ACADEMY OF
MEDICAL ROYAL
COLLEGES

Quality Improvement – training for better outcomes

Key findings from the report
March 2016

Contents

Introduction

Almost a decade ago, the improvement science experts Paul Batalden and Frank Davidoff, argued that if healthcare was to achieve its full potential, 'change making' had to become an 'intrinsic part of everyone's job, every day, in all parts of the system'.[1]

In the years since their now widely quoted editorial was published, the profile and stock of quality improvement in the UK has undoubtedly risen. But there is still much more to be done. There are plenty of organisations in which quality improvement remains a marginal activity, undertaken by a few isolated enthusiasts with scant support. Elsewhere, a greater familiarity with common quality improvement tools and techniques has not been accompanied by a clear understanding of how to drive and sustain change in a complex system.

This Health Education England (HEE) and Health Foundation sponsored project led by the Academy of Medical Royal Colleges aimed to provide a robust structured framework to embed improvement methodology as a core competence in practice for all doctors. It has identified strategic and supporting infrastructure required to build reflective and enthusiastic improvers, and professional and personal resilience in doctors in training. The long term aim is to increase capability and capacity across the workforce for healthcare teams to make a positive difference to delivering safe and effective patient care.

This document outlines the key findings from the work. The full report can be found on the Academy website, www.aomrc.org.uk. A map of available quality improvement resources may be found here http://bit.ly/1QqOXYm. A selection of quality improvement training case studies are available here http://bit.ly/217PxiT, together with fuller details of the inter-professional education methods listed on the interactive map. 'Talking Points' on the debate of clinical audit versus quality improvement, patient involvement, senior clinician engagement, parity of esteem of quality improvement with research, time to do improvement, and quality improvement and sustainability are interwoven throughout the full report.

> "If we are to create a health service of committed improvers, who are ready and willing to make change happen then we need to engage professionals in quality improvement at the very start of their training. Moreover, we need to ensure that they are used to working collaboratively both with people in other health professions and roles, and, crucially, patients."
>
> Penny Pereira, Deputy Director of Improvement, The Health Foundation

"There is a win-win here for doctors in training, the organisations in which they work, and our patients by engaging a large proportion of the healthcare workforce with quality improvement at an organisational level, while offering opportunities for doctors in training to undertake activities that we know will prepare them for future leadership roles and responsibilities."

Patrick Mitchell Director of National Programmes, Health Education England

Stakeholder organisations

All four countries of the UK have been involved in this work, with representation from 35 organisations made up of patients, trainees, experts in the field, and those actively involved in quality improvement work. The stakeholder organisations are listed below, and all members of the task and finish group are listed in Appendix 1.

Academy of Medical Royal Colleges	Medical Students
Academy Patient Lay Group	National Medical Director's Clinical Fellows
Academy Quality Improvement Group	NHS Education for Scotland
Academy Trainee Doctors' Group	NHS England
Association for the Study of Medical Education	NHS Improving Quality, moving to become part of NHS Improvement
BMA Junior Doctors' Committee	NHS Employers
Centre for Sustainable Healthcare	Public Health Wales
Council of Deans of Health	Royal College of Anaesthetists
Conference of Postgraduate Medical Deans (UK)	Royal College of Obstetricians and Gynaecologists
Faculty of Intensive Care Medicine	Royal College of General Practitioners
Faculty of Medical Leadership and Management	Royal College of Midwives
Faculty of Public Health	Royal College of Nursing
Future Focussed Finance	Royal College of Physicians
General Medical Council	Royal College of Surgeons of England
Health and Social Care Northern Ireland	Scottish Deans' Medical Education Group
Health Education England	The Health Foundation
Joint Royal Colleges of Physicians Training Board	UK Foundation Programme
Medical Schools Council	

Acknowledgements

The work was commissioned by the Joint Academy Training Forum, and the Task and Finish Group was chaired by Dr Emma Vaux. Sincere thanks are extended to all members of the Task and Finish Group and their employing organisations. The work was funded by Health Education England and The Health Foundation. The NHS IQ Advancing Change Team also designed and funded the accelerated learning event. We are grateful to the team from the Faculty of Medical Leadership and Management Trainee Steering Group Think Tank, who undertook a survey of junior doctors' views on their current experiences of quality improvement. We wish to acknowledge the contribution to the talking points by Francis Mortimer, Medical Director, Centre for Sustainable Healthcare, Paul Sullivan, Consultant Acute Physician and Health Foundation Improvement Fellow, Tricia Woodhead, Health Foundation Improvement Fellow and Improvement Advisor and Associate Clinical Director for Patient Safety West of England AHSN, and Jocelyn Cornwell, Founder and CEO, Point of Care Foundation.

'The goal is not for patients and carers to be the passive recipients of increased engagement, but rather to achieve a pervasive culture that welcomes authentic patient partnership – in their own care and in the processes of designing and delivering care. This should include participation in decision making, goal-setting, care design, quality improvement and the monitoring and measuring of patient safety' [2]

Quote from the Berwick report, 2013, chosen by Peter Rees, Patricia Peattie and Derek Prentice. Academy Patient Lay Group members.

