Unlocking the potential

Supporting doctors to use national clinical audit to drive improvement

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Foreword – Professor Danny Keenan, medical director, HQIP

This is a very important report from the Royal College of Physicians (RCP). Taken from the perspective of doctors in training, it discusses the role of junior doctors participating in local clinical audit, their engagement with national clinical audit (NCA) and how this translates into improving the quality of care for their patients locally. Although it draws on the experience of junior doctors, its messages are clear for all of us in healthcare and in quality improvement.

There are some very important and challenging messages for the clinical, leadership and educational community, at all levels. In its role in commissioning, managing and developing the National Clinical Audit Programme and Patient Outcomes Programme (NCAPOP), among other national improvement initiatives, the Healthcare Quality Improvement Partnership (HQIP) has a responsibility to take on board the findings of this report.

There is evidently great confusion between the terms 'clinical audit' and 'quality improvement'. This is unhelpful for those who are striving to use the methodologies to make a difference to patient outcomes locally, in terms of understanding how capturing good-quality data contributes to both. Importantly, it is clear that consultants do not have a consistent understanding of the basics of these methodologies. This limits their ability to effectively train the next generation of clinicians. HQIP is therefore pleased that the RCP is starting to address this through the provision of training aimed at consultants and hope that other royal colleges will follow suit.

A significant finding reported here is that nearly all the trainee doctors surveyed had come across the national audit programme (for the most part commissioned and managed by HQIP), in that they had participated in data collection as part of their rotations. They clearly stated that they valued national audit, which is to be celebrated. Critically for service improvement, what seems to be systematically missing is that trainee doctors have limited knowledge of the findings of national audit or how to access the results. This is very disappointing as these doctors are the next generation who will be driving the very changes that the audits have revealed are required to improve patient outcomes in practice.

We note that the junior doctors, when asked, reported that they had not heard of HQIP. While HQIP fulfils its commissioning role by working with providers such as the royal colleges and specialist societies to develop and deliver the NCAPOP, if we wish to be a facilitator in improving patient care, and to ensure that our resources aimed at supporting this are used, we need to address this lack of awareness about HQIP.

There are clear recommendations in this report that target a plethora of organisations and personnel. In essence, it seems that we clearly value NCA but that it often only exists to provide data for assurance. In the current era, clinical audit should also be consistently used to improve the quality of services and care. This relationship needs to be clarified, amplified and acted upon by all the target audiences identified in this report.

At HQIP, we have taken on board the messages in this report where we have a role and the remit and responsibility to take action. We are planning to work collaboratively with others, to take these findings forward.

The world of quality improvement includes many important and influential organisations, providers and trainers. As we all build on this agenda, we need to work together to develop a coherent approach so that the current and subsequent generations of clinicians, including the clinical trainers and supervisors, do not have to negotiate the hurdles identified in this report, and can therefore become effective agents of change to improve patient outcomes. Because, in effect, that is why we are all here.

Foreword – Professor David Oliver, clinical vice president, RCP

The National Health Service (NHS) is fortunate in having a large suite of centrally funded, genuinely national clinical audit programmes covering a variety of clinical areas, which would not be possible in many health systems. Some of the audits have been instrumental in transforming care processes and outcomes at scale (eg the stroke and hip fracture audits). Other audits have highlighted gaps and variation in care, which has helped clinicians and managers to focus on service improvement. We know that evidence-based, clinically credible data do help drive changes in clinical performance.

Doctors in higher specialist training (in the few years before they become a consultant) may be aware of NCAs that are active in their current training placement, as they sometimes get involved in collecting the audit data. In addition, they are under pressure to carry out a local, small-scale audit cycle or improvement project as part of their portfolio of training evidence, even if those audits are of variable quality or their duration is too short to demonstrate sustained improvement. But as data presented in this report show, speciality trainee doctors' understanding of audit programmes and their wider context, relevance and impact is variable, as is their engagement with the process, which can be perfunctory.

Against this backdrop, there is now a growing focus on improvement science in the NHS, as a practical way of driving real-time improvements in clinical services, how clinicians work and a growing range of opportunities for doctors in training to gain experience and skills in quality improvement. I welcome this sea change because the more clinicians who have these competencies, the greater our chance of sustaining and improving services and engaging clinicians in delivering solutions beyond their day-to-day clinical role.

This report describes a key initiative: to join up clinical audit work and improvement work. Across seven English regions and six specialities, a total of 330 participating speciality trainee doctors undertook a structured programme of learning and development based on the Learning to Make a Difference (LTMD) programme. This improved their awareness and understanding of clinical audit and the principles and frameworks of quality improvement. Feedback on this approach was excellent both from the trainees undertaking it and other stakeholders such as trust medical directors, training programme directors, trust quality improvement leads and medical royal colleges. This programme led to a major increase in local quality improvement projects driven by speciality trainees and linked to audit. It provides a template for the future. By rolling out such approaches, we could equip a large number of trainees with some of the skills that they need to be local service leaders, quality champions and change agents of the future.

Executive summary

The work reported here has specifically explored with doctors in training how to bridge the current disconnect between identifying what needs to be improved and the capability to actually improve in practice. We are grateful to HQIP who provided the funding for this work.

Background

For individual health service providers, participating in national clinical audit (NCA) can provide valuable information to support improvements, because by benchmarking resources, processes and outcomes, NCAs can help pinpoint areas in need of improvement. However, using NCA to drive change at a local level can be challenging.

Local clinical audit has been carried out by doctors in training who are asked to complete audits as part of their professional development. However, the requirement to 'do an audit' has, in many cases, been little more than a data collection exercise with no subsequent learning, action or long-term consequences for patient care.

Clinical audit has a dual role, which has led to potential confusion. Its first role is as a quality assurance process and the second is as a quality improvement process. However, by focusing on quality assurance, small adjustments in practice are made to conform to standards rather than taking every opportunity to improve care. The perception of clinical audit therefore needs to shift from an emphasis on data collection to ensuring it is used as a tool for continuous improvement.

The work reported here has specifically explored how to bridge the current disconnect between identifying what we need to improve and the capability to make improvements in practice. Different models of implementation of improvement learning were tested with seven different medical specialties involving a number of higher speciality trainees. It used the outputs of NCA as the catalyst for improvement while the trainees were supported to learn about quality improvement in action.

Aims

The aim of this piece of work has been to:

- increase the engagement of doctors in quality improvement activity through greater accessibility to the outputs of NCA
- use the outputs of NCA as a driver for change and for producing meaningful local improvements
- build doctors' capability in quality improvement
- support the RCP's strategic aims to improve care for patients and develop physicians throughout their careers
- support HQIP in its professional leadership role in the field of quality improvement by providing information about opportunities to implement NCA findings in practice.

Summary of key findings

1   In total, 330 trainees undertook training in quality improvement:

- 5% of trainees knew how and where to access NCA data
- 18% of trainees understood what NCA is
- 59% of trainees recognised the value of NCA to clinicians
- 85% of trainees had previously participated in NCA data collection
- 94% of trainees considered quality improvement projects to be valuable in their specialism
- less than 30% of trainees agreed that clinical audit is an example of quality improvement activity.

2   Five supporting infrastructure models for quality improvement were explored. No single model had clear advantages, but key to success was the premise that the trainees:

- feel that what they learn and do matters
- see that quality improvement activity is of value to them and to their patients
- feel that it aligns with their training requirements
- feel that they are given time and support to do quality improvement work.

Key messages

- NCA can effectively promote national improvement in patient care, but in some cases promoting the use of NCA to drive local quality improvement projects can be challenging.
- To date there has been a missed opportunity for trainees and others to learn about and interact with NCA.
- Trainees are aware that NCA is valuable in healthcare but not what that means for their own practice. Trainees get involved in NCA through data collection but there is then a disconnect. Trainees are not involved in using the collected data nor do they know how to access it.
- Building capability in quality improvement is key to using this data to drive improvement.
- The right educational and organisational supporting infrastructure for trainees, and the teams with which they work, is key to the success of this approach in making the difference.
- Critical ingredients are mentoring, time and headspace to plan and do. If this is not given attention, then any quality improvement initiative is a token effort and is set up to fail with consequent demoralisation of all staff involved.
- Developing quality improvement skills in higher specialty trainees, and their consultant supervisors, is most likely to benefit from combining a regional approach to their quality improvement education and training underpinned by local organisational support involving multidisciplinary teams.

Recommendations

What needs to happen: Key areas for action have been identified for all stakeholders involved in the commissioning, development and implementation of national clinical audit to improve patient care.

- Results of NCAs need to reach all doctors (and other healthcare staff).
- Local outputs from NCAs should be used for patient-focused quality improvement initiatives.
- It should be emphasised that quality improvement should naturally follow on from an audit.
- Staff need to be given dedicated time and support to undertake quality improvement work, based on NCAs.
- Sufficient training and resources need to be put in place to support quality improvement activity.

The specific recommendations listed in Table 1 have also been developed for stakeholders to action at national, regional and local levels.

Table 1 Recommendations for stakeholders

Stakeholder	Recommendation
Valuing NCA	
National organisations	
Including: HQIP, royal colleges, the General Medical Council (GMC), Health Education England (HEE) and equivalent bodies	**Maximise the joined-up and effective use of NCA results to reach not just doctors but all healthcare staff** **Promote the use of NCA for both quality assurance and quality improvement** **Ensure that NCA reports include specific quality improvement guidance** **Promote NCA as a catalyst for quality improvement activity in revalidation and through the Academy of Medical Royal Colleges' (AoMRC) *Quality Improvement: training for better outcomes* for undergraduate and postgraduate training**
Regional organisations	
Including: local education and training boards (LETBs), academic health science networks (AHSNs)	**Drive healthcare quality improvement by promoting NCA through educational frameworks for all healthcare staff**
Local organisations / individuals	
Including: medical directors, trust audit departments, medical education departments, educational supervisors, clinical supervisors, patients	**Ensure that medical staff are supported to use NCA outputs to deliver patient-focused quality improvement initiatives and not just to collect NCA data for organisations' regulatory requirements** **Implement the NCA findings by disseminating them widely within trusts, to drive healthcare quality improvements that connect local clinical audit and medical education departments** **Actively encourage and facilitate patient involvement in NCA quality improvement initiatives at the local trust** **When a relevant NCA audit report is published, ask medical and other healthcare staff: 'What action do we need to take as a result of the NCA findings and recommendations?'**
Trainees	**Recognise the opportunity that NCA presents for improving patient care and using outputs for patient-focused quality improvement activity**
Developing quality improvement capability and capacity	
National organisations	
HQIP	**Ensure that messaging about quality improvement activity encourages organisations to:** • **give staff dedicated time and support to carry out this activity** • **promote the message that NCA should be used for both quality assurance and quality improvement** **Review mechanisms for disseminating NCA reports, to increase circulation to doctors in training**

RCP	**Develop a quality improvement e-learning package for consultants on how to get started in supporting their trainees' quality improvement activity**
	Involve chief registrars in promoting and supporting other trainees' quality improvement activities in their hospital trusts
Joint Royal Colleges of Physicians Training Board (JRCPTB)	**The Annual Review of Competence Progression (ARCP) decision aid for each medical specialty should make clear the roles of quality improvement and clinical audit**
	Undertake curricula review to ensure that quality improvement is incorporated into postgraduate medical training, taking into account the new GMC generic professional capabilities and the AoMRC recommendations
Academy of Medical Royal Colleges (AoMRC)	**Future iterations of the AoMRC's *Quality Improvement: training for better outcomes* should include guidance and examples of what good quality improvement activity looks like in practice and for revalidation purposes**
Regional organisations	
HEE	**There should be dedicated time for education and training in quality improvement methods as part of HEE's (and equivalent bodies') and trusts' education contracts**
Local organisations / individuals	
Hospital trusts	**Ensure that there is adequate support for medical staff to conduct quality improvement by establishing connections with local clinical audit departments and others with improvement expertise, such as The Health Foundation's Q Network**
Educational and clinical supervisors	**Set the expectation that trainees will participate in quality improvement activity and that they will be supported to do this**
	Ensure that trainees have access to quality improvement expertise; for example, by linking them to local:
	• **clinical audit departments** • **Health Foundation Q Network members** • **quality improvement champions within departments**
	Provide feedback to trainees on the impact of their quality improvement activity
	Consider running quality improvement training either locally or in partnership with others, to support doctors in training with their improvement activity (the AoMRC *Quality Improvement: training for better outcomes* offers guidance on this)
	Undertake personal development as required to ensure that they can act as role models for trainees in relation to quality improvement activities
	Be proactive in encouraging the development of quality improvement networks regionally, within trusts and between medical specialties
Trainees	**Identify and engage with local networks and individuals who can provide support for their quality improvement activity**
	Reflect on the feedback provided by educational/clinical supervisors on any quality improvement activity, to enhance their personal development

Background

This report examines how national clinical audit (NCA) can drive change. Through greater accessibility to the outputs of NCA, doctors and the wider multiprofessional team can increasingly be engaged in activities that use these outcomes to drive meaningful local improvements in patient care.

