

Building capability to improve safety

Summary of a workshop discussion, 14 May 2014, and
examples of approaches and activities for building safety
improvement capability

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Introduction

On 14 May 2014, the Health Foundation hosted a workshop to discuss building capability for improving safety. The event was developed in collaboration with NHS Improving Quality and was attended by leaders from across the NHS.¹ The aim was to produce a useful overview of what capability for safety improvement organisations need, and the best ways to go about developing this capability. In advance of the event, participants shared examples of capability building approaches that they were aware of, and this was supplemented by some rapid web research into notable examples of capability building strategies and initiatives.

This report is in three sections. Section 1 summarises key points from the workshop discussion. Section 2 presents the examples of capability building approaches shared with workshop participants before the event. Section 3 provides brief profiles of the examples of activities that build improvement capability, identified in the web research.

Section 1: Summary of workshop discussion

Why is it important to think further about building improvement capability?

The workshop was developed in collaboration between the Health Foundation and NHS Improving Quality. It aimed to develop a useful and coherent articulation of:

- what the NHS needs in terms of capability to improve safety
- how best to develop that capability.

While there have been many thousands of people trained in improvement skills over the past decade, there is a strong sense that this has not yet translated into teams and organisations having sufficient expertise to be able to effectively achieve the scale of improvement they are seeking. All too often people who have attended training courses then seem to disappear, rather than having the opportunity and support to put what they learn into practice.

While the workshop was explicitly focused on safety, it became clear that in many ways it was artificial to distinguish what was needed to improve safety from what was needed to address other quality outcomes.

What is the most useful way of understanding the need for safety improvement capability?

Section 2 of this report provides some examples of how people have sought to articulate the scale and nature of improvement capability needed in the NHS. Many of these models involve a pyramid, with a relatively small number of people with advanced expertise and a wider group with a lower level of expected capability.

Many of the participants felt that it was helpful to have an explicit ambition for how many people should be skilled in improvement: this was useful in order to engage decision makers and to highlight that few leading organisations in health or elsewhere achieve transformational change without a considerable number of people with these explicit recognised improvement skills. Goals that have been set for the number of improvement experts include the square root of the total workforce and between 1 and 5% of the workforce. The view from those at the event was that these numbers should be seen as a stretch target, suggesting a critical mass, rather than a calculation that would appear to have any firm science behind it. NHS England's ambition for 5,000 safety fellows or champions was described as playing a similar function in aiming to significantly grow the number of people with recognised advanced expertise in improvement.

¹ See the appendix for a list of participants.

The discussion identified problems with, and potential ways to enhance, existing strategies for building improvement capability:

- Roles on a pyramid can easily be interpreted or become labels attached to people based on their place in an organisational hierarchy, rather than a reflection of skills and knowledge. It might also lead to an overly simplistic focus on achieving a certain number of people who have been through a training programme. This can lead to failing to draw on the skills of those not currently in a recognised role. It may also undermine the credibility of improvement expertise if these individuals fall short of what people expect to see in an ‘expert’.
- As illustrated in Box A, the range of knowledge and capability needed to achieve sustained improvement across a system is far greater than individual experts can be expected to possess on their own. It is therefore more productive to think in terms of teams who between them have a range of expertise, with the skills, resources and networks to be able to tap into sources of insight and capability from elsewhere. To achieve this, an expert should be familiar with most – and have expertise in some – of the quality improvement and safety skills listed in Box A.
- Capability building strategies need to reflect that people will develop skills and insights through many different formal and less formal experiences over their career, and that their opportunity to put these skills into effect will wax and wane over time. There is the risk that the designation of people as having different levels of expertise could be taken as a relatively static hierarchy in terms of capability, which may often reflect only formal training.
- The models reviewed in advance of the workshop (see Section 2) could be interpreted as just counting the number of individuals at different experience levels, rather than recognising the way those individuals interact and build on the skills of those around them. Rather than having roles that designate levels of expertise, it may be more useful to think about the function that people are playing within the system they are part of. This would also allow more thoughtful discussion about, for example, the particular roles of patients involved in improvement.
- Having skills and knowledge is in itself insufficient to be able to achieve improvement. Teams and organisations need to have access to expertise, energy, time and resources to learn – and to put what they have learned into action. The extent to which they are able to achieve change will be critically influenced by the wider context, including the learning and improvement culture.² Just training more people without addressing these other factors may result in investment and enthusiasm being lost, or at least laying fallow until other opportunities arise. Part of the role of those who undergo training is to influence this context, and they should be encouraged and supported to do so.

Figure 1 on page 6 aims to visually represent what is needed within a system in terms of improvement capability. It offers an enhanced alternative to some of the strategies shared in Section 2, based on the discussion at the workshop.

How should we be building improvement capability?

The group suggested a more asset-based approach³ to thinking about how the NHS gets the capability it needs to achieve its improvement objectives. It was broadly agreed that there was still a significant shortfall in the number of people who have had the opportunity to develop their improvement skills and knowledge. However, a strategy that prioritised further investment in training may yield fewer results than one that also focuses on enabling people who have already developed skills and knowledge to put them into effect. It was also noted that there were many courses already available that could be drawn from rather than needing to develop new content from scratch.

² What the group articulated has similarities to IHI’s ‘Will, Ideas, Execution’ model (www.ihl.org/resources/Pages/IHIWhitePapers/ExecutionofStrategicImprovementInitiativesWhitePaper.aspx). However, the discussion described something notably more interconnected and organic, whereby the potential growth of each component will feed off the others.

³ See, for example, www.healthscotland.com/uploads/documents/17101-AssetBasedApproachestoHealthImprovementBriefing.pdf

Box A: Quality improvement and patient safety skills

This extensive, but not exhaustive, list of skills was gathered from scans of existing quality improvement/safety curricula and programmes. Asterisks (*) indicate safety specific skills.