Executive summary

> "In order to practise medicine in the 21st century, a core understanding of quality improvement is as important as our understanding of anatomy, physiology and biochemistry"
>
> Stephen Powis, Medical Director, Royal Free London NHS Foundation Trust, 2015

Through new medical science and models of delivery, the systems and reliability of healthcare provision have become more complex – something all too obvious to the staff. Professional training has traditionally, and not unreasonably, focused on the specific clinical skills and knowledge of medicine, rather than knowledge of how to work on the system in which it is practised. To equip professionals to respond to such challenges needs the embedding of improvement methodology as a core competence in practice for all doctors. Quality improvement does make a difference. The outcome will be the continuous improvement of patient care, creation of a more capable and resilient workforce, together with financial, social and environmental sustainability.[3,4]

Until now, trainee involvement in quality improvement has largely been through clinical audit. However, this has become something of a token effort, and, to a large extent, simply data collection. There is a need to move from this traditional approach to implementing repeated real-time measurable changes using quality improvement methodology. Many colleges and medical schools have recognised this, and are implementing curricula enabling trainees to develop improvement science capability. The availability of support and facilitation to implement quality improvement at regional and/or organisational level across the UK varies from a 'smorgasbord' of great practice to being patchy at best. Many senior doctors, and the multi-professional team within which they work, are new to the idea of improvement as a systematic methodology.

The Academy of Medical Royal Colleges has drawn together a wide range of stakeholders, to align efforts to implement quality improvement training as a core competence in practice. Experience, expertise and insight have been gained from many different organisations – clinicians and non-clinicians, and most importantly patients – providing a richness and momentum to efforts to enable all trainees (and senior clinicians), and so their patients, to benefit from developing this capability. The vision has been to provide strategic direction to the content, resources and supporting architecture on all matters relevant to training in quality improvement for undergraduate and postgraduate trainees.

The key recommendations are:

- A progressive curriculum in quality improvement activity should underpin all training stages of a doctor, building capability and leadership, and a foundation for on-going lifelong learning and implementation
- Quality improvement should be integral to all clinical and non-clinical job descriptions and appraisal, and career recognition given for quality improvement achievements
- Patient involvement should be advocated and included at every level with recognition that this may be achieved in a variety of ways
- All trainees, and their trainers and multi-professional teams with which they work, should have access to quality improvement training

- Quality improvement activity should be supported at all levels, locally, regionally and by royal colleges and specialist societies in the form of enabling 'core' quality improvement support aligned with existing educational structures to permit expert facilitation, coaching, mentoring and inter-professional learning, with protected time to undertake it
- Health and social care executives and non-executives should role-model best practice quality improvement approaches and create an open culture with the focus on learning, ownership and accountability rather than reprimand, as this facilitates a quality improvement culture
- A repository of quality improvement activity should be established to empower learning and sharing
- A stakeholder group should be established under the auspices of a national body such as the Academy of Medical Royal Colleges to align planning in quality improvement activity by key stakeholders and topic experts for the long-term, that is applicable to everybody, and to contribute to improving patient outcomes through education, training, research and collaboration.

The ambition has been great, and it is acknowledged that the recommendations are not exhaustive. They are the starting point and need to be brought to life through their practical implementation. By providing support for partnership working and fostering collaboration with the relevant stakeholders and organisations, the Academy of Medical Royal Colleges aims to ensure that the momentum created by this work is maintained and the report's recommendations are put into practice. The long-term aim is to reduce the variability between organisations' capabilities, and to ensure that work is coordinated at all levels throughout healthcare to build quality improvement into its foundations and at its core.

"If I'm being entirely honest I think we as doctors, perhaps not surprisingly, slip back into the medical model and the medical conversation, and the big challenge is truly to listen to other members of the multidisciplinary team. So it has to be learning together within teams that include patients and carers, with no hierarchy.

In no way do I underestimate the challenge, but this is both exciting and important work."

Professor Dame Sue Bailey, Chair of the Academy of Medical Royal Colleges

"One of the great lessons about quality improvement is that it isn't only about patient benefit. Good patient services lead to happier and more contented staff – it's an all-round win situation."

Derek Prentice, Academy Patient Lay Group

A four nation approach

"Scotland's globally recognised quality improvement and patient safety work would not have been possible without a focus on quality improvement training at every level. We have much more to do and I welcome this report to further drive up standards and consistency of quality improvement training across the UK".

Professor Jason Leitch, National Clinical Director, Scottish Government

"Building improvement skills and giving staff opportunities to change systems and processes of care has fuelled our progress in quality improvement & safety across Health and Social Care. This report will be an important guide on our journey. The call for a "progressive curriculum in quality improvement … building capability and leadership" embodies the thinking behind our Quality 2020 Attributes Framework."