Clinical audit is a quality improvement process that seeks to improve patient care and outcomes through the systematic review of care against explicit criteria and the implementation of change.[1] Aspects of the structure, process and outcome of care are selected and systematically evaluated against explicit criteria. Where indicated, changes are implemented at an individual, team or service level, and further monitoring is used to confirm any improvement in healthcare delivery in line with the HQIP-endorsed *New Principles of Best Practice in Clinical Audit*.[2]

> Clinical audit is a quality improvement process that seeks to improve patient care and outcomes through the systematic review of care against explicit criteria and the implementation of change.[1]

Clinical audit has been undertaken in many healthcare settings throughout the UK since the 1989 white paper entitled *Working for Patients*,[3] and it is carried out at several levels.

National clinical audit

The Healthcare Quality Improvement Partnership (HQIP) aims to improve health outcomes by enabling those who commission, deliver and receive healthcare to measure and improve healthcare services.[4] HQIP commissions, manages and develops the National Clinical Audit Programme and Patient Outcomes Programme (NCAPOP) on behalf of NHS England (NHSE), the Welsh government and (in some cases) other devolved authorities. The NCAPOP comprises more than 40 national improvement projects (national audits and clinical outcome review programmes) that relate to NHSE's priorities. It includes some of the most commonly occurring conditions and services. An additional 40 national audits are conducted by a variety of bodies that comprise the full quality accounts list.[5]

National programmes of clinical audit have been high-profile and generally well-received, such as the National Bowel Cancer Audit[6] and the Sentinel Stroke National Audit Programme.[7] For individual health service providers, participating in national clinical audit (NCA) can provide valuable information to support improvement by benchmarking resources, processes and outcomes that can help pinpoint areas in need of improvement. However, penetration of some audit data has been limited, and therefore opportunities to improve have been lost. Furthermore, not all clinicians have the knowledge, skills and understanding to undertake the changes that are required to initiate service improvements.

Local clinical audit

At an organisation level, clinical audit activity has usually been supported by trusts' clinical audit departments. Some local clinical audit has been carried out by doctors in training who are asked to complete audits as part of their professional development. However, the requirement to 'do an audit' has, in many cases, resulted in little more than a data collection exercise with no subsequent learning, action or long-term consequences for patient care.[8] This is not necessarily a reflection of clinical audit as a methodology (which, when it is used correctly, is an important tool for improving

quality) but of how it has been understood, implemented and supported in the majority of instances. The length of trainees' rotations has had an impact on trainees' ability to participate in meaningful audit activity and their potential to sustain any improvements made. In addition, trusts' clinical audit departments may not necessarily have the capacity, or capability, to support trainees' quality improvement activity.

In the hands of most trainees, clinical audit tends to have a very narrow focus. They primarily concentrate on the start of the audit cycle, asking: 'Are we doing the right thing?' and 'How are we doing?', rather than using the data dynamically to drive continuous improvement and change in real time. Indeed, it was this finding, based on trainees' Annual Review of Competence Progression (ARCP) and reinforced by a lack of enjoyment in their audit activity (finding from the *Audit of Audits*, Emma Stanton, 2009, unpublished data), that fuelled the launch of the RCP's Learning to Make a Difference (LTMD) programme in 2010.[8] In addition, when trainees were asked whether clinical audit is quality improvement, over 80% said 'no' (LTMD unpublished data).

Clinical audit for assurance and clinical audit for improvement: where does quality improvement fit in?

Recent reports and developments highlight the importance of using a common language to describe the intent of quality improvement work.[9] Clinical audit has two roles, one as a quality assurance process and the other as a quality improvement process. This is why it can be confusing and bewildering for senior clinicians, doctors in training and managers. Clinical audit is often looked upon as a process for evaluating or gathering evidence of compliance with audit standards, rather than holding to the original aim of a cycle that continuously improves the quality of services. Both approaches are valuable in practice. Organisations must fulfil the quality requirements of the NHS Standard Contract. However, by focusing on quality assurance, small adjustments in practice are made to conform to standards rather than taking every opportunity to improve care.

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As part of the General Medical Council (GMC) requirements for the revalidation of doctors, quality improvement activity is defined as follows:

> *… you will have to demonstrate that you regularly participate in activities that review and evaluate the quality of your work. Quality improvement activities should include an element of evaluation and action, and where possible, demonstrate an outcome or change.*[10]

The focus is on the evaluation of current practice rather than what difference has been made as a result of the review or evaluation. In the new GMC generic professional capabilities framework,[11] patient safety and improvement is one of the nine domains that are described as being essential and integral for professional medical practice in the UK. Under the domain of quality improvement, audit is described in terms of 'critically appraising information from audit', with no specific mention of clinical audit.

In December 2016, NHS Improvement (NHSI) published *Developing People – Improving Care*[12] and the National Quality Board published *Shared Commitment to Quality* (seven steps to quality).[13] Health Education England's (HEE's) quality framework 2016/17 has as one of its aims: 'To embed a shared definition, measurement and benchmarks of quality across England to support quality

improvement'.[14] These reports all outline the steps to take to build capability to improve. They do not, however, make explicit the connections between quality improvement and clinical audit.

Quality improvement is a broad umbrella term under which many approaches sit.[2] Clinical audit should be seen to sit under this umbrella. Any quality improvement approach should provide a mechanism for using data from NCA to inform, drive and stimulate improvement, and should synchronise audit cycles and quality improvement in order to sustain improvements in care. A quality improvement approach should move from reliance on aggregated data to the use of time-ordered data to measure and evaluate the impact of change. The focus should be on continuous improvement rather than one-off change. This shifts the mindset from one of evaluating and using data for assurance, to continually improving and using data for quality improvement. This new mindset has resulted in some NCAs moving toward continuous measurement in order to better facilitate quality improvement (eg the Falls and Fragility Fracture Audit Programme).[15]

> Any quality improvement approach should provide a mechanism for using data from NCA to inform, drive and stimulate improvement, and should synchronise audit cycles and quality improvement in order to sustain improvements in care.

The problem: bridging the gap

The work reported here has specifically explored how to bridge the current disconnect between identifying what we need to improve and creating the capability to actually make improvements in practice. The intention has been to encourage a shift in the perception of clinical audit from an emphasis on data collection to a tool for continuous improvement. While recognising the benefit of large-scale data collection, the focus for this work has been on how to utilise relevant national data to identify unwanted variation in the local context, to ultimately develop and test possible solutions that will lead to improvement and move clinical audit from a single audit loop to one of multiple cycles of change.

This work has built on the LTMD programme, which supports trainees in core medical training (CMT) to learn and develop relevant skills in quality improvement methodology.[16] It has also built on the recommendations from the Academy of Medical Royal Colleges (AoMRC) *Quality Improvement: training for better outcomes* report, which aimed to embed quality improvement into medical undergraduate and postgraduate training.[9] Doctors in higher specialty training, and the teams in which they work, should also have the right training and support to put quality improvement into action. This project has therefore focused on how to move beyond core medical trainees in order to make quality improvement activity work for higher specialty trainees (ST3+).

The work for this report (which was commissioned and funded by HQIP), piloted different models for implementing quality improvement learning with seven different medical specialties involving a number of higher speciality trainees. It used the outputs of NCA as the catalyst for improvement, while the trainees were supported to learn about quality improvement in action. While this report examines the test of concept around enabling quality improvement through one specific group of staff linked to NCA, the findings should be applicable to other healthcare practitioners. Improvement is better (and is likely to be more successful and sustained) if it is undertaken as a team activity.[17] Some recommendations may therefore be relevant to trusts and educational trainers in other professional groups. Furthermore, quality improvement activity is even more powerful when patients are involved.[18]

Context

Over 5,000 core medical trainees have had the opportunity to undertake a quality improvement project as part of their training in the past 5 years, as part of the LTMD programme. Expanding this approach to include ST3+ doctors offered the chance to significantly build quality improvement capacity within the medical workforce. This approach therefore supports the RCP's strategic aim of improving care for patients by driving the implementation of higher standards of clinical practice and promoting team working and strong clinical leadership.

The work for this report took learning from existing programmes, policies and reports, and piloted innovative ways in which quality improvement education could be developed and tested with individual specialties within regions in England. It intended to draw in the multidisciplinary teams in which the doctors work, and in so doing enhance the capability of all staff, including consultants. Using NCA data as a catalyst for change offered doctors the opportunity to become more capable and resilient in terms of driving change in their practice, as well as improving care for their patients.

This work needed to align with and build on existing national, regional and local clinical and educational infrastructure for trainees, with the recognition that these were at very different starting points.

The specific aims and objectives of the project were as follows.

Project aims

- To increase doctors' engagement with quality improvement activity through greater access to the outputs of NCAs.
- To use the outputs of NCAs as a driver for change and produce meaningful local improvements.
- To build doctors' capability in quality improvement.
- To support the RCP's strategic aims to improve care for patients and develop physicians throughout their careers.
- To support HQIP in its professional leadership role in the field of quality improvement, by providing information about opportunities to implement NCA findings in practice.

Project objectives

- To enable doctors to implement change by providing them with tools and training, with support from the LTMD programme.
- To encourage collaboration between junior doctors and the multiprofessional teams in which they work, to deliver these improvements.
- To provide opportunities to present quality improvement work locally and regionally, and to share good practice.

Methods

The project team's approach to supporting ST3+ doctors to deliver quality improvement using NCA was to:

1   engage with the medical specialties
    a   work with postgraduate medical deans to identify specialties where there may be a sufficient number of trainees who would be interested in taking part

b   liaise with presidents of specialist societies and specialist advisory committee (SAC) chairs to identify particular specialties that may be interested in building on national audit

c   develop local support networks based on existing knowledge of where quality improvement expertise is located

d   select five specialties to work with

2   identify specific national audit findings on which to focus quality improvement for trainees to work on collaboratively at a local and/or regional level

a   work with NCA project teams, SAC chairs and local specialty leads, in order to identify relevant key national audit outcomes

b   ensure that trainees complete project plans that identify the NCA finding that is the basis for their change

c   ensure that project plans are agreed with the doctor's supervisor or a member of the project team before work starts

3   review the local provision of quality improvement training

a   assess local quality improvement resources and needs

b   tailor training for each site, to reflect the local context and need

c   provide trainees with training in quality improvement methodology

4   develop a project register

a   ensure that all projects are logged on a central project register, including:
   - name
   - contact details
   - title and aim of the project
   - which NCA finding is the focus for the project

5   create opportunities for local presentation

a   liaise with local leads to set up a local presentation event in each area

b   agree presentation dates with each individual site

c   invite all participating trainees to presentations at which certificates will be awarded

d   award prizes as appropriate.

Engagement with the medical specialties

The initial approach taken was to liaise with postgraduate medical deans, presidents of specialist societies and SAC chairs to identify particular medical specialties that may be interested in building on the LTMD programme using NCA as the starting point. The aim was to identify five medical specialties and to identify a consultant lead in each specialty who would oversee the work in their area, support trainees and drive the project forward with the support of the RCP project team. In fact, seven specialties expressed an interest in taking part in the project, and it was agreed that they would all participate (Table 2).

Table 2 Participating specialties, leads, regions and trainees

Specialty	Region	Lead	Numbers of trainees
Cardiology	Yorkshire	Ann Tweddel	16
Endocrinology	South West	Joanna Watson	*Lead change, so now taking an organisational approach (ie not specialty specific)*
Geriatric medicine	East Midlands	Nicolette Morgan	26
General internal medicine / acute internal medicine	West Midlands	Phil Bright	20 AIM 120 GIM
Renal medicine	Kidney Quality Improvement Partnership (KQuIP)	Graham Lipkin	67
Respiratory medicine	West Midlands	Alice Turner	*Began in August 2017*
Rheumatology	Wessex	Jo Ledingham	9

In addition to the medical specialties identified above, there was an opportunity to broaden the approach to include GP trainees. A quality improvement training session for GP trainees (n=70) in Thames Valley focused on how to use NCA in general practice. This was delivered as part of a patient safety and quality improvement day, with the support of the School of General Practice and with the associate GP deans (Michael Mulholland and Nicky Turner).