Technical safety improvement skills

Identifying where and why improvement is needed; analysing safety risk and measuring/evaluating data, change and outcomes.

- Cause and effect diagrams
- Process mapping/analysis
- Driver diagrams
- Swim lane mapping
- Understanding clinical variation
- Understanding clinical risk*
- Proactive risk analysis tools (eg failure mode and effects analysis)*
- Model for improvement
- Identifying error and harm*
- High reliability systems*
- Human factors*
- Root cause analysis
- Safety-critical work (eg invasive procedures, infection control, medicines safety, emergencies)*
- Plan-Do-Study-Act (PDSA) rapid improvement cycles
- Value stream mapping
- Spaghetti diagrams
- Fishbone analysis
- Five whys
- Recognising, reporting and managing adverse events and near misses*
- Patient stories

Measurement skills

Designing measures and evaluating data, change and outcomes.

- Measurement for improvement
- Setting baselines
- Excel, Pareto, Run, SPC, Win Charts
- Balanced scorecards
- Quality measurement
- Collecting data / audit
- Data sampling
- Analysing data
- Safety culture measures (eg safety culture interaction) *
- Measurement of reliability
- Mortality measures*
- Harm measures*
- Patient experience measures
- Evaluating improvement

Engagement and implementation skills

Influencing and engaging colleagues in patient safety work; involving staff, patients and partners; motivating those involved to change/enhance practice and sustain change over time.

- Leading change/improvement
- Understanding others' perspectives
- Creativity and innovation
- Sustainability
- Organising for quality
- Staff engagement
- Group facilitation skills
- Creating a culture for improvement/safety*
- Working in partnership
- Patient and carer engagement
- Coaching principles and practice
- OD cycle and skills (contracting, data collection, data feedback, implementation)
- Effective teams
- Team diagnostic tools (eg Aston organisation development)
- Motivation theory
- Communicating about risk, safety and errors*
- Learning and changing practice from errors*
- Manchester Patient Safety Framework (MPSF)*
- S-BAR handover tool
- Handling conflict effectively
- Respectful and non-respectful behaviours

Research and learning skills

Extending and deepening knowledge and understanding about safety improvement; sharing learning; applying and transferring research into practice across wider contexts.

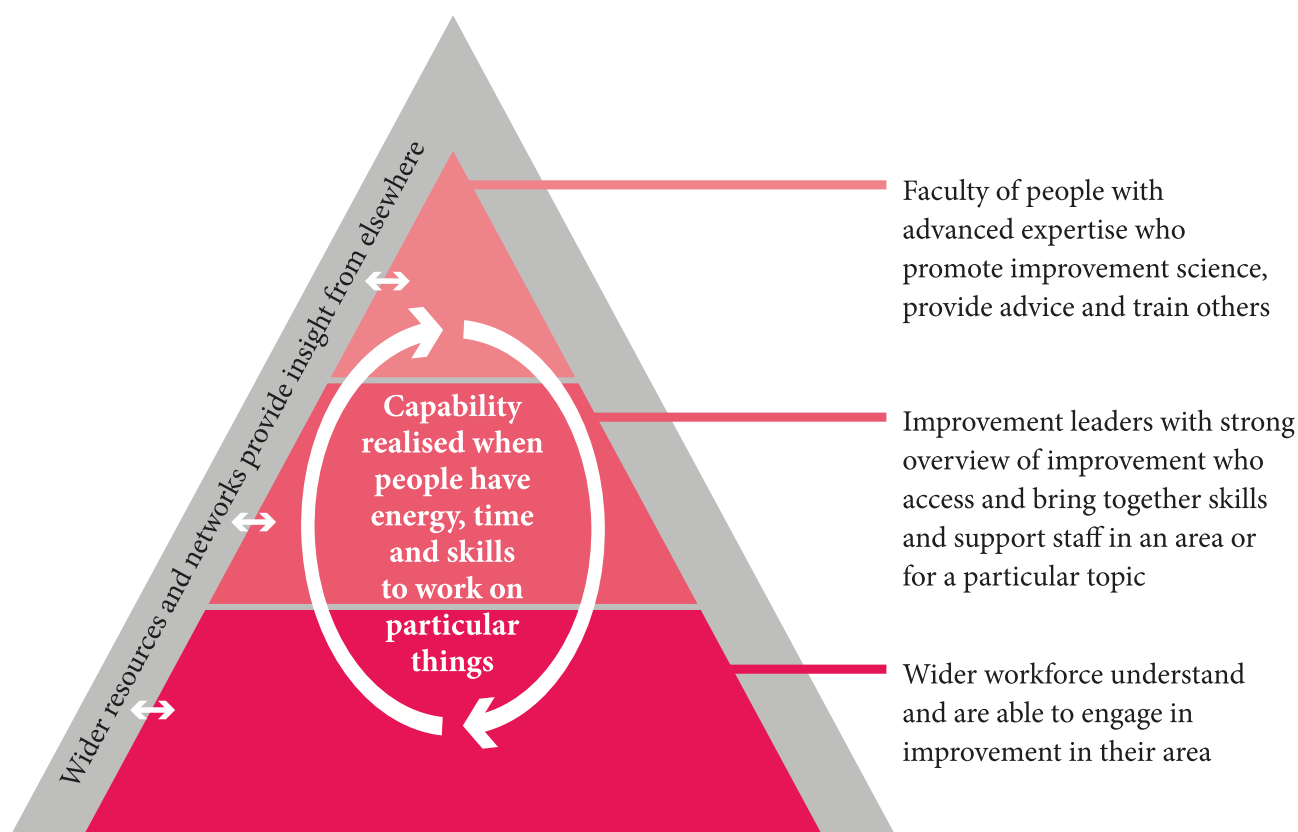
- Qualitative research methods
- Quantitative research methods
- Research findings into practice
- Peer reviewed publishing
- Conducting patient safety research*
- Action research

Systems leadership skills

Creating a culture of values and behaviours which nurture and promote safety improvement across a meso- or macro-system.