Dr Gavin Lavery, Clinical Director, Health & Social Care Safety Forum, Northern Ireland

"Wales, like many nations, has been involved in quality improvement for some years. We have started to teach quality improvement methodology at undergraduate level and widely across the health system and welcome this report's ambition to increase the exposure doctors in training have to quality improvement. There is no doubt that a step-change in capacity and capability is needed for quality improvement in healthcare to have a big impact on the Triple Aim, and this report is a welcome and important step on that journey."

Aiden Fowler, Director of NHS Quality Improvement and Patient Safety/Director of 1000 Lives Improvement Service, Public Health Wales

"Education and training interventions can actively improve patient safety. There is a real need for a systematic approach that uses learning tools effectively, both for short term reduction in risk to patients and also to build a long-term, sustainable learning environment within healthcare that is centred on patients and on the need for the safest care possible. Getting it right involves instilling the right culture from the very beginning of a healthcare worker's career. This report gives us direction as we navigate the way forward together."

Patrick Mitchell, Director of National Programmes, Health Education England

Definitions

Quality

'Patient care that focuses on safety, effectiveness and patient experience'

NHS Constitution for England 2015 [5]

These dimensions of quality are echoed in 'The Healthcare Quality Strategy for Scotland 2010',[6] Our Quality Strategy for 2015-2018' in Wales,[7] and 'Quality 2020' in Northern Ireland [8]

Quality Improvement

- Using understanding of our complex healthcare environment
- Applying a systematic approach
- Designing, testing, and implementing changes using real-time measurement for improvement
- To make a difference to patients by improving safety, effectiveness and experience of care.

Quality Improvement education

Develops our capability and resilience to put quality improvement into action through acquisition, assimilation and application of:

- Knowledge in improvement science, systems and measurement
- Skills in managing complexity, leading change, learning and reflection, and ensuring sustainability
- Training in human factors that impacts those capabilities
- Involvement of patients throughout the process.

Outline

This Health Education England and Health Foundation-sponsored work led by the Academy of Medical Royal Colleges aims to provide a robust structured framework to embed improvement methodology as a core competence in all doctors. By looking at four themes required to produce this framework (quality improvement curriculum development, quality improvement education and learning, strategic and supporting infrastructure at multiple levels, and resources (Figure 1)), it has identified key requirements for building reflective and enthusiastic improvers, and professional and personal resilience in doctors in training. The overall aim is to increase capability and capacity across the workforce for healthcare teams to make a positive difference to delivering safe and effective patient care.

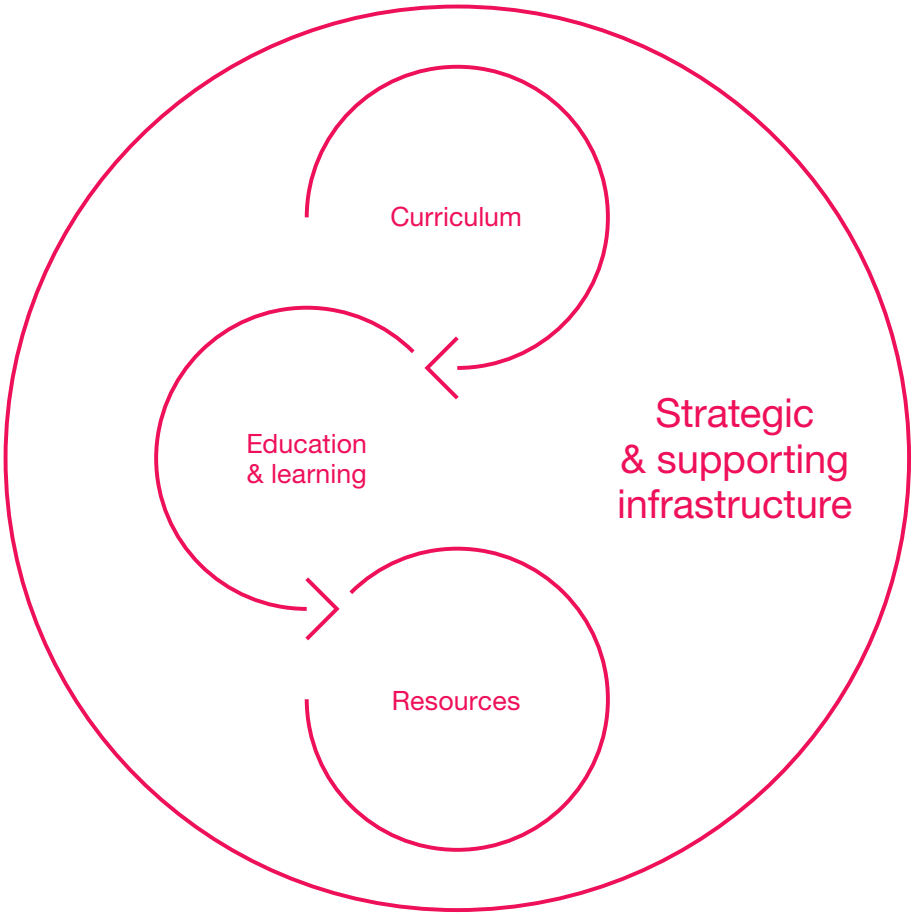

Figure 1: The four work streams involved in this work

> "We should start with the patient. It is important that quality improvement starts with what is important and not with what is easy to address"
>
> Patricia Peattie, Chair Academy Patient Lay Group

Work stream 1:
Quality improvement curriculum

The aim was to develop an approach to quality improvement learning that would start at undergraduate level, and then be developed and enhanced as an individual moves into postgraduate education and practice in the workplace. Whilst the primary focus of this work has been on medical education and training, the intention is that this can easily be applied to the training of other health and social care professionals.