Table 3 Region and leads for general practice

Specialty	Region	Leads	Numbers of trainees
General practice	Thames Valley	Michael Mulholland Nicky Turner	70

It was quickly apparent that each specialty/region was organised differently, which was considered to be both a strength and a weakness. It was a strength in that it afforded the opportunity to understand whether there are advantages in delivering training and support in different ways, which offered insight into how best to proceed in the future. It was a weakness in that there was very little foundational infrastructure and support to build on.

The provision of resources

Having identified the specialties, and the leads for each one, it was important to set up as much support as possible for the leads and their trainees and to facilitate quality improvement training. Following the experience of the LTMD project, it was felt to be important to make senior managers aware of the work for this report, and to ask them to support the doctors who engaged in it within their trusts. To this end, a letter was sent to the chief executive officers (CEOs) of the trusts where registrars were participating in the project (Appendix 1). In addition, LTMD trainee and supervisor packs were adapted so that higher specialty trainees could use NCA data as a driver for improvement. New webpages that summarised the project were created, as part of the LTMD website (www.rcplondon.ac.uk/projects/learning-make-difference-ltmd). The webpages also contained the key project documents and useful links to other quality improvement resources. Over the course of the project, there were 594 website hits, and the trainee and supervisor packs were downloaded 159 and 79 times, respectively. The team were keen to facilitate the development of networks and to make use of social media to support this. A project Facebook page was set up and maintained by the project coordinator, to keep registrars up to date about developments.

Knowledge of NCA, HQIP and quality improvement

All the trainees who were involved in the project were asked the same questions, relating to their understanding of NCA, HQIP and quality improvement. They were asked these questions at the start of their quality improvement training.

Tailored quality improvement training

Quality improvement training was the key to getting ST3+ trainees informed about and engaged with undertaking quality improvement projects. Different models of training were delivered, largely determined by the time that was allocated for the training session and the arrangement of the training room. There were predetermined training dates (from regional teaching programmes), which were spread throughout the year. The different approaches to training that were taken included:

1   1-hour training – using a series of multiple-choice questions to explore the principles of quality improvement; how the model for improvement fits with clinical audit; using time-ordered data; using NCA to identify areas to improve; and tips for getting started.

2   2-hour training – the principles of quality improvement; how to develop an aim; how to measure the impact of any change; generating ideas; what NCA is and how to use it.

3   Half-day training – the principles of quality improvement; developing project plans using NCA as the catalyst to generate ideas; peer feedback on trainees' ideas.

4   Whole-day training – the principles of quality improvement; a presentation of quality improvement projects that trainees had been involved in to date; issues that have been encountered and discussion around what may have helped; practising process mapping; driver diagrams and developing project ideas using NCA as the catalyst to generate ideas; peer critique; and feedback on the project plans.

Following each training event, feedback was sought through a structured feedback form.

Support infrastructure for quality improvement activity

Drawing on experience and learning from the LTMD project, it is clear that very different educational infrastructures support trainees nationally, regionally and locally. There may be specific programmes of quality improvement support for clinical fellows in their out-of-programme activities. In general, most trainees have limited access to, or knowledge of, supporting infrastructure and/or networks. Trainees also experience inconsistent support for their quality improvement activity from trust clinical audit departments.

There are, however, examples of good practice. Making Every Moment Count (which is part of HEE's Better Training Better Care programme) described one cross-organisational approach to supporting trainees in their quality improvement activity.[18] A successful regional approach involved trainees specialising in diabetes and endocrinology: they came together to train in quality improvement and then implemented improvements in the care of the diabetic foot in their own organisations (Joanne Watson, personal communication). The Health Foundation Q Network is emerging and its impact on trainee education in quality improvement is therefore uncertain, but it provides an opportunity to try connected networks in practice.[19] There are emerging developments within specialist societies that are now putting a spotlight on quality improvement; for example, the Kidney Quality Improvement Partnership (KQuIP).[20] HEE regions have developed more infrastructure that is focused

on supporting core medical trainees, largely in response to changes in the CMT curriculum and quality criteria.[21] This has enabled annual regional showcase events of trainees' work.

Taking into account the known examples of supporting infrastructure, no one model was felt to be superior by the project team. It was, however, felt to be important that any quality improvement support that is put in place aligns and fits with the existing infrastructure.

Feedback was obtained from each of the consultant leads through a 1-hour, semi-structured telephone interview with the project clinical lead.

Findings

Trainees' understanding of NCA and quality improvement

The responses of 330 trainees, relating to their understanding of NCA, quality improvement and HQIP, are collated in Tables 3 and 4.

Table 4 Responses from trainees

What does NCA mean to trainees?	Percentage (n=330)
I understand what national clinical audit data is	18%
National clinical audit data is valuable to me	59%
I know how and where to access national clinical audit data	5%
I have used national clinical audit data before to inform my work	36%
I have participated in data collection for national clinical audit data	85%

Table 5 Responses from trainees

What does quality improvement mean to trainees?	Percentage (n=330)
I have come across quality improvement in my training so far	97%
Quality improvement projects are valuable in my specialism	94%
I am familiar with quality improvement methodologies	59%
I have undertaken a quality improvement project before	78%

The collated results are shown into Fig 1.
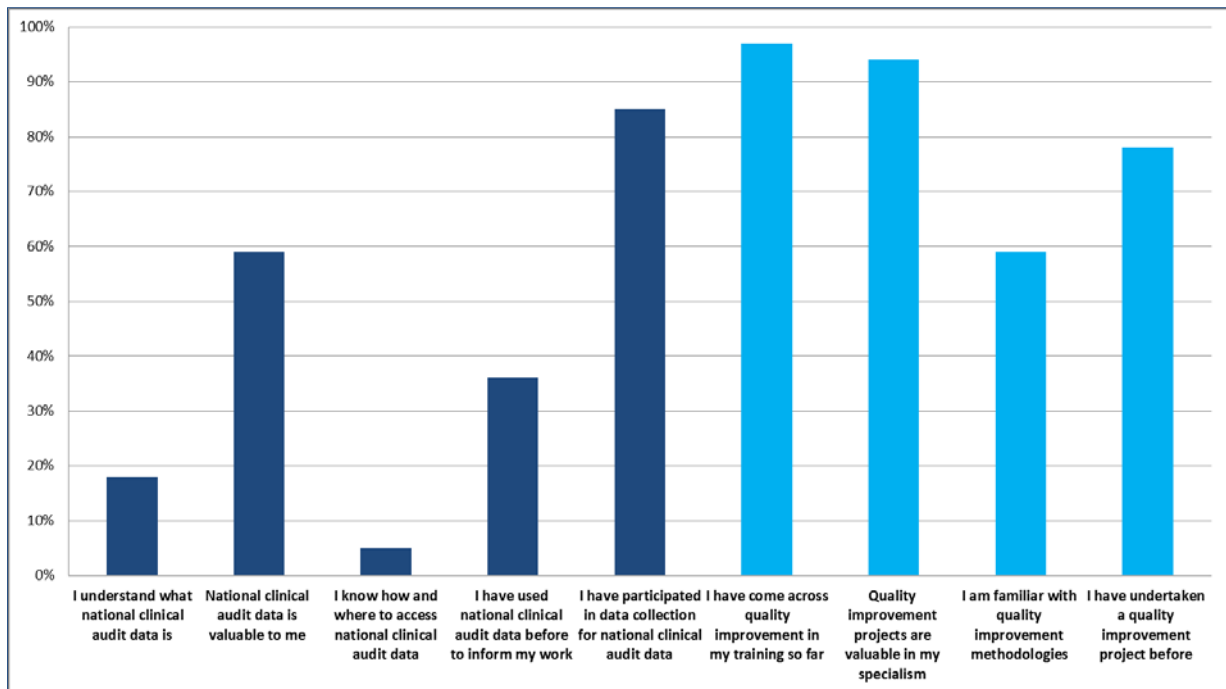
Fig 1 The responses of 330 trainees to questions on NCA and quality improvement.

Trainees appear to recognise the value of NCA to the clinician and a significant number of trainees have been involved in NCA data collection. However, their understanding of what NCA is and how to access the data was much more limited. When asked whether they knew what HQIP is, no trainee had heard of the organisation, even when they were further prompted with detail about HQIP's function.

There was a much greater awareness of quality improvement in action, which is likely to reflect the higher specialty trainees' previous involvement in quality improvement when they were core medical trainees. However, when they were asked whether clinical audit is an example of quality improvement (as part of the quality improvement training content), less than 30% said 'yes'.

Trainees described their understanding of NCA as follows.

- *'These are big data collections about patient care'*
- *'I know trusts have to do them'*
- *'I'm not sure to be honest. I know I had to do data collection for one. But I never saw anything about it again'*
- *'I think it can tell you a lot about what is happening in a clinical area such as stroke. You can see how you are doing against other hospitals'*
- *'It's all about collecting data. Then I'm not sure what happens next'.*

Trainees defined quality improvement as follows.

- *'Identifying some inefficiency or suboptimal system and finding solutions, measuring as we go'*
- *'Improving efficiency. The notion of "quality" is broad and complex and so capturing learning as we go is key to QI'*
- *'Identifying a problem and making manageable and incremental changes to improve on it'*
- *'Identifying an area for improvement, implementing change and trying to measure – mindful of the difficulties in measurement. Assessment is also important'*
- *'Finding a suboptimal system, making a change, reassessing and adjusting accordingly. Time, resources and management are key – small changes over time'*
- *'Implementing change in order to better patient care'*

- *'Doing an audit to asses, making intervention and assessing again to see where there are improvements'*
- *'Goal to achieve best clinical care which is safe and cost effective. Looking at how you can change practice to give the best clinical care'*
- *'Innovation'*
- *'Trial and error – testing out small scale change'.*

Responses to questions about NCA and quality improvement, by specialty

When trainees' responses to questions about NCA and quality improvement were analysed according to their specialty, the disparity in knowledge about NCA was more marked (Fig 2). The response of 70 GP trainees who received training in quality improvement and the use of NCA are also included. A particular issue was trainees' limited knowledge about how to access NCA data.

Trainees in diabetes and endocrinology were not asked these questions because the consultant lead in these specialties relocated during the project period and, as a result, no specific quality improvement training was delivered.
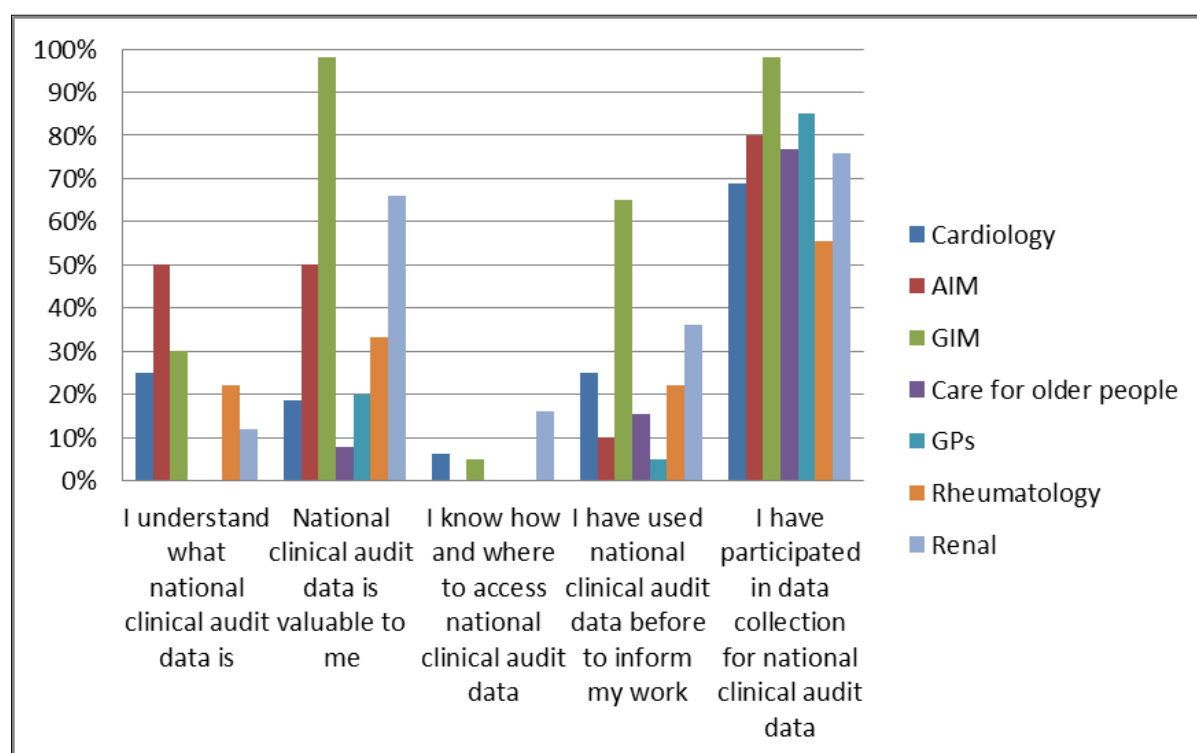
Fig 2 NCA responses by specialty.