- Whole systems theory
- Social movement theory
- Understanding complex systems
- Leading change across organisational boundaries
- Developing shared purpose and values
- Latent conditions for safety
- Peer leadership across systems

Figure 1: Enhanced model for safety and quality improvement capability



The group highlighted that the improvement capability needed would vary considerably depending on the task at hand: for example a complex or ‘wicked’ problem may require a very different approach to a more straightforward, or ‘tame’, one.^{4,5} Developing a more sophisticated approach to deploying the right mix of energy and expertise to particular problems, in a way that in turn builds overall capability, might be more effective than an approach that focuses just on improvement capability in general or looked solely at what was needed for a particular initiative.

There was some debate about how to strike the right balance between explicitly stating a formal standard of expertise required to lead improvement and having a more inclusive/permissive view of what is needed. A good way forward might be to:

- a. focus on the outcomes in terms of knowledge and experience rather than seeking to define specific training requirements
- b. recognise that people will inevitably bring deeper knowledge in some areas than others.

Their expert contribution may combine sufficient understanding of the overall field of improvement to be able to source the expertise needed for a particular purpose, while making their in-depth knowledge useful to the people and tasks around them.

⁴ Rittel HWJ, Webber MM. Dilemmas in a general theory of planning. *Policy Sciences*. 1973; 4(2), 155–169.

⁵ An example model for understanding different challenges is the Cynefin Framework. See: <http://en.wikipedia.org/wiki/Cynefin>

It was felt that developing a menu of opportunities for developing capability, that people can access in different ways, was likely to be productive. This is because:

- there is a very wide range of knowledge and skills required for the ‘long and hard’⁶ job of achieving improvement
- people learn in different ways, yet this is rarely adequately taken into account when designing capability building activities
- enabling people to access training or other sources of knowledge flexibly was more likely to meet the diverse needs and working patterns of staff who, in general, are likely to be time poor. This should reflect that the majority of learning takes place as part of day-to-day work rather than on separate development courses.⁷

Given the range of expertise that might be necessary to fully understand and solve safety or other quality challenges, perhaps greater recognition should be given to the tasks of understanding the skills needed and sourcing improvement capability. When assembling project teams for particular tasks, ensuring an effective mix of energy and expertise is rarely done systematically.⁸ From an individual perspective, developing capability is often opportunistic rather than properly supported. This individual capability coaching and team capability design role for projects may need greater recognition as a critical part of an improvement leader’s role.

There was a breakout discussion about the role of those with the most advanced improvement expertise in a system. It was felt that these people should be seen as having a mix of the following three roles:

- Championing improvement science: demonstrating how it can help in understanding and addressing the issues faced by the system.
- Providing advice: acting as a repository of knowledge and understanding, with links to wider sources of expertise.
- Coaching and teaching others.

There was a specific discussion about the improvement capability needed by boards. Boards are key to creating and nurturing a culture of safety, quality and improvement. It was felt that it may be more useful to think about traits and behaviours from boards, rather than expecting board members to have sophisticated understanding of improvement tools. It was felt to be helpful for boards to understand enough about measurement, safety and risk to be able to set appropriate goals for the organisation, locally shaped rather than just in response to externally set requirements. This could be enhanced by a better grasp of how safety and financial objectives are related. Boards also need to understand how their interactions with the organisation will impact on the culture and engagement for safety and improvement.

The workshop participants agreed that the examples of capability building approaches and activities shared in advance of the event were useful. These are presented in Sections 2 and 3 of this report.

⁶ Dixon-Woods M, McNicol S, Martin G. *Overcoming Challenges in Improvement*. The Health Foundation. 2012. www.health.org.uk/publications/overcoming-challenges-to-improving-quality

⁷ http://en.wikipedia.org/wiki/70/20/10_Model#Learning_.26_Development

⁸ The Health Foundation is piloting a team-based capability self-assessment tool as part of the Closing the Gap in Patient Safety programme. If helpful, this may be developed for use in future programmes. See: www.health.org.uk/areas-of-work/programmes/closing-the-gap-in-patient-safety

