn.

There were mixed responses in many areas, both between and within participant groups. Variation was seen at all levels and in particular between:

- Perspectives and views of participants on what constitutes barriers and facilitators
- The level of engagement with national clinical audit
- The mechanisms by which it drives improvement
- The processes and practices of individuals and provider organisations
- Audits in terms of focus, timeliness, content and presentation of outputs and support provided

This suggests a variety of approaches are needed when considering how to address some of these factors. Key insights from these findings include the following:

- There seem to be fundamental differences in the way national clinical audits are viewed: as a tool to measure quality or to identify improvement, to monitor change (where data is presented in a way that enables this), or an intervention in itself to change quality. Others had limited awareness of the existence of national clinical audit or the relevance to their practice
- There were a range of views regarding analysis, interpretation, presentation and skills. There was variation in views about ownership vs. how much input suppliers should have – from producing reports customised for trusts to trusts taking responsibility themselves. Some felt without ownership improvement wouldn't be made. Others felt that without supplier assistance they couldn't make improvements. Some discussion also took place about whether users of audit data feel they can disclose a lack of understanding or their ability with interpretation of data. Both these areas could be explored further
- Interpretation of findings, what to prioritise and how to go about change from what is known or happening in practice should be highlighted more, particularly as data overload was frequently cited as a barrier. Summary reports in a common format highlighting the

national picture, the local picture, recommendations, organisations that may be helpful and examples of practice would be welcomed by many

- In addition to providing numerical data on clinical outcomes and effectiveness, the data could be made more engaging and contextualised, providing a broader picture of quality, if patient experience data were more widely included
 - Organisations have developed their own processes, practices, governance and assurance arrangements around national clinical audits. While local flexibility is encouraged, more sharing, standardisation or coordination across organisations and between specialities within organisations, sharing developed templates for action planning and reporting of findings could be encouraged and supported more by suppliers and HQIP
- Although face-to-face events were cited as useful, there was more variation in awareness and use of printed resources and guidance. Some were found to be helpful by participants, but in other cases this provision was limited or not accessed
- Clinical audit staff are in a good position to make comparisons across audits, to support clinicians to use national clinical audit for improvement and to share best practice across specialities where they are resourced to do so
 - Although improvement should be seen as core business, people implementing improvement are often not equipped with the skills, time or resources to be effective. There is also a reliance on good will, for example clinical leads often do things in their own time for suppliers. There may be a need to formalise roles and also to make investment in additional skills (such as analysis) at supplier and local levels in order to get national clinical audits used more extensively for improvement
 - Learning at different levels is key: between specialities, between provider organisations, between suppliers, and learning from good practice in other areas of HQIP work.
- Confidential enquiries were cited as a good example

Several common themes also emerged. There was a call for greater **clarity** in the areas of content and presentation of national clinical audits. Specifically, it was suggested that the objectives and rationale for specific items of data collection should be more explicitly linked to standards and improvement; as should methodology and analysis and interpretation of the data, signposting and summaries to provide clearer results.

Consistency and commonality were highlighted. More consistency is needed in approaches to data collection methods, accessibility of data across audits and using audits identified as exemplars. Similarly, more consistency is needed in presentational format: balancing this with flexibility to suit individual needs and abilities was identified as a way to enhance the current offering.

Communication and collaboration were also highlighted. HQIP has opportunity to facilitate greater collaboration between suppliers to make national clinical audits seem less 'disjointed', as well as to improve effectiveness and communication by connecting with clinical leads, clinicians, commissioners (who play a strategic role regarding quality in these organisations) and the media (who can influence public perceptions).

but there were some consistent findings that provide a useful starting point. For example, consistently highlighted facilitators were resources and events. Other relevant findings are summarised at the beginning of each section.

What the literature adds

The report has highlighted a number of barriers and facilitators that participants explicitly discussed or implied. Often there were consistent views, but frequently there were mixed responses. This variation in responses highlighted the difference between perceptions, with some participants citing factors as barriers while others did not consider them barriers or did not feel they were relevant. This prompts consideration as to whether barriers are consciously or unconsciously 'constructed' by participants to make sense of the realities of their situations, and whether removing or addressing these 'barriers' would have a positive impact.²⁴ If all the identified 'facilitators' were in place, would this lead to increased use of national clinical audit data for quality improvement? Which of these factors are most important?