The responses to the questions that related to quality improvement were more consistent across all the specialties (Fig 3).
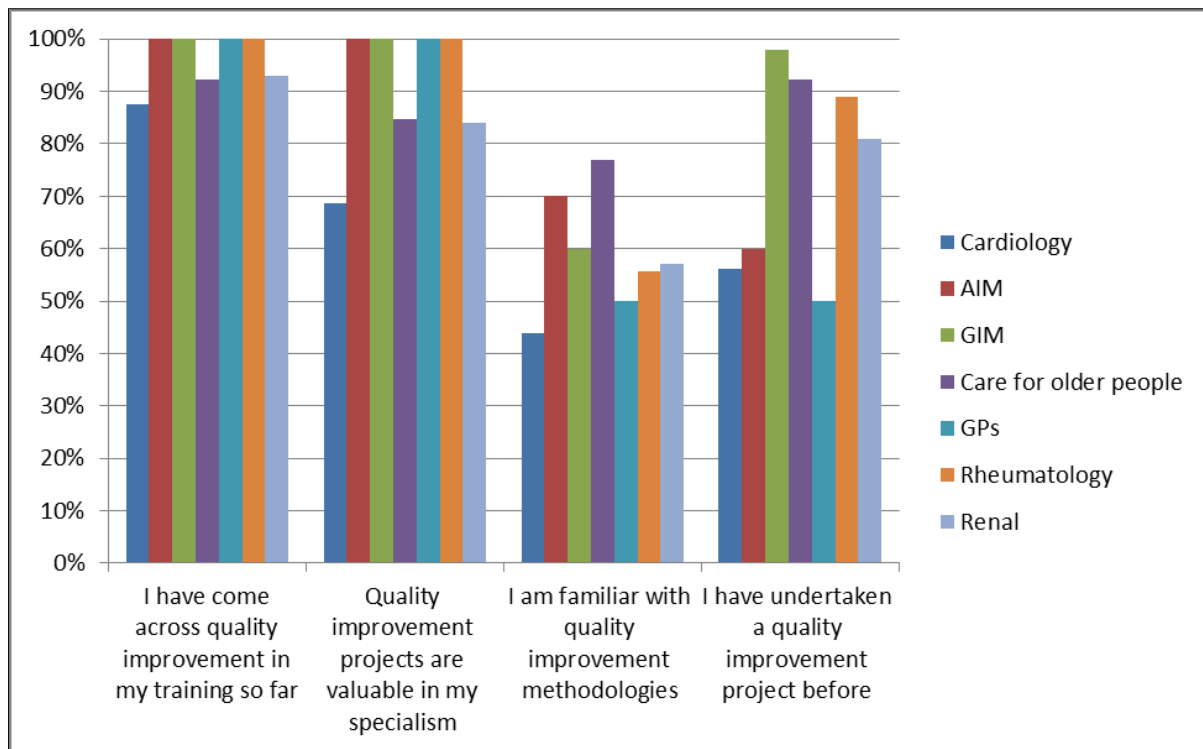
Fig 3 Quality improvement responses by specialty.

Tailored quality improvement training

Overall, 330 trainees undertook training in quality improvement.

> *'We would really like you to come and help us develop a better approach to QI. The trainees themselves have asked for more advice/support and we have tried to offer mentors for academic projects and support but it is slow to get going …'*
>
> Training programme director

The most successful model, as determined by participant feedback, was a workshop that was delivered over a whole day; the trainees were able to develop a tangible project idea while learning and developing the project together.

The areas that trainees wanted to focus on were:

- *how to do and direct effective quality improvement projects*
- *have an increase in national awareness – how does what they do fit into the big picture?*
- *the pitfalls*
- *how to turn an idea into a good quality improvement project*
- *how to collect data and use them effectively*
- *how to approach the right people*
- *how to engage colleagues in quality improvement projects.*

The most useful aspects of the quality improvement training were:

- *understanding what quality improvement is and why bother about it*
- *process mapping, driver diagrams and how to transfer ideas into action*
- *real-world examples with opportunity for feedback from the group*
- *presentations on quality improvement in action*
- *brainstorming*
- *practical development of projects*
- *interactive sessions as this gave a chance to exchange ideas and a practical taster*
- *understanding the process of doing quality improvement by using simple analogies: to show how it is useful to plan with others because they will have more ideas; also to show how to use the tools, which feel more familiar and less daunting when they are not abstract concepts*
- *time-ordered data and use of run charts as opposed to before and after.*

Feedback

> '*I thought the session was going be to very dry and uninspiring, yet I found the day the exact opposite.*'
>
> Trainee

Evaluation of training

An evaluation of all the training methods is presented in Table 6.

Table 6

	Strongly agree	Agree	Disagree	Strongly disagree
The programme was interesting and relevant to me	61%	39%	0%	0%
The amount and depth of material were appropriate for the time available	61%	39%	0%	0%
The programme matched my expectations	50%	50%	0%	0%
There were elements that could have been omitted	11%	11%	56%	22%

Examples of feedback

'*Very relevant to my day-to-day practice. Made QIP* [quality improvement projects] *seem more manageable and achievable and now I know how to approach an idea*'

'*Very comprehensive and interactive*'

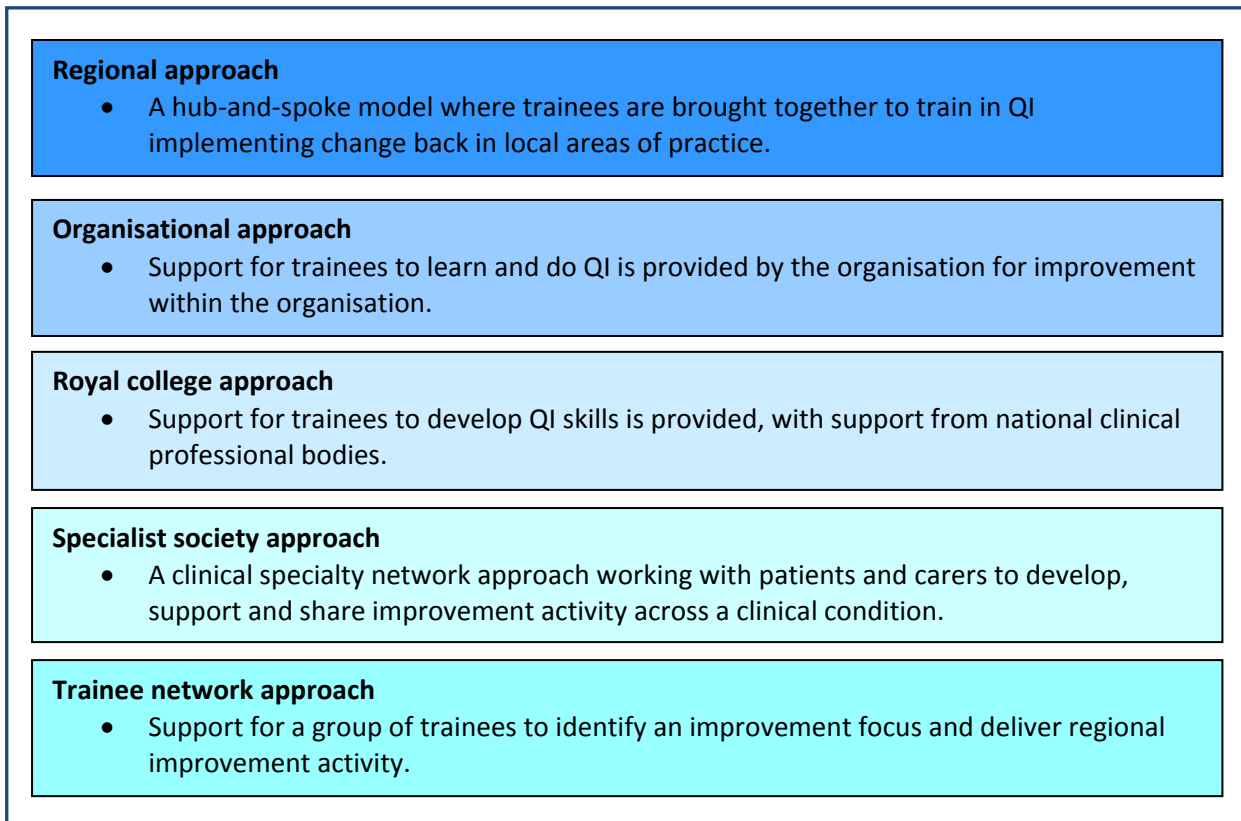'*Good relevant session on QIP for our training and progression through hospitals*'

'*It brought it alive. I needed the really practical bits to get it. And now I do.*'

'*The trainees particularly like / want to know examples of projects/ideas from their own specialty / primary care.*'

'A session as something more practical was one I heard positive comments on and was remembered as being something they could relate to.'

Support infrastructure for quality improvement activity

Different models were identified for supporting trainees to learn about quality improvement and how to put their learning into action (Fig 4).

Regional approach
- A hub-and-spoke model where trainees are brought together to train in QI implementing change back in local areas of practice.

Organisational approach
- Support for trainees to learn and do QI is provided by the organisation for improvement within the organisation.

Royal college approach
- Support for trainees to develop QI skills is provided, with support from national clinical professional bodies.

Specialist society approach
- A clinical specialty network approach working with patients and carers to develop, support and share improvement activity across a clinical condition.

Trainee network approach
- Support for a group of trainees to identify an improvement focus and deliver regional improvement activity.

Fig 4 Approaches to supporting trainees to learn about and implement quality improvement.

These models are outlined below, with the advantages and disadvantages of each model described. The models are still in development for the different specialties, but the type of model that is emerging for the different specialties has depended on:

- the existing infrastructure
- the local education context
- the local lead's capability and capacity
- shared learning from others
- innovation
- alignment with the speciality strategic direction.

No single model had clear advantages, but key to success was the premise that the trainees:

- feel that what they learn and do matters
- see that quality improvement activity is of value to them and to their patients
- feel that it aligns with their training requirements
- feel that they are given time and support to do quality improvement work.

Model 1 – A regional approach (eg rheumatology, respiratory medicine, cardiology, AIM, GIM, geriatrics and general practice)

This is a hub-and-spoke model where trainees in one specialty are brought together for quality improvement training at which they identify areas to improve and they then implement small-scale change within the organisations within which they work. They are supported by their training programme director and other facilitators, such as consultants who are interested/trained in quality improvement. This approach links participants with their educational supervisors and/or clinical supervisors.

Advantages	Disadvantages
Trainees come together to learn and share ideas.	Success is dependent on the direction of the training programme director (TPD).
Trainees train together to share common projects, and start to think and learn more broadly about system change.	Common projects may be at different stages.
This model uses existing educational structures, trainees can move around different hospitals with project ideas as they rotate.	There may be variable reception and support from each organisation.
This model provides a useful mechanism to identify relevant NCA outputs for the specialty and to improve areas in the local context.	Trainees have a specialty focus rather than an organisation focus.
This model presents a mechanism to facilitate shared learning from different organisations.	There is less opportunity for inter-professional learning.

'Despite negative feelings in December it was very encouraging to see their projects at the second QI day in June. We had around 50 trainees present QIPs and Martin Bromiley came and introduced the idea of Human Factors to them. It seemed that the practical elements of the December day had been understood and they were able to make changes in practice that did impact patients.

'As a result we are planning this year to work with the AHSN to do a single project by every trainee across Thames Valley based around the identification of sepsis. We hope that the more practical focus will work better with the trainees.'