Section 2: Approaches to building capability for safety improvement

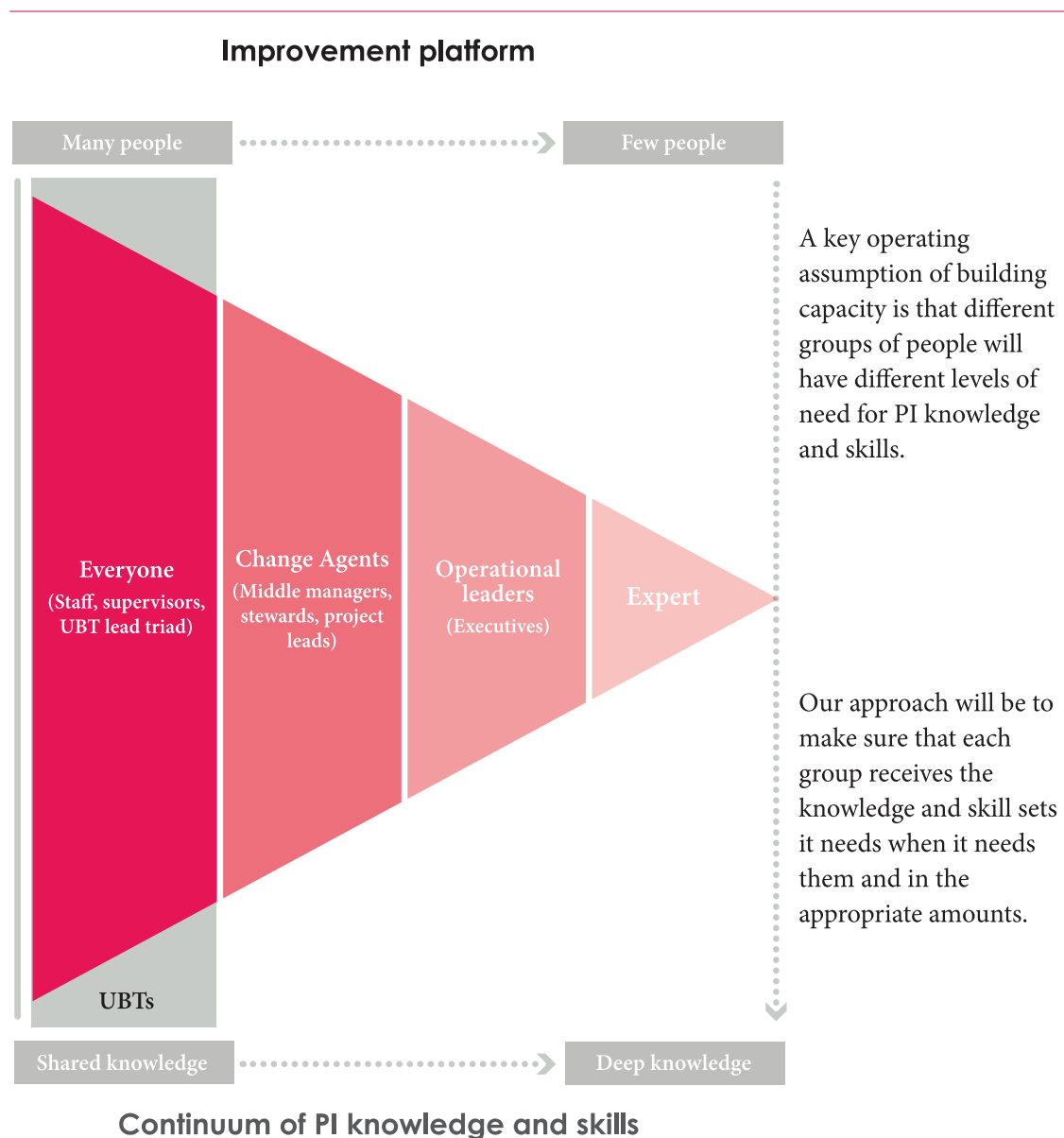
Reproduced below are some examples of how organisations and individuals have attempted to answer the question ‘How many people, at what level, and in what sort of roles do we need to effectively address the safety improvement challenge?’ in different health care improvement settings. There are many others – this is just a snapshot selection intended to reflect the range of thinking on this topic.

Kaiser Permanente

Staff at Kaiser Permanente are arrayed in terms of the continuum of performance improvement (PI) knowledge and skills.

The improvement Unit-Based Teams (UBTs) are natural work-group teams, convened by the organisation’s labour-management partnership agreed on in the most recent contract negotiations.

Experts, who are covered by the Improvement Advisor (IA) title and job description, have deep knowledge regarding the Model for Improvement and Lean thinking, and some Six Sigma skills. Each medical centre has at least one full-time-equivalent IA and several other IA-trained staff in quality, nursing and elsewhere.⁹



⁹ Source: Schilling, L. (ed). *Implementing and sustaining improvement in healthcare*. Joint Commission Resources, 2009.

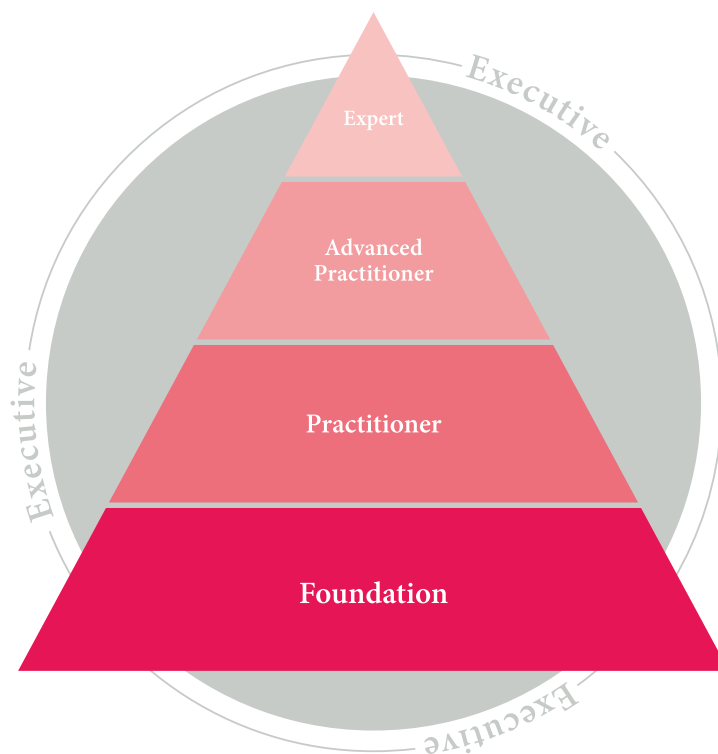
NHS Institute for Innovation and Improvement

NHS Improving Quality are actively reviewing the patient safety resources developed in organisations that came together into NHS Improving Quality, including the NHS Institute for Improvement and Innovation. This review will inform the work of the Patient Safety Collaboratives that will be supported nationally by NHS Improving Quality. Updated materials will be shared through the website when available.

www.nhs.uk/improvement-programmes/patient-safety.aspx

The NHS Institute for Innovation and Improvement development framework provides a practical framework from which health care organisations can identify gaps in desired levels of innovation and improvement capability, and build and sustain it. It identifies the combination of key knowledge, skills, attitudes and behaviours needed at all levels (individual, team, organisational), to make change and improvements happen and sustain them.