National clinical audits could be considered as complex interventions in themselves, made up of technical elements (data, outputs, etc.) and social elements (relationships, engagement events, etc.). It may be useful to learn from related disciplines – such as organisational development – when considering how to implement 'interventions' to lead to change in practice such as increasing uptake of national clinical audit for improvement. Using theories that relate to systems and organisations and their interactions and influence on individuals may be helpful.

In contrast to the mechanical paradigm of barriers and facilitators, another mode of interpretation is that of complex adaptive systems; this challenges the simplistic assumptions of 'cause and effect' and prompts less linear thinking, and instead encourages interactions and relationships of different components to be viewed as simultaneously affected and shaped by the system. In focusing on dynamic relationships rather than simple cause, a more complete picture of the forces affecting change may emerge.²⁵ Although beyond the scope of this project, it may be useful to do this in subsequent work concerned with change.

During the research process (interviews and analysis) it appeared that participants were referring to factors that could be grouped into different stages along a pathway or continuum. Some felt that barriers to engagement started at the most fundamental level, and could be overcome by stimulating engagement with content by making it relevant, and by relating it to recognisable standards and improvements. Where this 'need' was met, either through the audit itself or by the user's perceptions, the focus shifted toward more technical elements of analysis, presentation and interpretation of the data.

Once there was understanding of the need for change and identification of what should be improved, achieved by showing information that had either been interpreted in a usable way, or been reviewed by those with the skills to analyse, interpret and communicate the information themselves, attention shifted from 'what?' to 'how?', based on prioritising, action planning and learning from others, before moving to the final stage of improvement implementation. At each of these 'stages', distinct barriers and facilitators were identified. This may in part reflect the evolution that national clinical audit undergoes, with some audits grappling with content while the more established audits have moved past the technical issues of content, analysis and presentation, and are better able to focus on aspects of implementing change, supporting learning and developing networks, in a similar way to communities of practice that people use to support, learn, share and challenge in order to actually carry out improvement.

These findings relate more broadly to the fundamental issues affecting mind-set and behaviour of clinicians and their appetite for changing practice, as well as to issues that impact on the success of organisational change. Fields such as sociology and psychology as well as organisational development may also contribute to learning here. The Behaviour Change Wheel is a helpful model with which to map some of these issues.²⁶ The Behaviour Change Wheel starts by considering why and how people change their behaviour, and provides an understanding of factors at the level of the individual, communities, and population level.