Associate deans, the School of General Practice

Model 2 – An organisational approach

In this model, the support for trainees to learn and undertake quality improvement is provided by the organisation. This model includes executive support, a consultant lead(s) and links to the clinical audit department and is provided for all trainees of all grades and specialties.

Advantages	Disadvantages
All trainees in an organisation are able to access support for their quality improvement activity.	The training under this model may feel separate from the trainees' educational training model, curriculum expectations and the Annual Review of Competence Progression (ARCP) panel.
There is much more opportunity for interprofessional learning.	There needs to be clear alignment and links with the director of medical education, regional training and the training programme directors.
There is a clear mechanism for using NCA outputs to improve, as the trust has easy sight of the outputs and can establish tangible links with the trust's clinical audit team for support.	There is no mechanism to share learning from other organisations.

'There is a developing model for all specialist registrars in our trust with support from the deputy medical director, with a consultant lead and support from the clinical effectiveness unit. We are clarifying how this needs to link with regional training and TPDs.'

QI lead

This approach is similar to the Making Every Moment Count model that was developed as part of HEE's Better Training Better Care programme.[18] The key areas for success for this model were that quality improvement activity was seen to be core hospital business that was supported by the hospital board, that there was expert support alongside trainees, that supervisors were identified to coach and mentor trainees and that the multidisciplinary team and patients were involved with celebrations of success.

Model 3 – The royal college approach

The LTMD programme has supported core medical trainees in their quality improvement activity since the pilot in 2010. The programme was developed within the Joint Royal Colleges of Physicians Training Board (JRCPTB) and was fiscally supported by the RCP, the Health Foundation and HEE. Over 2,100 core medical trainees participated in a quality improvement project in 2016/17 (Fig 5).

QI project growth
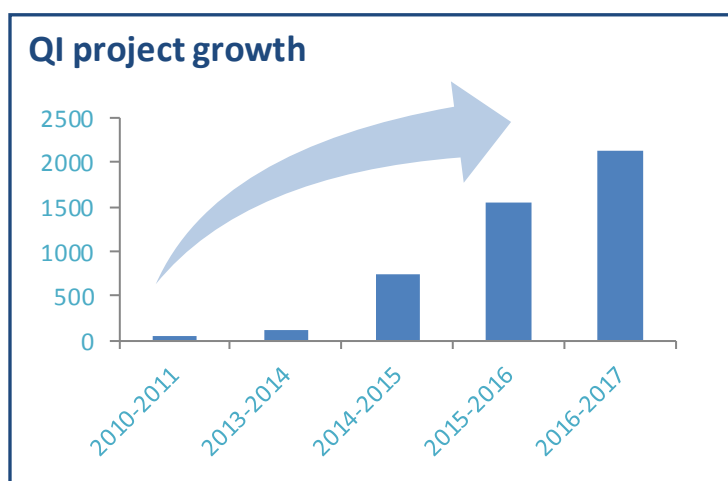
Fig 5 Quality improvement project assessment tool completion by core medical trainees per year since the LTMD programme was introduced.

Advantages	Disadvantages
Provides central core support aligned with curriculum and ARCP requirements.	Can feel like this model is separate from interprofessional learning, although that is not the intention.
Enables influence on curriculum content and change.	Implementation of improvement change is dependent on what local and regional infrastructure and support is on offer.
Provides an easily accessible website with valuable resources to get started, with many examples of quality improvement action and signposting to other quality improvement support.	Mechanisms for signposting to NCA output may be distant to the trainee.
An RCP annual showcase and regional showcases enable work to be presented more locally.	
Able to influence a large number of trainees.	
With many NCAs being hosted by the RCP, it is possible to signpost to NCA outputs and explain how to access them.	

The work for this report built on the foundations of the LTMD programme, with the intention of reaching out to the higher specialty trainees in the 30 medical specialties. This approach is aligned with the AoMRC's *Quality Improvement: training for better outcomes* report recommendations.[9] The new RCP quality improvement hub (RCPQI) has now been launched[22] and it will provide the RCP in London with an approach to supporting trainees in their quality improvement activity.

The RCPQI

The overall aim of the RCP's QI 'hub' is to build on the work that is already being developed and delivered within the RCP, such as the LTMD programme. It aims to provide the workforce with the skills that they need to improve the quality and safety of healthcare delivery and to improve the experience and outcomes for patients. It is an ambitious programme of collaborative working across the RCP, to ensure the efficient and effective use of resources and improved dissemination of the RCP's work for the membership and wider healthcare teams.

The planned work will be supported by a faculty of clinical quality improvement experts, improvement of current resources and a plan for sustainable development and staffing. The work of the RCPQI has been split into five main streams:

1 Building workforce capability to implement continuous improvement and change throughout medical careers and across teams. One example is the development of the role of chief registrar.
2 Supporting services and teams to implement quality improvement and to sustain change within services.
3 Building a faculty of medical professionals with the key skills and enthusiasm to support the implementation of plans across all regions.
4 Developing the facilities to support the testing, evaluation and dissemination of new quality improvement methodologies and interventions.
5 Delivering bespoke support on an individual basis to support change within services and organisations.

The RCP also supports the Chief Registrar Programme to establish new, senior leadership roles for senior trainees whose focus is on delivering high-quality, safe care.

'*Having protected time as an RCP chief registrar with* access *to senior people, a* voice *in meetings,* knowledge *of what's actually going on in the ward, a* network *of contacts and resources in the trust and a* widened view *of the healthcare "system" … wrapped round with some theory and training provided by the RCP … moved me beyond first steps in QI to make some real differences.*'

Model 4 – The specialist society approach (eg renal)

KQuIP is described as a dynamic network of kidney health professionals, patients and carers who are committed to developing, supporting and sharing improvement in kidney services, to enhance outcomes and quality of life for people with kidney disease.[20] In the absence of commissioned NCA, the kidney community will use different data sources, including UK Renal Registry (UKRR) data, to identify areas that need to improve.

Regional KQuIP development days have been launched, to better understand the data and what unwanted variation looks like. Trainees are part of these teams. The intention is to deliver quality improvement training within teams and to focus on how renal teams might participate in one of three national projects. The aim is for each renal unit to have both a consultant and a multidisciplinary quality improvement champion to further facilitate this quality improvement

activity locally. In addition, there is an active Renal SpR Club where trainees come together for learning (and social) events.

Advantages	Disadvantages
Presents an opportunity to look at and participate in system-wide change.	Regional days will not happen very often and there is therefore a reliance on the quality improvement champions to drive this work locally.
Uses big datasets, UKRR data and other initiatives including the Getting It Right First Time[23] and NHS RightCare[24] programmes to understand unwanted variation.	Clear links need to be developed with training programme directors, regional training, curriculum and ARCP panels.
There are many opportunities for interprofessional and patient learning and improvement.	
The involvement of the Renal SpR Club presents opportunities to develop trainee quality improvement champions.	

Model 5 – The trainee network approach (eg gastroenterology)

Within the East Midlands, a recently established region-wide network of registrars collaborates across trusts on both quality improvement projects and research projects. This is a trainee-led gastroenterology audit and research network (GARNet).[25] Their current quality improvement project is on upper GI bleeding (UGIB). An initial audit has been performed against National Institute for Health and Care Excellence (NICE) quality standards, and process mapping of the UGIB journey has been undertaken. Each site lead has been asked to identify areas at their particular site that may require change (using the marginal gains theory). Each site is intended to select simple sustainable changes that will improve the overall time to endoscopy. Other regions hope to establish similar networks to work collaboratively on future projects.

Advantages	Disadvantages
A trainee-led connected community.	Consultant buy-in is variable.
There is peer support.	There is a need to link with educational infrastructure.
Working for a common aim, adapted for a local context.	Trainee leaders move on, so the work may lose momentum.
There is an opportunity for shared learning.	
An opportunity for a focused approach to drive improvement through a combination of NCA data and a quality improvement approach.	

RCP showcase event

All the trainees who participated in this project were given the opportunity to submit their quality improvement activity findings and learning for the RCP's LTMD showcase in July 2017.

> '*Success does not mean climbing a mountain but taking small steps and showing yourself you can do it*'
>
> Trainee

A number of quality improvement projects were presented (see Appendix 3).

Feedback

Throughout this work, learning was identified from written, face-to-face and semi-structured feedback.

> '*When it is all aligned it is influential, people come together – it's like a domino effect*'

Consistent themes were identified (listed below in bold) and related to the value of implementing LTMD principles[8] (listed below in italic) beyond core medical trainees.

1 **Developing an understanding of and undertaking quality improvement in practice: learning by doing, learning from others**

LTMD recommendation: All physician junior doctors and their supervisors should understand, develop and embed appropriate skills in quality improvement approaches in order to improve the quality and safety of care given to patients as provided through the care delivery system.

LTMD recommendation: Quality improvement skills and competencies should be considered part of the professionalism of a modern consultant working in the NHS in the 21st century.

2 **Using NCA as the catalyst to improve: eg how to improve unwarranted variation locally**

LTMD recommendation: Trainees should be offered the choice of completing a quality improvement project within a training year. Junior doctors should be encouraged to complete a quality improvement project by ideally implementing a trainee-led improvement idea and/or implementation of best practice aligned to their organisation's quality agenda.

3 **Finding out what does not work is important: it is how you respond and learn from it that is important – everyone needs to experience this**

LTMD recommendation: For trainees completing a clinical audit, a range of quality improvement approaches should be used in the 'implementing change' part of the clinical audit cycle.

> *'Some of my best QI learning came from projects that failed … miserably. There was kick-back, resistance, apathy and misunderstanding whenever I shared my ideas. I've learnt that I:*
> - *didn't involve the right people*
> - *was way too ambitious too soon*
> - *didn't have a measurement plan for my changes*
> - *needed to talk face to face not inbox to inbox*
> - *can't do this on my own.'*
>
> Chief registrar

4   **Quality improvement is not just a project, it is so much more: it is a triple win for the trainee, the organisation and the patient**

LTMD recommendation: A coherent framework and infrastructure focused on the junior doctor should be developed which is integral to clinical practice and enables lifelong learning in quality improvement throughout a physician's training and career.

5   **Quality improvement activity is together as a team: brings back the fun**

The trainee viewpoint

Participating trainees were asked for feedback on their current experience of quality improvement activity, including what works, what gets in the way and what would make a difference to their success. Trainees provided feedback via written comments, and face-to-face and semi-structured interviews. Some quotes are highlighted here, and a full summary is available in Appendix 4.

> *'Too much like projectitis'*

> *'It's all about alignment, if it is in the curriculum and ARCP that is where it needs to start'*

> *'Having your QI idea is not enough. You have to win over hearts and minds of real people. Along with crystal clear communication it is often the human element that determines the success of QI. The point where you have "failed" is probably the key target for your efforts.'*

> *'There just isn't enough time'*

'It's what is role modelled by consultants, that is what makes the difference'

The consultant viewpoint

Feedback was sought from participating consultants on their current experience of quality improvement activity with higher specialty trainees, including what works, what gets in the way and what would make a difference to their success. Their feedback was provided through written comments, and face-to-face and semi-structured interview. Some quotes are highlighted here, and a full summary is available in Appendix 5.

'The way "audit" is interpreted at ARCP panel causes twitchiness'

'SpRs have no personal motivation to get on with QIP when they are left alone'

'The world has changed; skills required / should be embedding are different from past training'

'Give clear learning objectives and support infrastructure around QI'

'Where QI was more established, I could use existing QI champions and plus I had a number of "go to people" that are QI experts for help and advice for methodology'

'Using NCA as catalyst and identifying that if performance is not a trigger to QI then what is?'