- **Foundation:** relates to all staff in order to develop an understanding and basic awareness of their personal responsibilities for continuous improvement of local services.
- **Practitioner:** relates to people in leadership and clinical roles who want and need to innovate and improve local services.
- **Advanced Practitioner:** relates to staff with improvement experience who will lead, coach and support others in service improvement initiatives within and across departmental and professional boundaries.
- **Expert:** relates to a limited group of staff whose reputation and credibility is recognised by their peers. They want to deepen their knowledge in one or more improvement topics through the practical application of theory in specific contexts.
- **Executive/ Leader:** relates to senior clinical and managerial leaders who want to build improvement expertise into their daily work and create the environment for improvement to thrive and be sustained.

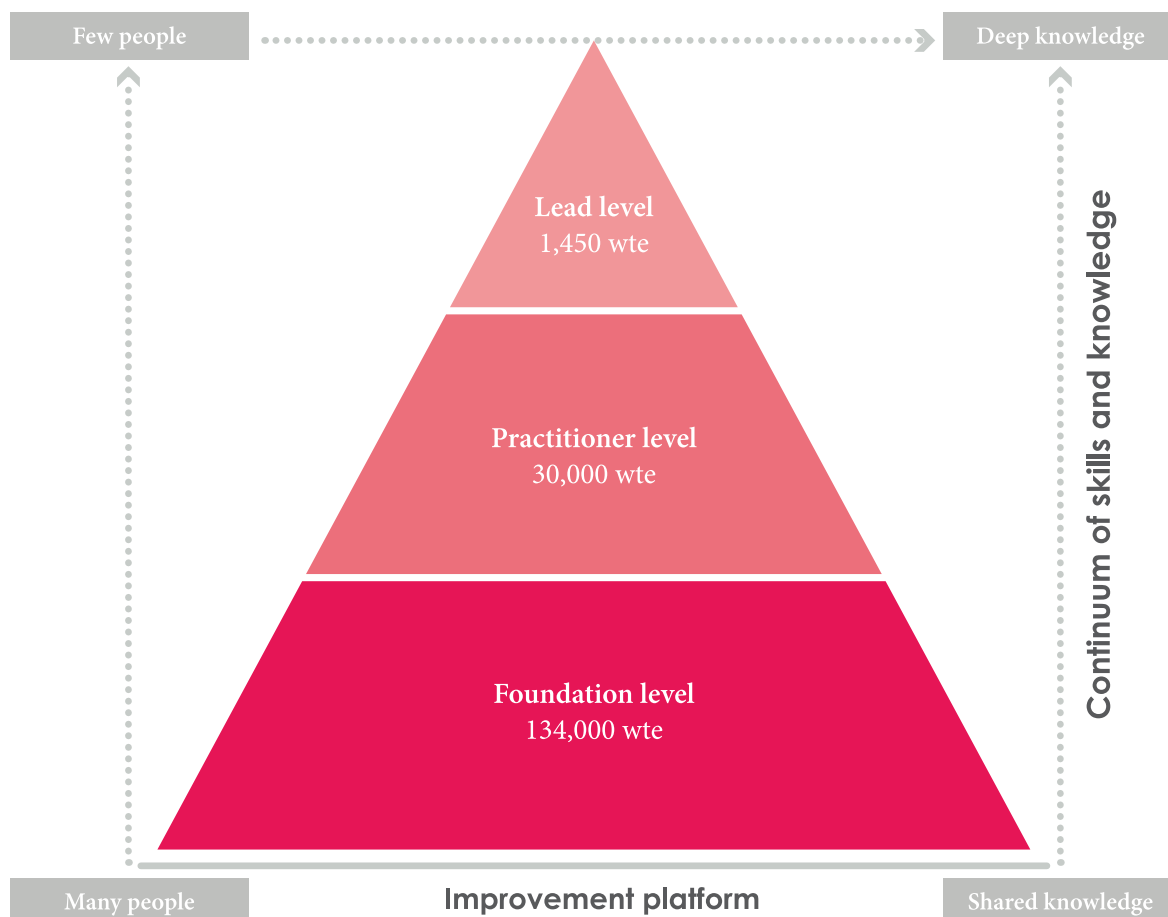


The following diagram, redrawn from the development framework, summarises the different approaches represented by the different levels.



NHS Scotland

NHS Scotland's Quality Improvement Curriculum Framework builds on Kaiser Permanente's approach (described on page 9) and aims to provide ongoing support for the development of learning in quality improvement. It describes the knowledge and skills needed to continuously improve services and enable the NHS workforce to access appropriate learning and development resources.¹⁰



Lead level: The Lead group represent an expert resource to promote quality improvement in health care settings, able to contribute to knowledge in the field and to lead, along with others, a culture of change and innovation throughout the health care organisation in which they work. Quality improvement leads should be in a position to deploy their skills across an organisation and will generally be part of structures and teams which vary across individual health board settings. Each lead will be required to undertake ongoing continuing professional development in order to improve their knowledge and skills and to remain current with the dynamic nature of quality improvement.

Practitioner level: This level is applicable to a wide range of staff with different roles whose work should be informed by a clear understanding of the principles and practice of continuous improvement in health care. The Practitioner level reflects a leadership role in quality improvement. Practitioners are seen as role models and should champion a culture of change and innovation within their own local environment. They can signpost others to learning resources and ensure that access to learning about quality is available to their teams. The Practitioner level will include staff working in clinical settings, for example charge nurses, as well as those working in support services, such as administration and finance.