Recommendations

Development of quality improvement curricula

The knowledge, skills, and values & behaviours required within a quality improvement curriculum at all levels of training are described in Figure 2.

"It's very exciting; I think it's just a beginning of the platform for where we go next – consistent quality improvement delivery through specialist curricula and beyond into consultant practice. One of the key things for me is the power of an alliance between GMC moving towards mandating quality improvement training as part of the generic curriculum, and the Colleges working together through the Academy to develop and mutually support consistent quality improvement training.
In the Royal College of Anaesthetists we have an active programme of training days to support trainers. In this the emphasis is to build knowledge, confidence and enthusiasm; including the challenge; 'when the GMC mandate our QI module, *how* will you deliver it? Not, why we can't do it, or the difficulties with it."

John Colvin, Consultant in Anaesthesia and Intensive Care Medicine and Associate Medical Director for Quality Improvement in NHS Tayside and Hon. Senior Lecturer at the University of Dundee

	Knowledge	Skills	Values and Behaviours
Undergraduate	Can compare and contrast quality assurance and quality improvement, and describe the relationship of audit and quality improvement to clinical governance. Understands the principles of, and differences between, quality improvement, audit and research. Can describe PDSA cycles, human factors and reporting error.	Has actively contributed to a quality improvement activity (this does not necessarily need to be in a clinical setting)	Has actively contributed to a quality improvement activity (this does not necessarily need to be in a clinical setting)
Foundation		Has taken part in systems of quality assurance and quality improvement, in the clinical environment, and actively contributes to a clinical quality improvement project	Recognises the need for continuous improvement in the quality of care, and for audit to promote standard setting and quality assurance
Core / Basic Training	Describes tools available for planning quality improvement interventions. Explains process mapping, stakeholder analysis, goal and aim setting, implementing change and sustaining improvement. Understands and describes statistical methods of assessing variation.	Designs, implements, completes and evaluates a simple quality improvement project using improvement methodology as part of a multidisciplinary team Supports improvement projects to address issues around the quality of care undertaken by other trainees and within the multidisciplinary team Demonstrates how critical reflection on the planning, implementation, measurement and response to data in a Quality Improvement project have influenced planning for future projects	Demonstrates the values and actively supports quality improvement in the clinical environment
Higher Training	Compares and contrasts improvement tools and methodologies Compares and contrasts the principles of measurement for improvement, judgement and research. Describes types of measures, and methods of assessing variation	Proactively identifies opportunities for Quality Improvement and leads multidisciplinary Quality Improvement project teams with minimal supervision Supervises a Quality Improvement project involving junior trainees and other members of the multidisciplinary team using improvement methodology involving junior trainees Leads and facilitates team-based reflective evaluation of a project	Demonstrates advocacy for clinical quality improvement

Figure 2: Knowledge, skills, and values & behaviours required within a quality improvement curriculum at all levels of training

Recommendations

In forming its recommendations for curriculum development, the task and finish group has identified a number of areas for consideration and potential action by key stakeholders.

To the General Medical Council (GMC):

- The GMC should use the quality improvement curriculum to help inform and be taken into account as part of its:
  - Development of a framework for generic professional capabilities
  - Approval of curricula produced by royal colleges and the UK Foundation Programme Office
  - Quality assurance processes: The development of exploratory questions for quality assurance teams could be a helpful way forward. This would enable teams to investigate and collect data on whether medical students and doctors in training are receiving education on quality improvement.

To the GMC and medical schools:

- The GMC and medical schools should work together to explore whether the recommendations for medical students could feed into any updating of the curriculum for undergraduate medical education and training.

To medical schools:

- Medical schools should consider whether they can design their curricula and assessment systems so that their students can meet the recommendations set out in this report.

To the medical royal colleges:

- Royal colleges should use the recommendations contained in this report to inform the quality improvement elements within the curricula they submit to the GMC for approval.

To those responsible for the delivery of the foundation programme and specialty, including GP, training:

- The relevant bodies should investigate how they can provide training that will allow their trainees to meet the recommendations set out in this report

- Trainers and teachers will need to develop skills in delivering quality improvement education and therefore there is a need to develop competences for quality improvement trainers. Those agencies responsible for embedding quality improvement and leadership within the health system and across the UK could be tasked with developing these
- These bodies should also consider how patients might be able to contribute to the development of quality improvement projects and education.