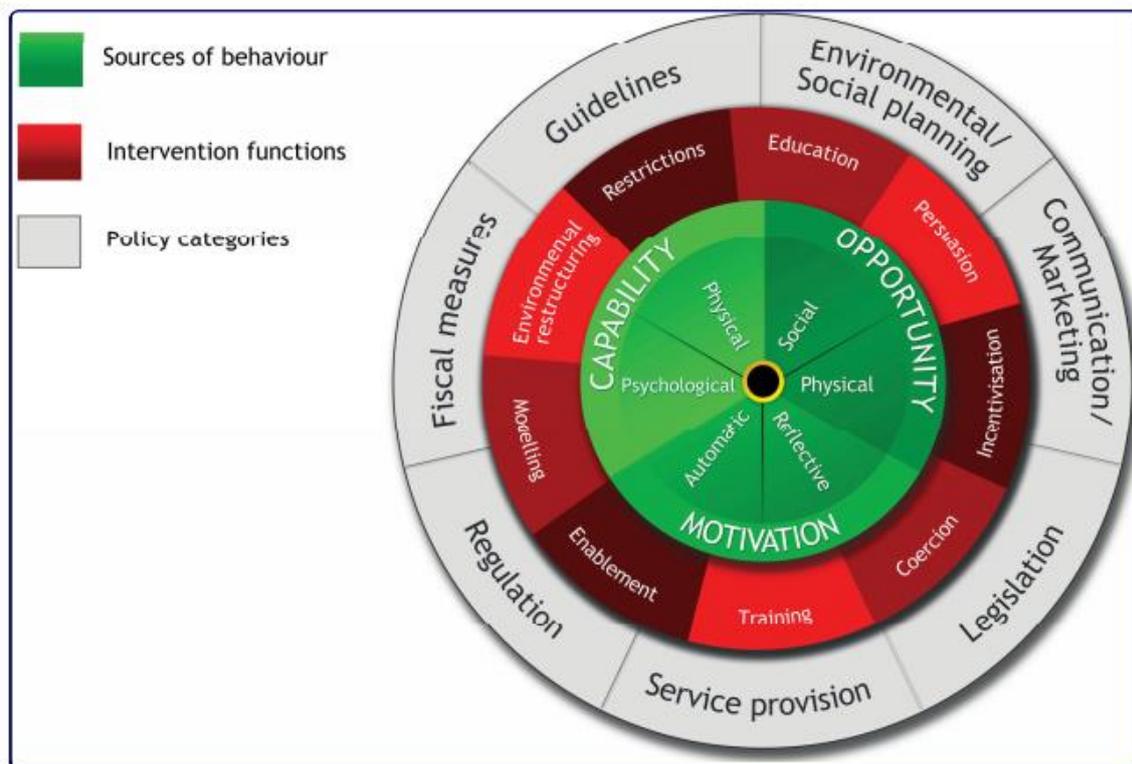


Figure 1. The Behaviour Change Wheel (Michie, 2011)

The sources of behaviour are characterised by:

- Motivation (habits, thoughts and goals)
- Opportunity (social and physical aspects that make behaviour possible or prompt it)
- Capability (knowledge, skills and tools) – with each one influencing the other

This model purports that if you want to change behaviour, you need to consider both what behaviour is desired and the context. This will show you what components of behaviour need to be changed, for example removing a barrier such as incapability, or restricting opportunity. The model can be applied to the findings in this report, for example in terms of the relevance of audits to their practice and to improvement, the reasons that people participate in audit can be seen as motivators. Networking, events and learning from peers can also be seen as opportunities. Skills and knowledge of interpretation, analysis, presentation, change management and communication can all be related to capability. The model also identifies nine intervention functions and many of the factors discussed can be mapped to these:

- Education – increasing knowledge or understanding, e.g. workshops

- Incentivisation – creating the expectation of reward, e.g. financial, recognitional or reputational gain
- Modelling – providing examples for people to aspire to, e.g. showcasing examples of best practice
- Restriction – using rules to increase target behaviour or reduce competitive behaviour, e.g. mandatory reporting of audits in quality accounts, internal governance processes to ensure engagement.

Others include persuasion, environmental restricting, and enablement.

Furthermore, seven different types of policy are identified, including:

- Communication/marketing – using print, electronic, telephonic or broadcast media
- Guidelines – creating documents that recommend or mandate practice. This includes all changes to service provision.
- Fiscal – using the tax system to reduce or increase the financial cost
- Regulation – establishing rules or principles of behaviour or practice
- Legislation – making or changing laws
- Environmental/social planning – designing or controlling the physical or social environment
- Service provision – delivering a service.

Some of these interventions are ‘softer’ than others. This model highlights the complexity of factors at play, operating on different levels. Although the model has not been applied extensively during the analysis phase, it offers a useful way of reflecting on some of the findings presented and the approaches that might be considered in order to try and change behaviour.

This work should be viewed in the context of other work HQIP is doing, in particular the self-assessment framework for national clinical audits.

Limitations

There are several limitations with this work, some of which are methodological. It was not possible to run all the interviews in the same format given the time constraints of participants, therefore a practical approach was taken when using the topic guide, and not all topics were discussed with all participants.

Thirty participants were involved in total. An additional seven clinicians were approached but did not take part in the interviews. Therefore clinicians do not make up the largest group of respondents. There are small numbers in the sub-groups of participants and findings were not formally stratified by respondent type in the analysis. However where findings differed between participant groups this was highlighted in many instances.

As one person conducted the research and analysis, the process may be subject to more bias than if several people had independently analysed the data and collectively discussed the findings. On the other hand, there is merit in this approach for qualitative research. The advantage of one person gaining consistent and in-depth knowledge of the key issues is that it allows for deeper mining and drilling down over time. As with all qualitative research the professional background of the author (in this case a clinician) may also have impacted on the topic areas discussed and the findings.