¹⁰ Source: NHS Scotland. *Quality improvement capacity and capability building plan to support the delivery of the route map to the 2020 vision for health and social care*. Unpublished.

Foundation Level: All staff working in health care settings should be encouraged to take a reflective approach in their role. This will be achieved by raising awareness of the principles that underpin quality and ensuring that everybody involved (and this should include the patient and carer) has an appropriate level of understanding of the significance of quality improvement and its part in service delivery. The Foundation level learning provides opportunities for staff new to the workforce to learn about quality improvement and be included, for example, in induction programmes, practice development programmes or undergraduate courses. The education could also inform the continuing professional development (CPD) of staff currently employed and be integrated into existing opportunities for CPD.

Virginia Mason

Staff engagement is a key feature of Virginia Mason's 'Production System' (VMPS), with each of their 5,500 staff trained in the fundamentals of the approach.

*'We offer management courses focused on the VMPS for leaders. We train and certify or send to Japan more than 100 leaders a year. We select the cream of the crop, future senior leaders, to undertake a rigorous 18-month program – in addition to their day jobs – to earn a Kaizen fellowship. As part of their work, they do additional in-depth learning at Virginia Mason, they return to Japan and they study at leading Lean companies around the world. We have approximately 150 certified leaders in the VMPS who head up workshops. They are in every unit so that it doesn't require an organizationally sanctioned improvement event to make the VMPS part of daily work life. We have 40 people... whose sole job is to support line management in implementing Kaizen and the VMPS. World-class Lean companies have between 1 and 5% of their workforce in such activities, so we should have between 50 and 250.'*¹¹

W. Edwards Deming

*'As Dr. Deming told me one day, if you want to change the culture of an organization, you don't have to get everybody, but you do have to get what he called the square root of N. Meaning that if there are N individuals in the organization, you need to really educate the square root of that total. He said, convince that many and it will start to take on a life of its own and drive itself ahead without you there to keep it going all the time. We put together that course and specifically targeted thought leaders. Our aim was to convert them, to make the scientific case that this was the right way to go.'*¹²

¹¹ Kaplan G. Seeking Perfection in Healthcare. In: Batalden, P (ed) *Lessons learned in changing healthcare... and how we learned them*. London, UK: Longwoods, 2010. p145-159. www.longwoods.com/content/22056

¹² Source: In Conversation with...Brent C. James. <http://webmm.ahrq.gov/perspective.aspx?perspectiveID=97>

Section 3: Activities that build capability for safety improvement

In this section we present brief profiles of some prominent examples of programmes and activities that build (safety) improvement capability, identified by rapid web research.

AQuA Academy

The AQuA Academy provides opportunities to learn about improvement for all groups of staff. The AQuA Academy brings individuals together in ‘communities of practice’ to develop their knowledge and skills. The approach is to develop, in staff at all levels, the skills and capacity in improvement methods and change management.

Current programmes within the Academy include:¹³

- Boards on Board
- AQuA Improvement Methodologies (AIM)
- AQuA Improvement Methodologies Plus (AIM+) – deeper dive sessions in selected areas from the AIM programme
- Lean
- Patient Safety Ambassadors
- A new role for finance in quality improvement.

Capability building in Scotland

The Scottish Safety Fellowship Programme

The Scottish Patient Safety Fellowship Programme was introduced to develop and strengthen clinical leadership and improvement capability in NHS Scotland in order to support the implementation of the Scottish Patient Safety Programme (SPSP). The Fellowship Programme is lead by Healthcare Improvement Scotland (HIS), in partnership with NHS Education for Scotland (NES) and NHS Scotland territorial NHS boards. From summer 2014, NES will provide the leadership and management of the Fellowship Programme. The specific aims and objectives of the Fellowship are to develop and strengthen clinical leadership capability to support the SPSP; to contribute to the development of a long term quality improvement and patient safety culture; to establish a learning support network for transformational leadership; and to strengthen existing collaborations within NHS Scotland. An SPSP Fellows community page allows fellows to share ideas and support each other throughout the length of the fellowship programme and afterwards.

The Scottish Improvement Advisor Programme

The Scottish Improvement Advisor (IA) programme is an Institute for Healthcare Improvement (IHI) programme. It has been specifically designed to train recognised experts in improvement science and is part of IHI’s international suite of programmes. The IA Programme is a rigorous nine-month patient safety and quality improvement programme which equips participants with the knowledge and skills to become improvement advisors within their NHS board. An IA is someone who can effectively lead and facilitate quality improvement, using data to drive improvement, thus assisting NHS boards to achieve sustainable improvements at board level. Key to the programme is the completion of an improvement project by each IA within their own NHS board. Senior faculty, including members of the executive from HIS, Scottish Government and previous IA cohorts, are also invited to speak/present their projects to the current cohort. There are approximately 75 Improvement Advisors in NHS Scotland.

¹³ Source: www.advancingqualityalliance.nhs.uk/aqua-academy

Scottish Improvement Skills course

Scottish Improvement Skills is designed to help health care organisations develop the skills and resources they need to carry out successful improvement projects. The course includes a three-day workshop plus two follow-up WebEx-based conference calls and a one-day follow-up workshop. It combines brief lectures, demonstrations and mentorship through a project to reinforce key concepts and tools. The education and support for this programme is delivered by the SPSP fellows, IAs and other HIS and NHS Board staff as speakers. Approximately 400 staff have completed the Scottish Improvement Skills course (or the IHI equivalent, Improvement Science in Action).