To those involved in developing assessment systems in both undergraduate and postgraduate medical education and training:

- Those involved should continue to develop robust ways of assessing proficiency in quality improvement, for example, through supervised learning events and professional exams.

Summary

It is clear that there is a pressing need to develop quality improvement learning across the continuum of medical education and training. It is an area that is recognised as important both globally and in the UK. At present, approaches vary both across stages of training and specialties. The intention is for this work to enable education bodies to embed quality improvement education into their current curricula. This will allow them to demonstrate that their curricula will be able to deliver the generic professional capabilities that relate to quality improvement.

Work stream 2:
Education, learning and development

> "No country has produced so many excellent analyses of the present defects of medical education as has Britain, and no country has done less to implement them."
>
> George Pickering, 1956 [9]

This work stream looked at the key principles for effective delivery of quality improvement training, barriers and facilitators to achieving this, different quality improvement methodologies and learning methods, and examples of quality improvement training from across the UK. There was a particular focus on inter-professional education and patient involvement.

The aim was to identify the best methods for providing quality improvement education in a multi-professional environment that has a specific NHS context, is deliverable, inclusive and aspirational.

Recommendations

1. **National policy needs to be clear and loudly stated**

   Everybody needs to understand what quality improvement is, who owns it and what its brand values are. From this we need clear, simple, unified national guidance on how to engage with quality improvement.

2. **Local action needs to be supported, decisive and effective**

   There should be an empowered and adequately resourced local leader responsible for setting the direction of quality improvement education and training. This person should be actively translating national policy into local policy, and vice versa. They should ensure that really robust nationally synthesised data is understood locally, and that crowdsourced solutions are seen and evaluated nationally.

3. **Building capability and capacity**

   Rather than taking quality improvement out of training, existing learning opportunities should be adapted to include an element of quality improvement training, with oversight from the local quality improvement education lead. Identification of individuals trained in human factors and quality improvement to collaborate and develop opportunities for education and training is essential supported by a community of quality improvement mentors who are willing to share ideas, experience and learning.

4. **Modern workplace learning**

   There is no 'one size fits all' approach to quality improvement training and no evidence that one method is superior to another. Pragmatic, integrated teaching and learning practices should be determined locally. There should be no training without evaluation of the methodology.

5. **Innovative learning practices**

   The developing field of inter-professional learning presents opportunities to share tested, and explore new, methods of inter-professional education applied to quality improvement and human factors education.

6. **Quality improvement education needs a research agenda**

   A call to research funding bodies for further work that evaluates the impact of teaching methods and their impact on building individual and team capacity and patient outcomes. The development of core outcome sets (similar to the CROWN [10] (Core Outcomes in Women's' Health) initiative or COMET COMET [11] (Core Outcome Measures in Effectiveness Trials Initiative) for quality improvement training, building upon the work of the Institute of Medicine would allow broader analysis of outcomes in quality improvement.

7. **Patients have significant and diverse contributions to make**

   The patient's voice and experience should be involved at all stages of quality improvement activities, including quality improvement education.

Summary

Quality improvement training needs to become the new cardio-pulmonary resuscitation (CPR). CPR training is universal for health workers, easily learnt and experienced through simulation and experiential learning, usually working as a multi-professional team. Even if not performing CPR, the basic principles can be understood and any worker may be called upon to help if needed. Quality improvement training has as much potential (or perhaps even more) to improve outcomes for patients, as well as deliver greater efficiency and improve experience for patients.

Quality improvement does not happen in a vacuum, it is practical and the way it is taught should reflect this. The learning environment should reflect the real one, despite the inconvenience to our current silo systems.

The value of completing a project must be taught as well as sustainability and how to disseminate learning. Culturally we should learn to acknowledge the importance of learning what hasn't worked as well as what has. We must embrace technology and new ways of learning, where this enhances the experience.

All of this will only be possible with clear national policy, strong local leadership and an infrastructure of support to put both training and quality improvement into action. Those who take the reins of responsibility for quality improvement must deliver a clear vision, which is understandable, digestible and practical for healthcare professionals much more widely than just doctors. Once we have this, the panoply of educational tactics and resources can be brought to bear by local leaders, to ensure that their local and regional quality improvement training and education is suited to their workforce, and more importantly, benefits patients.

Work stream 3:
Mapping examples of quality improvement in practice

This work stream looked at the resource architecture available across the UK, in particular to highlight examples of quality improvement working in practice. The resources identified are not exhaustive. The intention was to enable shared learning, foster collaborative practice, stimulate innovation, highlight expertise and enhance opportunities for quality improvement learning.

The aim was to identify and signpost the resources available to support quality improvement education across the UK, and bring them together in an accessible format.

Recommendation

Promotion of valuable learning and resources on quality improvement that already exist for healthcare professionals through an interactive resource map.

The Academy should consider developing an area of its own website to curate these resources.