As participants were selected partly from HQIP contacts, those known in the field and snowballed contacts from these initial participants, the sample is unlikely to be representative and may be biased towards the views of those who are already engaged with using national audit data for improvement. Therefore some of the perspectives examined may differ to those of people less engaged. Yet despite the fact that this sample of participants are assumed to be more engaged, this study reveals that they too experience barriers for engagement with national clinical audits. Work needs to be done to understand more about the barriers faced in improving engagement and making national clinical audit more compelling.

The approach undertaken was qualitative. In order to gather more representative views on some of the topics discussed, HQIP may wish to consider using a different sampling technique to gain a more inclusive sample and to increase the number of participants. If there is a need for quantification of some of the issues, then a quantitative survey may be a useful methodology to capture the views of a larger number of people, to gain further information in areas of interest.

There are opportunities for further work to evaluate: whether organisations with dedicated audit teams engage and therefore perform better than those without specialist resources; which audits lead to change or improvement in quality of service; and what specific factors may be most effective in facilitating national clinical audits to be used for improvement.

Recommendations

The following recommendations suggest ways that clinical audits could be presented and promoted better in order to encourage their use to support quality improvement activity in health services.

The recommendations have been divided by audience.

Commissioners of national clinical audit

These recommendations are aimed at HQIP and NHS England:

- Commissioners should consider developing an overarching strategy that places national clinical audits in the context of a strategic vision for quality improvement
- When commissioning new national clinical audits and reviewing contracts, consider a balance of data on clinical effectiveness, patient experience and safety
- Workshops or events at HQIP annual conferences would help target audit suppliers and clinicians to share best practice
- Stimulate engagement through a communications strategy that focuses on creating broader awareness of HQIP's remit and reach and the role of national clinical audit for quality improvement
- Further work could be done to evaluate the effectiveness of specific mechanisms and drivers (financial incentives, using data for appraisals and clinical excellence awards, workshops) for using national audit for improvement

Suppliers of national clinical audit

These recommendations are aimed at suppliers of national clinical audit:

- Include clear objectives about quality improvement and make these explicit when reporting
- Consider a more compelling rationale for data collection, highlighting its purpose and how to use the data for local improvement or in systems. Link to evidence-based standards and differentiate data for non-evidence-based targets from descriptive data for contextual information
- Consider ways to provide real-time feedback to support continuous improvement as well as providing datasets that can be manipulated for local analysis
- Support data outputs with opportunities for local clinicians to discuss findings, share best practice, and compare performance and planning for improvement. For example, workshops or events at annual conferences
- Consider formalising the user involvement of clinicians and patients in design and reporting

Both commissioners and suppliers of national clinical audit

These recommendations are aimed at commissioners and suppliers of national clinical audit:

- Consider a dual approach to interpreting data, mainly to:
 - Ensure data is analysed and presented in meaningful way, with adjustment
 - Support the user population to gain skill sets to interpret the data, identify what needs to be done and implement change. (The shortage of key skills in data analysis available to trust boards and management teams was also highlighted in the Keogh Review)
- Explore how to streamline data collection methods and combine processes and systems with consideration to broader informatics work and the context in which national clinical audits sit
- Consider a range of methods to support the work, including events, networks, and the appropriate allocation of resources. (The benefits of collaborative learning through quality improvement networks were highlighted in the Berwick Review)

- Strengthen communications strategies for HQIP and national clinical audit providers in order to improve engagement, stimulation and recognition of good practice. Consider collaboration on the development of a communications and engagement strategy with input from clinical, quality improvement and local audit leads. It should focus on:
 - Dialogue with clinical leads, commissioners and medical directors as well as media
 - The role of national clinical audits and using data for local improvement
 - Celebrating improvements and providing support to manage local and national media

Provider organisations

These recommendations are aimed at provider organisations and Trust Boards:

- Support clinical audit teams and clinicians to undertake national clinical audit work with a greater focus on ensuring adequate skills and resources, particularly time, are available
- Support clinicians and audit staff to develop skills in collection, interpretation and presentation of data, as well as quality improvement, change management, and clinical leadership
- Ensure appropriate processes are in place to use national clinical audit proactively in improvement as well as reactively. Compare processes of using national clinical audits to trusts known to be performing well
- Encourage trusts to share best management practice and integrate it within their quality agenda