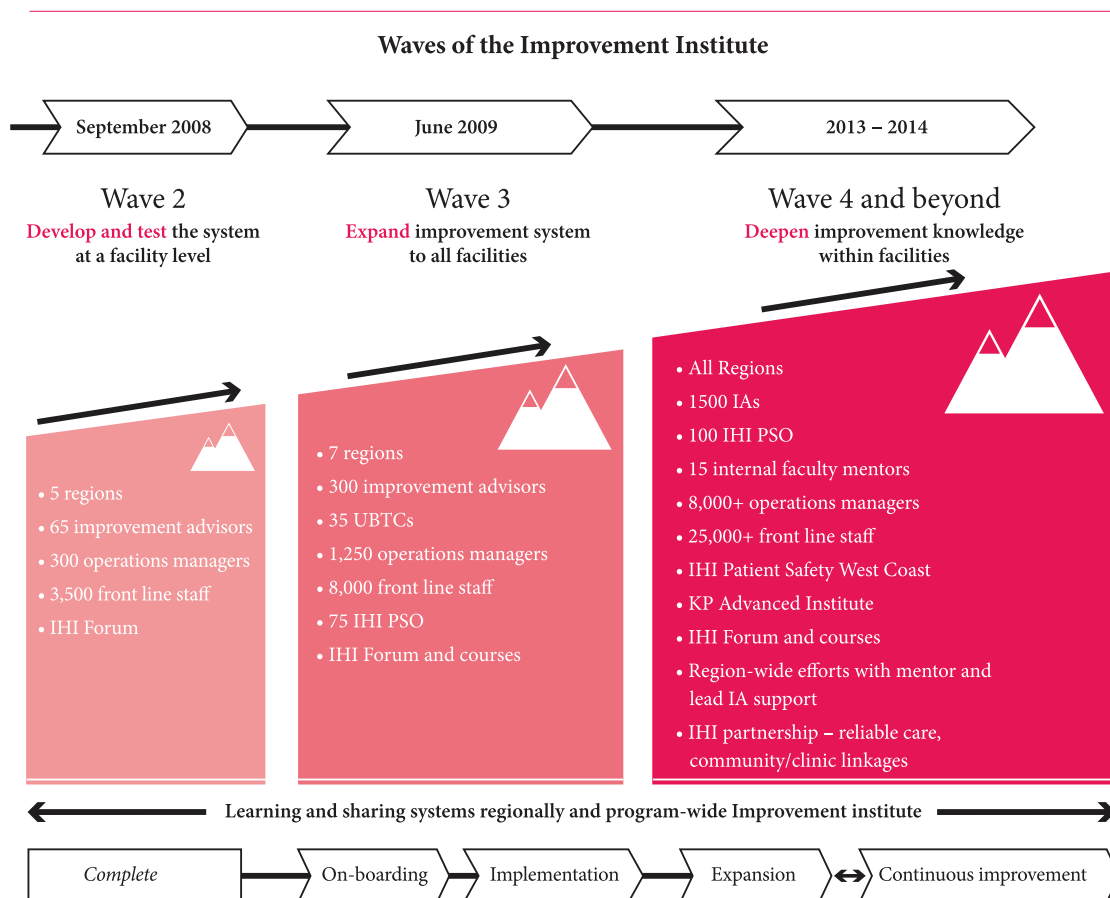
Institute for Healthcare Improvement Open School

The Institute for Healthcare Improvement Open School (IHI Open School) offers students, junior doctors, and faculty free online courses that teach the foundations of improvement, safety, system design, and leadership. Open School courses are also available to health care organisations and professionals for an annual fee. At approximately 200,000 members strong and growing, the Open School includes Chapters (face-to-face, interprofessional groups for students, practicing professionals, and faculty at hospitals and higher education institutions) in more than 65 countries around the world. There are over 70 Chapters in the UK and Ireland.

The IHI Open School website also offers a collection of free resources for individual and group use – improvement stories, videos, publications, tools, audio clips, activities, and links to other websites.¹⁴

Kaiser Permanente

The Kaiser Permanente Improvement Institute was created in 2008 to teach improvement experts and leadership teams new skills and approaches. It was implemented in a series of waves (see diagram below). Training focused on four audiences (everyone, middle managers, executives, and experts), building deeper knowledge as the audience became more expert.¹⁵



¹⁴ See: www.ihl.org/openschool

¹⁵ Source: Chase A. Kaiser Permanente Transformation Centers and the Evidence. ECRI – Nov 28, 2012.

Specifically around patient safety, Kaiser have also run a 'Patient Safety University' since 2010. They have trained over 7,000 frontline teams and middle managers. Through the 'university' staff can become accredited as 'patient safety officers'. It is based around three prongs:

- Building a culture of safety for the care team and environment
- Building skills in teamwork and communication
- Ensuring a consistently delivered, evidence-based design for daily work.

It consists of two phases. PSU1 is a two-day programme that targets senior leaders, managers, service line directors and physician chiefs. PSU2 aims to offer direct care providers a foundational background and skills that lend themselves to applying the three pronged approach. PSU2 begins with an introduction to safety principles and concepts, and then builds on them to help participants learn and employ specific practical application to develop, implement and sustain a culture of patient safety at the department/unit level.¹⁶

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www.nhs.uk/improvement-programmes/patient-safety.aspx

- **LIPS (Leading Improvement in Patient Safety)** – building the capacity and capability within hospital teams to improve patient safety. The programme aimed to help NHS trusts develop organisational plans for patient safety improvements and to build teams responsible for driving improvement across their organisation.
- **BaSIS (Building Safety and Improvement Skills)** – a package of interventions designed to enable junior doctors to become a force for safe practice by giving them the skills they need to be safe and empowering them to make improvements within their trust. A three-day programme over 10-12 weeks, delivering a quality improvement project.
- **PSL (Patient Safety Leaders)** – for those who want to lead safety improvement at all levels of an organisation. The learning format was 'hands-on', progressing through the phases of an improvement project. It incorporated patient safety good practice with improvement methodology and practical skills such as measurement for improvement. There was an emphasis on successfully working within organisational and professional spheres, helping to understand change culture and implementation of safety initiatives. It included a series of workshops, lectures, practical activities, and web-based seminars.
- **AIQS (Advanced Improvement in Quality and Safety)** – a year-long postgraduate certificated programme. The course consisted of seven days of face-to-face tutorials led by national and international improvement practitioners and topic experts, mentoring, virtual learning sets, clinics and virtual seminars.¹⁷