The interactive resource map is a useful, but not exhaustive, tool to explore and learn about areas of good practice across the UK, connect people to people, explore informal learning and innovative learning practices and maximise use of resources available. Many valuable resources on quality improvement already exist for healthcare professionals but many people remain unaware of them. An example may be found in Figure 3.

http://bit.ly/1QqOXYm

A selection of quality improvement training case studies are available here http://bit.ly/217PxiT, together with fuller details of the inter-professional education methods listed on the interactive map.

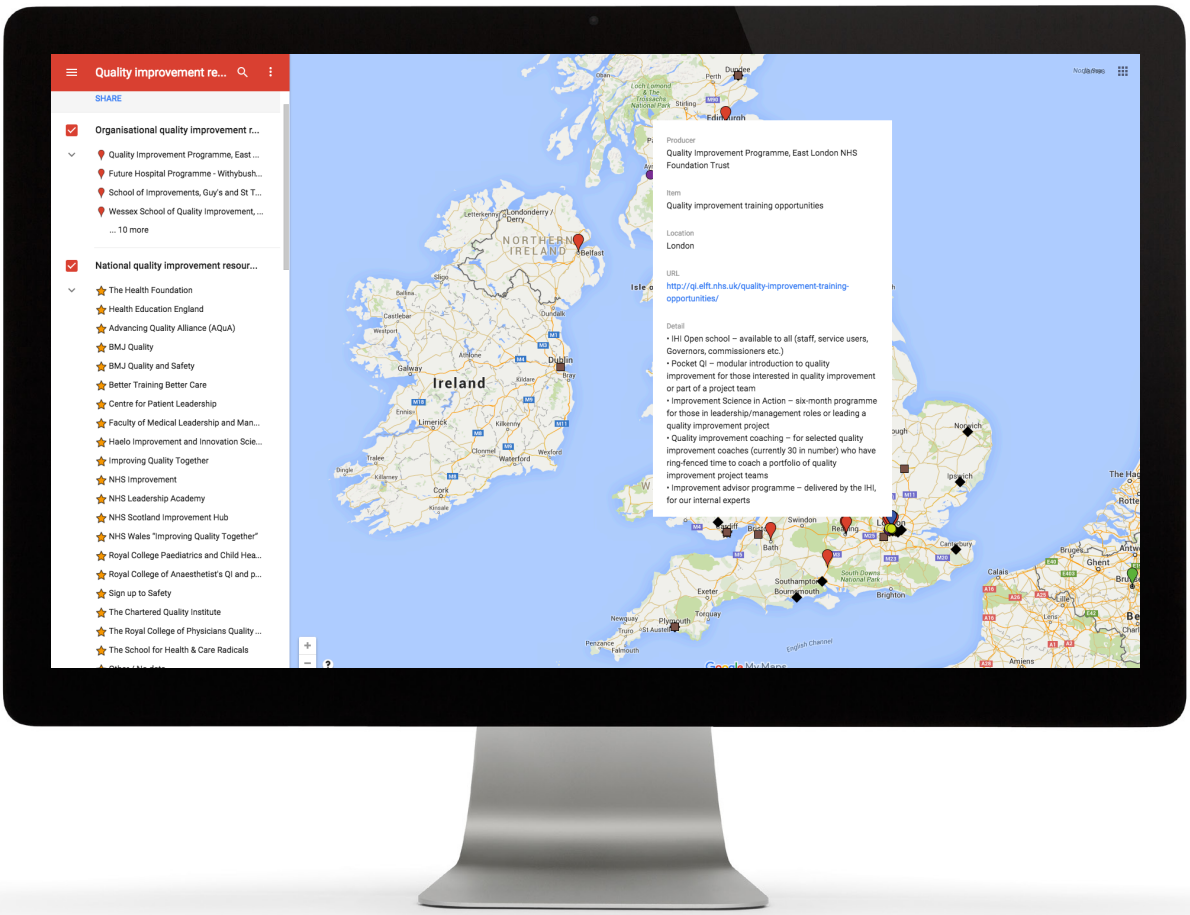

Figure 3: Example of an entry on the interactive map of quality improvement resources

Summary

There is a burgeoning of examples of quality improvement in action at the frontline, of quality improvement training and how learning is spread. The intention of the interactive map has been to capture good practice and share this whilst also illustrating the current network in place across the UK. These examples are not exhaustive but intended to demonstrate what is possible to implement.

> "Organisations can do an enormous amount on very little extra money. We need to engage everyone … there is no point doing all this great work in silos. It is spiral learning in action and we have been remorselessly stealing from others' great work so that we don't reinvent the wheel."
>
> Claire Mallinson, Director Postgraduate Medical Education, Guy's and St Thomas's Hospital

Work stream 4:
Strategic and supporting infrastructure

It is recognised that there are already excellent pockets of quality improvement and capability building, but the widely-held belief echoed in all of the discussions that shaped this work is that the formation of these 'improvement islands' is accomplished in *spite* of the strategic infrastructure rather than *because* of it. The aim of this work stream was to investigate what strategic infrastructure (defined as encompassing policies, people and strategic perspectives) was required for quality improvement education from bodies involved at multiple levels:

- Trust/Health Board (HB): e.g. connecting clinical audit teams to service improvement teams
- Medical schools /LETB /Deanery: e.g. supportive policies and commissioning
- National level: e.g. supportive policies by royal colleges, national guidance etc.