'There is just no time to do this … it's all about service'

'Consultants do not understand clinical audit and QI – they think it does not involve enough numbers – measuring small numbers for a pattern and they don't get it'

'TPDs were not hugely supportive as this was seen to be extra work and would mean they'd have to drop doing an audit'

'There needs to be recognition of QI – recognised in career development as much as research'

'QI needs to be explicit in the ARCP decision aid re clinical audit and QI'

'QI should not be supernumerary'

'Language of clinical audit and quality improvement is very important as it confuses'

'Is the Audit Department a place that trainees/registrars naturally turn to? Not really'

'There should be an education programme with admin, trainers "to go to", training and delivery of training'

'This is not just a doctor activity'

'Training a community of people on how to do QI, for example the Q community – start making regional networks in place'

'Examples of projects to demonstrate that little and big things can make a difference'

'Got to be local with local adjustments'

'Emphasising the importance of quality improvement for future career goals and a critical skill is key'

'RCP role in QI should be to be a champion for medical QI'

'QI ticks the box has demotivated trainees'

The patient viewpoint

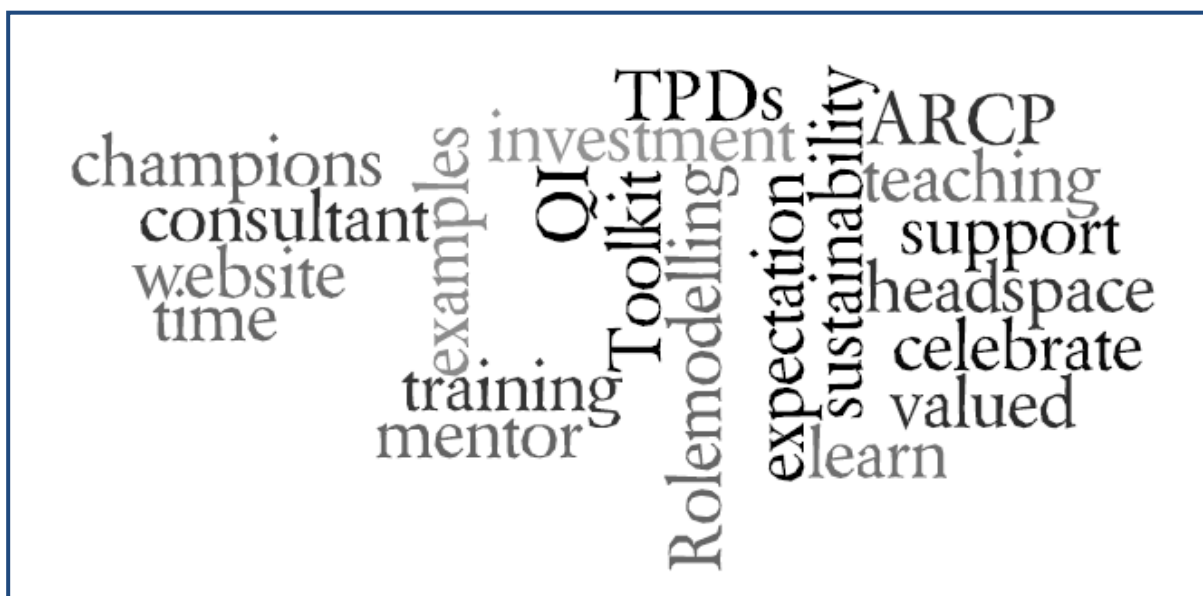The patient representative on the steering group for this work provided the following viewpoint.

'Creating a culture in which quality improvement is at the forefront of trainees' and their supervisor's minds can only be good for patient care and safety.'

'Developing trainees' abilities to not only identify how services and treatments can be safer, more efficient or more effective but also their ability to devise solutions and to communicate these effectively to other members of the team in order to effect change is key. Embedding such skills and behaviours throughout their training must surely benefit patients.'

The key ingredients to success

The word cloud below highlights the factors that were consistently identified as enabling the success of quality improvement in action.

Fig 6 Word cloud depicting ingredients for success.

What did not work

Table 7

Factor	Explanation
Twitter	Not many trainees use Twitter.
Facebook	Trainees tend to use Facebook for their personal rather than professional lives.
Webinars	These take time to organise and it is not always easy to find someone suitably qualified to volunteer to lead the sessions. It is difficult to publicise webinars to ensure that all the target trainees are aware of the resource. Shift working means that there will always be some doctors who are unable to participate. WebEx may be an unfamiliar technology to some doctors and their use of trust computers can make it difficult to access the webinar.
Some regions do not engage	Some areas have more knowledgeable, enthusiastic and motivated leaders who are able to influence agendas and initiate new work. In other areas, the necessary understanding and leadership is lacking.
Starting mid year	This was seen to be confusing and to increase the educational demands.
Accessing regional teaching days	Regional teaching days are organised up to 1 year in advance. It is difficult to schedule these days at short notice.

Conclusion

'What is the point in collecting all the data and doing all the work if we do nothing with it? Having NCA and not using it is pointless.'

Consultant

Trainees get involved in NCA through data collection but then there is a disconnect. Trainees are not involved in using the collected data nor do they know how to access it. Alongside this, trainees recognise quality improvement activity and its worth. But then the next disconnect is that trainees do not recognise clinical audit as being part of quality improvement activity. For trainees, audit has mainly been about data collection and is perceived as an assurance activity. A requirement to register their clinical audit with the trust, with no further support for implementation, has also propagated a tick box view of audit activity.

Confusion about the terms 'quality improvement' and 'clinical audit', how they are used in the curriculum and how they are understood by trainees and their supervisors has got in the way. Once the connection is made that clinical audit should inform quality improvement activity to drive and stimulate change then the barriers start to come down.

Effective quality improvement activity requires more than just data. Critical ingredients are mentoring, time and headspace to plan and do. If this is not given attention, then any quality improvement initiative is a token effort and is set up to fail with consequent demoralisation of all staff involved. Competing demands in the workplace are chipping away at education and training time and trainee morale. Workplace learning in the 21st century has to be different. By enabling quality improvement to be a multiprofessional activity, and providing training in developing quality improvement skills and creating the right conditions to support learning in practice, transformation can start to happen. Integrating quality improvement activity into the everyday job may help to alleviate some of the 'training versus service' tension. Quality improvement activity is of high educational value and it is possible to create the right environment for it with careful organisation and a commitment from the trust to invest in and value such activity.

NCA is a good place to start bridging the gaps. NCA outputs should be used to inform quality improvement in the local context. Such activity should be a priority for the trust in order to improve patient care and outcomes. The key to ensuring the success of this approach is to put in place the right educational and organisational supporting infrastructure for trainees and the teams with which they work.

Discussion

To date there has been a missed opportunity in terms of how trainees learn about and interact with NCA. Most trainees' interaction with NCA lies in collecting data but they have little understanding about its purpose or how the outputs are used. Despite this, trainees recognise the principle that NCA is important and of value to patients but not its value for their own practice. There is an information and communication chasm between trainees and NCA. This suggests that current methods for report dissemination and utilisation are not working for this group, and this is also likely to apply to other frontline staff. This recognition presents an opportunity for focused and aligned

improvement at multiple levels including HQIP, RCP, HEE, specialist societies and at an organisational level.

This work has demonstrated that engaging trainees in NCA and using NCA outputs as a driver for change provides a common focus for trainees to start quality improvement activities and to concentrate their improvement efforts. Their improvement focus can then be tailored to their organisation's needs, to produce meaningful local improvements.

It is not enough to simply collect data or generate a report of findings. A strong message throughout this work has been the recognition that NCA is a valued resource, and that it is a waste of time to collect audit data if NCA is not used as it is intended: to inform improvement.

Building capability in quality improvement is key to using this data to drive improvement. Furthermore, developing clinicians' skills so that they are able to respond to and reduce unwarranted local variation is relevant not just to NCA but also to other areas, such as the Getting It Right First Time (GIRFT) programme[23] and NHS RightCare.[24] The work for this report has focused on trainees (and their supervisors) learning about and getting used to quality improvement methodology, planning change, understanding how to engage people, identifying an aim, making small changes and undertaking relevant regular measurement. The intention has been for trainees to use the wealth of NCA findings as the catalyst to generate ideas for improvement and to learn how to implement change in practice. The trainees learn together and share what works and what doesn't. This work has demonstrated that higher specialty trainees are most likely to develop quality improvement skills if there is a combined regional approach to their quality improvement education and training, underpinned by local organisational support involving multidisciplinary teams. This approach is also strengthened as trainees move between organisations, providing further opportunities to develop and sustain what others have achieved and to bring their own learning to the new organisation.

However, there is a real challenge in enabling trainees to come together across what can be wide geographical regions and in fitting this work into their many competing demands and into teaching programmes that are often planned many months in advance. The timing of quality improvement activity, and how it is supported, is important. For example, starting quality improvement training half way through an academic year is perceived (not unsurprisingly) to be less helpful. Quality improvement training, and ongoing coaching and shared learning opportunities, should be an in-built thread that is woven throughout the year's teaching programme, with trainees having an opportunity to showcase their work at the end. The regional approach should align with organisational quality improvement offerings.

All staff groups need to receive quality improvement training. In particular, educational and clinical supervisors should receive training so that, at the very least, they can support trainees in their quality improvement activity. Quality improvement activity is part of revalidation; however, what that means in practice is open to interpretation and the focus for many doctors has been on service evaluation rather than improvement. There is therefore a real opportunity to strengthen improvement activity and to start to make this activity 'business as usual' for organisations. The ongoing AoMRC *Quality Improvement: training for better outcomes* work (with four work streams: revalidation, repository, curriculum and wider system engagement) presents a possible avenue for this.

The most successful model for quality improvement training seemed to be training that was delivered over 1 day as part of a regional approach, using NCA as the catalyst to generate

improvement plans, with subsequent ongoing coaching and support, including a consultant supervisor. This model would be greatly enhanced by support from trust clinical audit departments, beyond, what is for most, just a need to register their project. Renaming these departments to include the word improvement would help signpost trainees to these as a resource and start to make audit departments the natural place for trainees to turn to for support. However, at the same time, trust clinical audit departments need to be appropriately resourced in terms of time and capability, so that they can support trust staff in improvement rather than just assurance activity. Trainees tend to develop stronger alliances with the specialty department (and specialist society) in which they work rather than the organisation as a whole. By strengthening connections between trainees and the trust audit department, while they are supported to use NCAs that are relevant to their specialty for their improvement endeavours, will likely strengthen trainee–organisation affiliations and enable trainees to feel valued.

Galvanising quality improvement champions (consultant and multiprofessional) within a department, such as the approach being promoted by KQuIP, provides a further resource of support for staff. In addition, establishing chief registrar posts within a trust starts to build the foundations for a support network for all medical trainees. Linking with other networks such as the Q Network is, as yet, unexplored territory, but building trainee networks (such as within anaesthetics and as described with GARNet) is becoming increasingly successful.

There is sometimes a contagious negativity among staff who voice repeated concerns about the time that quality improvement activity takes. Clinical audit activity seems to have been viewed differently, which is most likely because its focus has been on data collection, which is often undertaken as an isolated activity. Investment in making time for improvement activity is critical. Quality improvement should be integral to everyone's work, with time being allowed for planning, implementation and reflection on learning and next steps. Without this, quality improvement will remain a tick-box activity, and will result in many unsustainable changes, which will lead to a demoralised workforce.

The recent HEE report on junior doctor morale articulated the importance, in the working environment, of protected time, being valued and investment in learning such as quality improvement activity.[26] These findings support what has previously been described by Daniel Pink as the three elements to motivate people in their work: autonomy (including flexible working practices), mastery (the desire to continually improve at something that matters) and purpose (wanting to make a difference).[27] To truly respond by providing the time and headspace for improvement activity, bodies such as NHS England, HEE, NHSI, the AoMRC, royal colleges, the GMC, trusts, commissioners and HQIP must all give the same message, in order to finally make this happen in practice. The result will be improved care and outcomes for patients and development for physicians as they progress through their careers.

Recommendations

The recommendations that have been made as part of this work can be found in the executive summary at the beginning of this report.

Acknowledgements

Appendices

Appendix 1 – Letter to CEOs

(The work for this report was originally entitled *Learning to Make a Difference beyond CMT*.)

Royal College of Physicians

Royal College of Physicians,
Clinical Evaluation and
Effectiveness Unit,
11 St Andrews Place
Regent's Park
Direct tel: +44 (0)20 3075 1644
Ravnit.Hunjan-Ruprai@rcplondon.ac.uk
Project Coordinator LTMAD – Beyond CMT

https://www.rcplondon.ac.uk/projects/learning-make-difference-beyond-cmt-0

10 September 2016

Dear Chief Executive,

"Learning to Make a Difference – Beyond Core Medical Training"
Using national clinical audit data to drive quality improvement

Over the next year, we will be working with a range of junior doctors to improve their skills in quality improvement. We are building on the success of the Royal College of Physicians/Joint Royal Colleges of Physicians Training Board/Health Education England (HEE) 'Learning to Make a Difference' (LTMAD) programme which supports trainees in Core Medical Training (CMT) to learn, develop and embed skills in quality improvement (QI) methodology. The focus is to move beyond CMT and skill up all trainees of all medical specialties in QI. This aligns with the recommendations of the recent Academy of Medical Royal Colleges Quality Improvement: Training for Better Outcomes Report[1], and the forthcoming HEE Quality Framework, GMC Generic Professional Capabilities and NHS Improvement Strategy.