¹⁶ Source: Cima L, Clarke S. (eds). *The nurse's role in medication safety*. Joint Commission Resources, 2011. (p.165)

¹⁷ Source: www.institute.nhs.uk/safer_care/safer_care/safer_care_-_home_page_2.html

NHS South West

- **Foundation year doctors' programme** (Severn Deanery) – a combination of regional one-day workshops on basics for year 2, while years 1 and 2 are given a trust-based programme and encouraged to develop and deliver quality improvement projects, including a mandatory day on human factors for all foundation trainees.¹⁸
- **Workshops and training days for all professional groups** across four specific workstreams as part of a five-year collaboration building local capability (South West Collaborative for patient safety improvement).
- **How to convert your clinical audit function to a quality improvement function** (Weston Area Health Trust) – using quality improvement methodology to harness doctors in training.
- **Developing specialist registrar capability** through leadership programmes prior to consultant appointments – half-seminar through Keele University leadership course. Fourteen programmes a year for all speciality areas can be at Keele or locally provided, as in Bristol and Peninsula.
- **Learning to make a difference** programme with Royal College of Physicians. Core medical trainees are supported and enabled to undertake quality improvement using a handbook and supervisor support.

NHS Wales

Improving Quality Together is the national learning programme for all NHS Wales staff and contractors. It provides a common and consistent approach to improving the quality of services in NHS organisations across Wales.

There are three main levels in the programme:¹⁹

- Bronze – an online introduction to quality improvement
- Silver – a short course that helps you put bronze-level learning into practice
- Gold – a network of improvement coaches supporting staff doing Silver-level projects

Plus there are additional Board level training sessions for senior teams.

Salford Royal NHS Foundation Trust

- **QI 90 minutes modules** – open to all staff on the following topics: The model for improvement; Managing improvement projects; Measurement, reliability; Human factors; Lean and Introduction to patient safety.
- **Clinical Quality Academy** – this is a 12-month programme (delivered through three two-day workshops and a summit) designed for clinicians and senior leaders who want to achieve results while applying quality improvement skills they are developing. Each participating team will attend with an improvement project. Teams have to apply to be part of this programme.
- **Clinical Microsystems coaching** – this is a six-month programme using clinical microsystems and quality improvement tools and techniques. Teams are allocated a quality improvement facilitator for six months and meet on a weekly basis to work through their issue/improvement project. Teams have to apply to be part of this programme.
- **Ad hoc departmental/divisional training** – if any division or department require any specific training bespoke, quality improvement training is designed for them.

¹⁸ For more information, see: Bethune R, Soo E, Woodhead P, et al. Engaging all doctors in continuous quality improvement: a structured, supported programme for first-year doctors across a training deanery in England. *BMJ Qual Saf* 2013;22:613-617. doi:10.1136/bmjqs-2013-001926

¹⁹ Source: www.iqt.wales.nhs.uk/home

World Health Organization

In 2004 WHO launched a patient safety programme in response to a World Health Assembly Resolution urging WHO and Member States ‘to pay the closest possible attention to the problem of patient safety’.

The WHO Patient Safety programme aims to coordinate, disseminate and accelerate improvements in patient safety worldwide. It also provides a vehicle for international collaboration and action between WHO Member States, WHO’s Secretariat, technical experts, and consumers, as well as professionals and industry groups. Each year, WHO Patient Safety delivers a number of programmes covering systemic and technical aspects to improve patient safety.

- **Multi-professional Patient Safety Curriculum Guide** – This comprehensive guide assists universities and schools in the fields of dentistry, medicine, midwifery, nursing and pharmacy to teach patient safety.
- **Training leaders in Patient Safety Research** – The Core Competencies for Patient Safety Research provide a framework for the ongoing education and training of patient safety researchers worldwide.
- **Learning from Error** – Workshop materials: Booklet and video in six languages explores how multiple weaknesses present within the health care system can lead to error and helps to gain an insight into the underlying causes of such events.
- **Introductory Course of Patient Safety** – A free online course is available to introduce the basic elements of patient safety research.²⁰

²⁰ Source: www.who.int/patientsafety/education/en

Appendix: Workshop attendees

Murray Anderson-Wallace	Centre for Innovation in Health Management
Sarah Armstrong-Klein	NHS Improving Quality
Suzie Bailey	Monitor
Amanda Begley	UCL Partners
Jo Bibby	The Health Foundation
Nikki Davey	Clinical Human Factors Group
Phil Duncan	NHS Improving Quality
Ben Gershlick	The Health Foundation
Jeanne Hardacre	Impact4
Anita Jayadev	Great Ormond Street Hospital
Liz Maddocks-Brown	NHS Improving Quality
Hugh McCaughey	South Eastern Health and Social Care Trust
Andrea McGuinness	AQuA
Pat O'Connor	NHS Tayside
Penny Pereira	The Health Foundation
Pepita Stringer	Seismic Consultancy Limited
Mike Roberts	UCL Partners
Stephen Ramsden	Transforming Health Ltd
Ross Scrivener	Royal College of Nurses
Lisa Smith	NHS Improving Quality
Fiona Thow	NHS Improving Quality
Simon Watson	Lothian NHS Board
Alan Willson	1000 Lives Plus Project
Tricia Woodhead	Safety South-West Collaborative
Susan Went	Formerly Healthcare Improvement Scotland

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