The recommendations have been made to support and grow a receptive environment for quality improvement. Many of these echo and reinforce the recommendations from the Berwick [2] and Francis [12] reports, as well as the recent report from think tank *Reform* which examines the issue of clinical leadership in the NHS.[13]

Recommendations

1. Building capability in quality improvement

- The most successful approach to quality improvement will be as a unified and multi-professional activity which also includes patients
- Establish a stakeholder group under the auspices of a national body such as the Academy of Medical Royal Colleges to align planning in quality improvement activity by key stakeholders and topic experts for the long-term, that is applicable to everybody, and to contribute to improving patient outcomes through education, training, research and collaboration
- This think tank should look at patient involvement as a specific work stream to establish the ways of best enacting this.

2. Training and education

- Quality improvement needs to be in everyone's job description and appraisal
- Quality improvement must be included in undergraduate and postgraduate training to ensure that everyone acquires at least a basic understanding and awareness
- A critical mass of clinical and non-clinical staff should have advanced quality improvement expertise
- A national quality improvement library should be created as a repository of knowledge staff can turn to
- Champion mentorship and coaching schemes should be the norm to support quality improvement in action

- Develop a programme of education and training to assist regulatory/national bodies in understanding the power of using data for improvement
- Develop skills and knowledge to co-design true outcome-based commissioning approaches and align incentives with quality improvement.

3. Leadership and culture recommendations

- For quality improvement to become normalised, executive and non-executive commitment, role-modelling and mentoring is core
- Executives should champion a multi-professional approach and release resource (time) to support quality improvement activity
- Role model best practice quality improvement approaches (e.g. using statistical process control (SPC) in board reports)
- Create an open culture with the focus on learning, ownership and accountability rather than reprimand
- All NHS and social care organisations should have credible quality improvement support in the form of an enabling ‘core’ quality improvement support team
- Local and national bodies including NHS Improvement, HEE and its equivalents, royal colleges and specialist societies should support quality improvement activity and provide opportunities for staff to showcase their work from examples across the NHS
- Patient involvement may be diverse and should be appreciated through opportunities to contribute, collaborate, learn together and lead.

4. Communication

- All NHS staff should share and understand a common language when discussing improvement
- Health and social care and its stakeholders should look towards a more positive approach to communicating their achievements, challenges and learning.

> "We need, as they say, to stimulate, develop and benefit from the latent, untapped talent of clinicians to become 'agents for change' in our system and to take responsibility for making change happen. Most of them will always be clinicians first and foremost, but they should be encouraged and supported to become clinicians able to champion and lead improvement."
>
> Sir Hugh Taylor KCB, Chair, Guy's and St Thomas' NHS Foundation Trust [14]

For these recommendations to be implemented there is a requirement for substantial and co-ordinated leadership from both quality improvement experts and the leaders of national and local bodies, in particular NHS Improvement, the Academy of Medical Royal Colleges, HEE and its equivalents, GMC, royal colleges, specialist societies, deaneries, trusts and hospital boards.

There has been a repeated urging from the authors of and contributors to the referenced reports [2,12] and from the numerous stakeholders engaged with this process that, in order to improve the care we give patients, we need our clinicians to be supported and given the opportunity to develop their quality improvement and leadership skills. Key decision makers need to agree the course together to make quality improvement an individual, local and national priority, to provide strategic direction, to embed quality improvement in professional education and training, and to lead in making continuous improvement part of our organisational cultures. Only by this means will we attain an enabling infrastructure for staff, involving and collaborating with their patients, to lead and succeed in quality improvement.

Discussion

> "To make improvements in front-line clinical care systematically across the NHS, two elements are needed: a greater level of national and local commitment to quality improvement, and resolution of the underlying issues limiting 'poorly' performing organisations."
>
> The Health Foundation Shaping the Future (2015) [15]

This is a much anticipated report which sets out recommendations for quality improvement education and training. There is a wish, a will and a want to enable undergraduate and postgraduate trainees to learn, develop and embed skills in quality improvement in action, whilst being supported and facilitated to do so, but an uncertainty about how this could be done together. Collaboration between a group of influential bodies, organisations and stakeholders has culminated in the development of these recommendations that outline the fundamental strategic direction and key building blocks needed to make this happen at pace. The intention has been to ensure that the recommendations are pragmatic, meaningful, and practical, and once implemented will make a difference.

There was a need to build on existing good practice and the current medical education and improvement landscape, allowing sufficient freedom to enable adaptation and implementation of recommendations to local context. The focus has been the doctor as they progress through their undergraduate and postgraduate training, but always acknowledging that all quality improvement work needs to be multi-professional and encompass other healthcare professionals, managers and executives and not least, patients. The strength of the group has been its diversity and ability to reflect the holistic approach needed.