This work, commissioned by Healthcare Quality Improvement Partnership (HQIP), will pilot different models of implementation with seven different medical specialties. It will use the outputs of national clinical audit as the catalyst for improvement whilst the trainees are supported in learning about QI in action. For individual health service providers taking part in National Clinical Audit can provide valuable information; benchmarking resources, processes and outcomes and can pinpoint areas in need of improvement. However, the use of audit data has been limited and opportunities to improve lost. This is an opportunity to make a difference using these data across your own organisation.

We will be working with trainees in your area and hope that you would be supportive of this work within your trust. We would like trainees to be able to use existing QI support within your own organisation as well as be further supported at a regional and college level to do this. Though we are aware that the resources available at organisational and region level may be very different, we intend for this to be part of the learning in how different approaches may be effectively implemented.

Provided you are in agreement for your trainees to participate, please could you pass this letter and enclosed form to your medical director, so they may provide us with contact details of whom we may liaise with to work together on this project. The completed form needs to be returned to us by: < Date>. At the end of the project we will provide you with a final report of our findings and a summary of all quality improvement projects undertaken this year.

Please contact us if you have any questions or comments, or see our website for more information (link in top right corner).

With best wishes,

Dr Emma Vaux
Clinical Lead for the LTMAD Programme

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1 Quality Improvement - Training for better outcomes http://www.aomrc.org.uk/publications/reports-a-guidance

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Appendix 2 – Summary for trainees

Royal College of Physicians · **HQIP** Healthcare Quality improvement Partnership

Learning to Make a Difference - beyond CMT

What is Learning to Make a Difference?

Learning to Make a Difference (LTMAD) is a programme that empowers junior doctors to learn and develop skills in quality improvement (QI) and put these new skills into practice in order to make a real difference to the quality and safety of patient care and the systems and processes within which they work. This is an established Joint Royal Colleges of Physicians Training Board/ Royal College of Physicians programme for core medical trainees and should be something they have already experienced and/or have been aware of as a result. The intention is for LTMAD to support trainees as they progress through higher specialty training and provide training in QI methodology and experience QI in action to make a real difference to patient care.

Where does national clinical audit fit in?

This project builds on the Learning to Make a Difference programme with the support from HQIP (Healthcare Quality improvement partnership). The outputs from national clinical audits are being used as the catalyst for the improvement activity. For individual health service providers, taking part in National Clinical Audit can provide valuable information; benchmarking resources, processes and outcomes and can pinpoint areas in need of improvement. However, penetration of some audit data has been limited and opportunities to improve lost. Using national clinical audit data as a catalyst to drive change offers doctors the opportunity to become more capable and resilient as well as improve the care of their patients. This project builds on the Learning to Make a Difference programme, expanding the approach to ST3+ doctors and is so doing tests innovative ways in which quality improvement education can be developed within individual specialties.

What do the trainees need to do?

To begin their quality improvement project, trainees need to identify a specific measure from a national clinical audit that can be used as a baseline to initiate a small scale improvement project. The intention is that they are most likely to work as a group of trainees on the same theme but the specific improvement focus they work on may be different and likely to depend on their own organisation's needs. Trainees might wish to work on their own, as a group of trainees and/or involve the multi-disciplinary team. The latter approach is very much recommended. Your help will be needed to identify a suitable topic for your trainees' projects and a consultant supervisor in their own organisation should be identified to provide support. Different ways of how this can work most effectively are to be explored and your input in enabling this and providing feedback will be very valuable. Trainees should aim to plan, implement and evaluate the success of their chosen quality improvement intervention within a 6-12 month timeframe.

What is my role?

Your role is to identify ST3+ trainees, within the specialty with which you are working, encourage them to participate in this new extension of the LTMD programme and explore how best to make this work. The trainees will need information about the programme, and training in QI methods, some of which they may be able to be access through your own expertise, experts within their region and/or may be provided by the LTMAD project team (see below). We will also need your help with collating a local register of the projects and with evaluating the success of the initiative. Beyond this, we are looking to build local networks of skilled quality improvement practitioners, who are able to collaborate and support both trainees and other members of the multidisciplinary team. At the end of the process, we hope to have a national or local event to celebrate successes and share learning.

Royal College of Physicians **HQIP** Healthcare Quality Improvement Partnership

Timeline

Aim	How?	Time-frame
All trainees to do a QIP during the year	Provided with resources and supported by a supervisor	March 2016- March 2017
Expectation set by local leads	Possible Powerpoint presentations to ST3+s	May 16 – June 16
Local training in QI methods for ST3+ trainees	Possible face to face presentations by new QI leads and/or clinical lead	June 16- Sept 16
Each trainee to identify a national clinical audit measure as a baseline for their project (work on own, in small group)	Think about what is not working, Trust's quality agenda Multi-disciplinary team approach	Sept/Oct 2016
Each trainee to start to develop an understanding of the framework	Read the LTMD tool kits, review the website and learn about QI projects already done	Sept/Oct 2016
Getting started	Identify your supervisor Complete the project plan Submit project title to JRCPTB central database	Oct/Nov 2016
Complete project March 2017	Present regionally with potential national presentation. Complete impact assessment tool (QIPAT).	March 2017

How do they do it?

We suggest they test their idea using the Model for Improvement and a simple structured framework such as Plan, Do, Study, Act (PDSA). However, other QI methodologies might be explored dependant on context of the improvement activity.

What resources are available?

Network of leaders

We intend to set up a network whereby the leads in each of the pilot areas can exchange ideas and learn from each other. The form and format of this will in large part be determined by the needs of the leaders themselves. The network might start, for example, with monthly WebEx sessions.

Website

Learning to Make a Difference website– there are lots of resources including trainee and supervisor packs on how to get started as well as examples and films of trainees talking about their projects and their experience of Learning to Make a Difference. There are project planning, final report, Powerpoint presentation and poster templates. There is also the QIPAT assessment tool for evaluating your work. All these templates are also on the eportfolio.
http://www.rcplondon.ac.uk/projects/learning-make-difference-ltmd

Twitter

Follow #LTMAD to find out when the latest news and to get updates on the Learning to Make a Difference programme. Trainees and supervisors can also submit project queries using this hashtag for fast, expert advice.

Newsletters

Bimonthly newsletters provide another means to share LTMAD developments and events.

You are always welcome to contact the Learning to Make a Difference team. You can e-mail the Project Coordinator, Ravnit Hunjan-Ruprai Ravnit.Hunjan-Ruprai@rcplondon.ac.uk or call her on 020 3075 1210.

Appendix 3 – Examples of quality improvement projects presented at the RCP showcase (July 2017)

1   Delirium in the emergency department

Dr Chris Miller, ST6 geriatric / general internal medicine, University Hospitals of Leicester NHS Trust

Standards: *Assessing for Cognitive Impairment in Older People Clinical Audit 2014–15*, Royal College of Emergency Medicine (RCEM) clinical audits, 2015; *Delirium: prevention, diagnosis and management*, NICE clinical guideline CG103, 2010; *National Audit of Dementia: care in general hospitals*

Achievements: There was improved recognition during initial assessment. The median delirium incidence rate was 2.0% (range 0–8.0%), well below the expected rate of 7–20%. The median rate improved to 13.5% (range 5.0–21.3%) after the introduction of the screening tool. There was an improved and easier method of requesting necessary investigations. Delirium awareness in the emergency department improved. There was an increased profile of delirium across the trust and beyond.

Learning: There was more learning around the process of devising and implementing change, interacting with 'key stakeholders' to gain their engagement, consulting with the staff who would be affected by any change and leading change 'from the front line' have been fascinating. There was resistance at times from senior colleagues who seemed not to fully understand the problem and were reluctant to accept that there was one. This tested my resilience and resolve, at times making me feel there was little point in continuing. By providing good quality data, patient experiences and incidents highlighting the problem within the trust and elsewhere, I was able to reach negotiated outcomes, resulting in improvement in intended outcomes.

2   A multiprofessional approach to earlier discharge post non-ST elevation myocardial infarction

Abdul Hameed, cardiology ST6, Castle Hill Hospital, East Yorkshire

Standard: NCA data describe primary percutaneous intervention (PCI) as the default treatment for ST elevation myocardial infarction (STEMI). It was recognised that there had been less focus on patients presenting with NSTEMI.

Achievements: Multiple plan, do, study, act (PDSA) cycles with involvement of the multidisciplinary team resulted in improvement of timing of discharge from 50% after 5pm to 100% before 5pm and >50% before 3pm.

Learning: Difficulties to get people to recognise that they can all contribute. Initially it was a blame game, eg the SpRs were told it was because the echocardiograms were not performed, or the physiotherapists stated that the nurses were not doing the occupational therapy referrals; checking that enthusiasm is maintained, and that data are being gathered as agreed; and the value of showing everyone the results, and that small changes can achieve results.

3 Why are outcomes for fractured neck of femurs (NOFs) sustained as inpatients worse than those who present via the emergency services?

Dr Amina Malik, Dr Rizwana Malik and Dr Ellen Paling, Heartlands Hospital, Heart of England NHS Foundation Trust, Birmingham

Standard: NICE guideline: *Hip Fracture in Adults*, CG124, June 2011 (updated May 2017), www.nice.org.uk/guidance/cg124.

Achievements: This project is underway; there is an increasing understanding of the variation in practice locally and we are devising a new multidisciplinary clinical pathway to address this.

Learning: Understanding that in order to make any significant improvement to the care of patients with inpatient NOF fractures, there is a need to adopt a multidisciplinary team approach. This involves having open and honest discussions with nurses, doctors, radiologists and the surgical team, and educating them about their individual roles in ensuring that inpatient NOF fractures are dealt with quickly and effectively.

4 Improving the management of steroid induced hyperglycaemia (SIH) in hospitalised patients

Dr Punith Kempegowda and Dr Alana Livesey, University Hospitals Birmingham NHS Foundation Trust

Standard: Joint British Diabetes Society for inpatient management and the audit standards set out in their guideline (www.diabetes.org.uk/Professionals/Position-statements-reports/Specialist-care-for-children-and-adults-and-complications/Management-of-hyperglycaemia-and-steroid-glucocorticoid-therapy-October-2014/).

Achievements: While nursing education resulted in improved monitoring, interventions for junior doctors coincided with reduced incidence of SIH in our quality improvement project (QIP).

Learning: Short and focused educational intervention resulted in good retention and a significant improvement of knowledge regarding SIH among junior doctors. While each intervention helped to improve some aspects of SIH management, it was a combination of all interventions that resulted in overall improvement. This reiterates the importance of designing interventions to include all members of healthcare staff who might be involved in the management.

Appendix 4 – A summary of the trainee viewpoint

(All quotes are in italics.)

What is the current experience of registrars?

'Too much like projectitis'

'It's all about what is in the curriculum, assessment drives learning'

'There is just ARCP confusion with QI and clinical audit, so we do clinical audit, or rather just data'

'it's still tick box'

'it was set up for CMTs but then you get to being a registrar and it's like there is a gulf'

'there is not time [to] *do it'*

'consultants are the blockers'

What works in getting started?

'It's all about alignment, if it is in the curriculum and ARCP that is where it needs to start'

'If a consultant facilitates this then that is a major hurdle overcome'

'you just want to be helped, it can be so difficult, audit departments don't want to know, just register a title, and then what do you do?'

'having someone prompt you, ask how you are doing, well then you know it matters'

'that someone might actually look at it, and what you are doing might make a difference'

'Having your QI idea is not enough. You have to win over hearts and minds of real people. Along with crystal clear communication it is often the human element that determines the success of QI. The point where you have "failed" is probably the key target for your efforts.'

What are the barriers that get in the way?

'There just isn't enough time'

'Time to do anything but service is the first to go'

'I want to do it but when?'

'I keep moving, it means I never seem to finish anything, and no one seems to care if I don't, except me'

'you can't sustain anything if you keep moving on'

'the data collections can be so big, it's just exhausting, it won't make a difference anyway'

'to be honest I am just not that interested in this'

'research is more what I want to [do] than this QI thing'

'behaviour of royal colleges and JRCPTB because it's now mandatory and therefore has made QI into a tick box exercise as opposed to interesting and organic'

'it fails because everyone is doing it and only half-heartedly because they're not passionate about it. The mandatory element of it is really killing it. Before there were a small number of successful projects because of passion. What if this is not something you want to do?'