Front-line staff

These recommendations are aimed at clinicians and audit teams:

- Clinicians should have greater ownership of and engagement with national clinical audits. These may be fostered by increasing understanding of local and national approaches to improving quality and the role of audit in the broader development of knowledge and skills for measurement and improvement of quality from undergraduate training onwards
- Clinicians should explore available resources to support them in using national clinical audit for improvement including publications, events, and meetings. They should use forums to learn from and share good practice with colleagues both within their organisations and across others
- Clinicians, audit staff, and managers need to integrate more to take ownership of and engage with audit. Relationships between the medical director, clinical audit teams, and clinical leads are particularly important

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Glossary and abbreviations

Benchmarking: Setting of targets based upon averages, clinical judgement or a combination.

BPT: Best Practice Tariff Intended to incentivise improvements in the quality of acute hospital care. They are structured and priced to reimburse high quality and cost effective care.

BTS: British Thoracic Society

CCG: Clinical Commissioning Group

Clinical excellence awards: A financial incentive given to individuals to recognise and reward the exceptional contribution of NHS consultants, over and above that normally expected in a post.

Confidential enquiries: Most confidential enquiries are related to investigating deaths, to establish whether anything could have been done to prevent the deaths through better clinical care. There is a national programme for confidential enquiries.

CQC: Care Quality Commission

CQINs: Commissioning for Quality and Innovation

ED: Emergency Department

HQIP: Healthcare Quality Improvement Partnership

SPRINT audit: Audit collaboration between the National Hip Fracture Database and Association of Anaesthetists of Great Britain and Ireland providing baseline anaesthesia information on hip fracture patients.

Incentive: Something that motivates or encourages an action. This can be at an individual, organisation or systems level.

Lotus notes: Software used for entering data.

MINAP: Myocardial Ischaemia National Audit Project

NCAPOP: National Clinical Audit Patient Outcomes Programme

NED: Non-executive Director

NELA: National Emergency Laparotomy Audit

NHFD: National Hip Fracture Database

NICE: National Institute for Health and Care Excellence

PROMs: Patient Reported Outcome Measures

QI: Quality Improvement

QOF: Quality and Outcomes Framework

RAG: Red Amber Green

SMR: Standardised Mortality Ratio

SSNAP: Sentinel Stroke National Audit Programme

WebEx: Online web conferencing combining file and presentation sharing with voice and video.

Appendix: Example questions and prompts

Front-line clinicians (doctors)

Background:

- What is your role?
- What is your professional background?
- How would you define national audit/what does national audit mean to you?
- Which national audits are you involved in?
 - Data collection
 - Using for quality improvement/changing clinical practice.

Specific audit:

- Can you describe the output format?
- Which bits do you use and share?
- Do you do any of your own analysis?

Barriers and facilitators:

- What do you see as the key barriers to clinicians using national audit for quality improvement?

Exemplars:

- Which audits lend themselves well to quality improvement?
- Which audits are being used in your trusts for quality improvement?
- What are the key features that encourage/support/enable this to happen?
 - Validity/reliability
 - Timeliness
 - Presentation format
 - Content
 - Accessibility of the outputs.
- What quality improvement work have you/your team undertaken that has been supported by national audit?

Board level (Medical Directors, Directors of Nursing):

- How does HQIP work with your organisation to support quality improvement?
- How do you access the audit report?
- Which bits do you use – e.g. executive summary?
- Does your organisation produce some secondary analysis – if so, who does it?
- How is using national audit data embedded in your trust?

Audit providers:

- What is your role?

- What impact has audit had on improvement?
- What do you see as the key barriers to engaging clinicians with audit for improvement?
- What are you doing to encourage clinicians to undertake quality improvement activities?
- How to build relationships with NCA suppliers
- How to build relationships between service users and suppliers
- Suggestions or recommendations.

Clinical Audit staff and managers:

Background:

- What is your role?
- Which involvement do you have with national clinical audit

Barriers and facilitators:

- What do you see as the key barriers to clinicians using national audit for quality improvement?

Exemplars:

- Which audits lend themselves well to quality improvement?
- Which audits are being used in your trusts for quality improvement?
- What are the key features that encourage/support/enable this to happen?
- How are national clinical audits being used in your organisation
- What process is there for managing this