The ambition was to bring to life and into action the recommendations from recent seminal reports which include Berwick[2] and Keogh.[16] To do so, the foundations outlined in the curriculum recommendations need to be put in place. Capability and resilience needs to be developed through training and experiential learning to get into the improvement habit, as outlined in the education, learning and development recommendations. Strategic direction and the supporting infrastructure is both the blueprint and the glue to make this happen in a coherent way at a scale and pace that is not achievable when we try to do this alone. Examples have illustrated where organisations and/or individuals have achieved success and helps to make sense and give a flavour of what is possible.

The 'Talking points' (these can be found in full report) have addressed some particularly challenging areas that divide opinion, and cause frustration and confusion. The intention of these thought pieces is to try and tackle these issues head on and provide some clarity to frequently-expressed concerns. Exploring how patients may be involved in partnership with healthcare teams is a particular highlight.

These recommendations are the starting point and it is now up to the relevant bodies, organisations and stakeholders to rise to the call to put them into practice. The recommendations are relevant to so many different layers of our health (and social) care and education that the challenge is how to implement them in a meaningful way to bring about the outcomes we desire. In addition, further debate is needed in other areas such as exploring how quality improvement could be enacted as part of revalidation, and how quality improvement activity could be assessed. The Academy of Medical Royal Colleges intends to be a very active partner in enabling this to happen.

Appendix 1:
Task and finish group members and affiliations

Member	Affiliation
Nigel Acheson	NHS England
Richard Berrisford	Royal College of Surgeons of England
Stuart Carney	Medical Schools Council
Jennifer Cleland	Association for the Study of Medical Education (ASME)
John Colvin	Royal College of Anaesthetists
Mark Dexter	General Medical Council
Kim Hinshaw	Royal College of Obstetricians and Gynaecologists
Rosemary Hollick	Academy Trainee Doctors' Group Representative
Rose Jarvis	Academy of Medical Royal Colleges
Elizabeth Jelfs	Council of Deans of Health
Bryan Jones	The Health Foundation
Peeyush Kumar	Royal College of Anaesthetists
Gavin Lavery	Health and Social Care Northern Ireland
Carmel Lloyd	Royal College of Midwives
Dave McKean	Scottish Deans' Medical Education Group and Scottish Government
Patrick Mitchell	Health Education England
Stephen Monaghan	Public Health Wales
Hadjer Nacer	The Health Foundation
Simon Newell	Academy of Medical Royal Colleges
Clare Owen	Medical Schools Council
Philip Pearson	Faculty of Medical Leadership and Management
Patricia Peattie	Academy Patient Lay Group Representative
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Peter Rees	Academy Patient Lay Group Representative
Lesley Page	Royal College of Midwives
Stephen Powis	NHS Employers
Stephanie Reid	NHS Improvement
Toby Reynolds	General Medical Council
David Richmond	Royal College of Obstetricians and Gynaecologists

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Julia R A Taylor	NHS Improvement
William Taylor	Royal College of General Practitioners
Clare van Hamel	UK Foundation Programme
Emma Vaux, Chair	Joint Royal Colleges of Physicians Training Board
Salman Waqar	Health Education England
Helen Winslow	Health Education England
Suzanne Wood	The Health Foundation
Arrash Arya Yassaee	Medical Student representative
Tim Yates	BMA Junior Doctors Committee

Appendix 2: Glossary

ACGME	Accreditation Council for Graduate Medical Education
AoMRC	Academy of Medical Royal Colleges
ARCP	Annual Review of Competence Progression
Audit	A process used by health professionals to assess, evaluate and improve care of patients in a systematic way. Audit measures current practice against a defined (desired) standard. It forms part of clinical governance, which aims to safeguard a high quality of clinical care for patients
AHSN	Academic Health Science Network
CQC	Care Quality Commission
CROWN	Core Outcomes in Women's Health initiative
COMET	Core Outcome Measures in Effectiveness Trials Initiative
FY1	Foundation Year 1 doctor
GMTS	General Management Trainee Scheme
GMC	General Medical Council
GPC	Generic Professional Capabilities for doctors
Health Board	The Scottish provider of healthcare
HEE	Health Education England
HSJ	Health Services Journal
IHI	Institute of Healthcare Improvement, based in Boston, MA
IOM	Institute of Medicine, based in Washington, DC
IPE	Inter-professional education
LETBs	Local Education and Training Boards responsible for the training and education of NHS staff in England
MDT	Multi-disciplinary team
NHS England	An executive non-departmental public body of the Department of Health that oversees budget, planning, delivery and day-to-day operation of the commissioning side of the NHS in England
NES	NHS Education for Scotland, an education and training body and a special health board within NHS Scotland
NICE	National Institute for Health and Care Excellence

PDSA	Plan-Do-Study-Act cycles, part of the Model for Improvement established by the IHI
'Q'	The 'Q' initiative, sponsored by the Health Foundation and NHS England connecting people skilled in improvement across the UK
SPAs	Supporting Professional Activities
SPC	Statistical Process Control
ST	Specialist Trainee
WHO	World Health Organisation

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