What would make a difference to improve quality improvement in action?

'It's what is role modelled by consultants, that is what makes the difference'

'It's all about the culture where you are'

'if there is a QI mindset then it happens'

'it's being somewhere where they see the importance of continually looking at data and monitoring changes'

'you need to get others on board. Work with small scale changes'

'if you can know how to find national clinical audit data to use for ideas'

'really understand about sustainability'

'engaging other specialties is very challenging; early and wide engagement is crucial'

'need time and persistence/perseverance'

'If deliver wins then more people will come on board'

'recognise and reward'

'make time in the job plan to do it'

'don't do it alone, do it in groups'

'supervision is critical – the quality of supervision'

Appendix 5 – A summary of the consultant viewpoint

(All quotes are in italics.)

What is the current experience of registrars?

Registrars need to do audit for their ARCP:

> '*The way "audit" is interpreted at ARCP panel causes twitchiness*'

'*ARCP requires registrars to "do an audit". The way "audit" is interpreted at ARCP panel causes twitchiness.*'

'*Registrars are all given audits by consultants. If NCA it's often a case of "here's the data, go and do it".*'

'*You get the impression they just have to do it for box in e-portfolio.*'

'*Most audits by trainees do nothing, change nothing and are just a tick box.*'

'*Use of trainees by consultants or departments has been to use trainees to do the data collection.*'

'*No feedback and nothing changes. We need to bridge the disconnect.*'

It can be hard to motivate registrars:

> '*SpRs have no personal motivation to get on with QIP when they are left alone*'

'*Very few of them have done a QIP or an induction to it. QIP is seen as extra work.*'

'*Rota shortages compound the problems – registrars can be covering delivery almost constantly.*'

'*Clinical duties take priority. They may not be in post long enough to complete an audit cycle.*'

'*They are given stuff to do that is not most relevant to their everyday practice and that is often not very interesting.*'

'*Individual registrars can be enthusiastic but then they hit obstacles – the project killers – and they become demotivated.*'

Need to build registrars' skills:

> '*The world has changed; skills required / should be embedding are different from past training*'

'We need to build registrars for the future ahead and what they have to deal with. There should be emphasis on leadership development – these docs are going to be leaders of future and start to acquire skills earlier on. Confidence in leadership roles and attaining goals is a massively under developed skills in trainees. They can get bored and disaffected as a consultant. It's a hard lesson to learn but must learn it, need to learn it early though – otherwise will wobble as a new consultant – learn about business case, connection management and leadership, extra responsibility.'

What works in getting started?

Set expectations:

'Give clear learning objectives and support infrastructure around QI'

'Objectives need to be set out at the beginning of the year: terminology and QI methodology; secondary leadership, management.'

'All trainees need their syllabus to reflect terminology and methodology and increased sophistication of QIPs [quality improvement projects] *so that by the end of training they can lead QIPs with other members of the multidisciplinary team.'*

Provide access to training and support:

'Where QI was more established, I could use existing QI champions and plus I had a number of "go to people" that are QI experts for help and advice for methodology'

'In other places there was a QI suite of training offerings relevant to where doctors were in their training. Others sought to bring different training together (eg the RCP, the deanery and the specialist society). RCP QI training day has helped one lead to get two to three supervisors QI trained. Having access to funds to support training also helped. However there is a danger of a lack of coordination. Another lead commented there are lots of different bodies [that] *want you to join them as QI member. They are doing the same sort of thing but not in a concerted way. Some advantage to lots of noise in the system but so many strands are distracting.'*

Enable an understanding of using NCA:

'Using NCA as catalyst and identifying that if performance is not a trigger to QI then what is?'

'What is the point in collecting all the data and doing all the work if we do nothing with it? Having NCA and not using it is pointless. Eye opener for trainees as they think more about little and often improving, often need more time, often not simple; this is learning in its own right. I agree that this is a real opportunity for the SpRs, the leaders of the future to learn and participate in renal related projects which will make a difference. This would tie together extremely well with the KQuIP model.'

Making QIP visible:

> *'Across academic year – "showcase" group presentations for peer review. Get report from each directorate/division to trust board level and what activity should be.'*

Supportive leadership:

> *'Consultant/registrar with a good idea and it's taken up – it's the leadership thing, interested consultant and support, and some energy and authority to get it moving and deal with all the blocks.'*

What are the barriers that get in the way?

A lack of time:

> *'There is just no time to do this … it's all about service'*

> *'QIPs are not mandated, if it's not mandated then they don't have time to do it. If it's mandated they can then negotiate the time. Only way to get training is to mandate it eg >60% attendance at ARCP. We have to mandate so can protect it and can get time for it. When something is new and unfamiliar it needs time to get going and regular slots too.'*

Not enough team time:

> *'Lack of time when you are free and other teams/departments/people are free to get together. Don't have time together, don't come together as a team. On the current programme there is only 1 study day a year allocated to training. The trainees do not see themselves as a network that can do something together in same way as the trainees previously.'*

Not enough skilled support:

> *'Consultants do not understand clinical audit and QI – they think it does not involve enough numbers – measuring small numbers for a pattern and they don't get it'*

> *'A barrier was the "angst of consultant colleagues not trained in QI themselves". The concept of QI has only been in place a short time. If it was across enough trusts then it wouldn't be such a big problem. Senior colleagues need to have training. They are uncomfortable to supervise something and not know what to do when you don't have the skills. Unclear who the Q community are. Who are they, what do they do? You cannot depend on one person doing it all and keeping the momentum going – need a systematic approach and the structure to underpin it.'*

Unsupportive/hostile colleagues:

> *'TPDs were not hugely supportive as this was seen to be extra work and would mean they'd have to drop doing an audit'*

'Personality clashes. Too many territorial people. Own department feels like a brick wall. Trainees have been griping.'

Ineffective use of resources:

'Improvement academy comes if invite them. They parachute in and then move on which isn't sustainable. Irritated by this because managers identified two areas to improve but not use the expertise within and there's a sense that it's "done to us" not "with us".'

Lack of value attached to quality improvement:

'There needs to be recognition of QI – recognised in career development as much as research'

'Truly participatory QIP – could be part of an MD or PhD. And recognised by specialist associations. Pay more than lip service, not just a tick box. Some reflection at national conferences and regional programme directors. Surgery talk above improvement work but not QIP – not attach value to processes. All about research, generating new knowledge and not applying current knowledge.'

Conflicting priorities:

'This could be within trusts, for example there was a merger with different hospitals having different approaches. One embraces trainee ideas and the other mandates top down for QI. Also there can be tension between trainee and the team interest. Each directorate has an area of concern; have QIP to which trainees can come; if bright idea and that fits, then great; probably get a lot more out of it if can fit in and be part of existing activity.'

What would make a difference to improve quality improvement in action?

Quality improvement should be part of the curriculum:

'QI needs to be explicit in the ARCP decision aid re clinical audit and QI'

'One of the things that is crucial to CMTs is "I have to do a QIP" and if we made it mandatory for registrars that would change a lot. I'd like to start earlier on. Involve QI in medical student's degrees in med school. Emphasise leadership skills, management etc. QI should appear on the school board agenda. All schools should have someone on board for taking on lead for QI training – they would go to HoS, PGD meetings. What should be in that person's delivery agenda – training package for ES, develop regional days to present, to develop a registry of go to QI experts across the region, dictate as part of the induction of trainees, induction to QI. Until at least it is a well recognised skill set from medical school. All trainees need their syllabus to reflect terminology and methodology and increased sophistication of QIPs so that by the end of training they can lead QIPs with other members of the multidisciplinary team.'

Protected time for training:

'QI should not be supernumerary'

'More protected time for training – maybe training days can be incorporated into regional teaching days? Time allocated to training days when everyone can be together. With approval of TPD; rota with clinical leads. Specialist societies should run training for all high level staff. Set and maintain standards and deliver results. Not sure if national courses across difference specialties help; learning with a specific project is better.'

'Use of regional networks – Key for renal is how we use KQuIP to enable as much as possible embedding QI in registrar training and using it for QI. QI training day by the trust here for consultants was sold out.'

Simplify the language:

> *'Language of clinical audit and quality improvement is very important as it confuses'*

'Make the connections, not distinguish between CA and QI so much – they are the same! Focus on the change even though that is the hard bit. Just ditch the jargon around QI and CA as it gets in the way. Makes us feel something is light years away as opposed to just keeping it plain and simple / in more day-day terms – eg "make things work better" and "improve service".'

Need to build support across the trust:

> *'There should be an education programme with admin, trainers "to go to", training and delivery of training'*

'More QI training. Educational supervisors need to get involved in, an interactive group. Senior permission / buy in and recognition is important. Senior colleagues need to have training. Programme directors set importance. Each trust should identify a QI lead – therefore regional Programme director and QI leads and network leads and KQuIP could start to build a support network. Each trust renal unit has a clinical lead – if also had a QI lead (one consultant, one multiprofessional) then registrars could link with these. SpR club – could have important role in helping this. So end up with explicit infrastructure – involves registrars in it as well, a waste not to use them, fantastic resource.'

'You need a lead consultant to aid the supervisors in training. The new intake of trainees' orientation is a good place to start. Cohort of registrars with experience and use them. Trusts must have the right supportive infrastructure in place. They have clinical governance leads and clinical audit teams. Trusts need to transform existing architecture to deliver QI, and clinical audit is a subset. The lead need not be an expert but coordinator of admin. Need staff to lead and guide QIP in which trainees participate. Ensure we use existing audit leads and QI leads plus have a number of "go to people" that are QI experts for help and advice for methodology. You cannot depend on one person doing it and need systematic approach and structure to underpin it.'

Role of trust clinical audit departments:

> *'Is the audit department a place that trainees/registrars naturally turn to? Not really'*

'I just do not know where to turn to for advice. This includes the trust audit department. They work well with NCA but they have had cuts and cuts and do not have the manpower, nor the expertise, not a massive profile in the trust. They are stretched financially. Maybe they should change their name/come out and offer to help. Most junior doctors do not know who to talk to when these departments could be really help. However, do they have enough capacity? Almost invisible in the trust at the moment, but what resource do they have and what is their role? I would Love to say there is a role but they are very unhelpful. They have a lack of resources to aid management of projects. They have an electronic system that logs and email reminders about reports. We'll use the system but there is no other support. There are many trusts who say they're engaging in QI but in reality it's not embedded. The trust struggle with registering and archiving the work and need a repository.'

Need to get the whole team involved:

'This is not just a doctor activity'

'The training programme director is the key in driving this forward. Getting QIPs and the methodology embedded and get the whole team on board is important. Big piece of work here – team building, getting the entire multidisciplinary team involved, CMT struggle with this. Will take a mind shift to get there as it's not truly a multidisciplinary team thing yet.'

Think about regional networks:

'Training a community of people on how to do QI, for example the Q community – start making regional networks in place'

'Bring into AHSN QI/Q links. Use social media. How can this link with NHSI resources, how to manage data, spreadsheet templates, through groups online etc. Need regional support as registrars rotate.'

Need examples to follow:

'Examples of projects to demonstrate that little and big things can make a difference'

'Need to give examples of how it could work in a highly functioning trust and take it and apply it to own.'

Quality improvement needs to be local:

'Got to be local with local adjustments'

'Although might be system wide, it's got to be local. Got to be flexible. There is still a place for NCA and global improvement but bring it back to local improvement, implementing and making it sustainable.'

Make quality improvement a job requirement:

> *'Emphasising the importance of quality improvement for future career goals and a critical skill is key'*

'Put it in educational supervisor accreditation; something for ARCP supported courses; It is not unreasonable to be expected to demonstrate how you have improved an area of service – service can have a broad definition eg delivery of education. The message needs to be if done a QIP more likely to get a consultant appointment. Look to GMC and expect ability to do, and support, a QIP is part of the role of the educational supervisor.'

The role of the RCP:

> *'RCP role in QI should be to be a champion for medical QI'*

'Maybe the RCP could do more – consultant training etc.'

Need for perseverance:

> *'QI ticks the box has demotivated trainees'*

'Need more joy in your work. Do not know what they are missing. If they feel that negative as a registrar real worry as a consultant. The way to change is for the guys coming up and being trained in it. We must emphasise the advantages, and that things will get better.'

References

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