The Health Foundation
Inspiring Improvement

Event report:

Evaluating healthcare quality improvement

A summary of learning from a Health Foundation roundtable, 6 June 2011

Identify Innovate Demonstrate Encourage

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1. Introduction

About the event

On 6 June 2011 the Health Foundation hosted a roundtable event to discuss current thinking about the challenges of evaluating complex interventions to improve the quality of healthcare.

Senior figures from the field of improvement science came together to share their knowledge, learning and experience in the hope of generating a new consensus about what we know and the challenges we still face.

Speakers shared real-life examples to illustrate the successes and challenges of improving quality and how to evaluate its impact.

Agenda and key speakers

We invited senior evaluators who are working with the Health Foundation and other key partners to contribute to the event.

Morning
Improving quality: what works?

Referring to current Health Foundation programmes, the morning session asked what have we learned about improving healthcare quality, and what are the challenges?

Speakers were:

—Maxine Power, Department of Health (and Health Foundation Governor)

—Mary Dixon-Woods, University of Leicester

—Iain Ryrie, Office for Public Management

Afternoon
The challenges of evaluation

In the afternoon we looked at the challenges of evaluating complex improvement interventions and asked what we need to do to develop further the science and practice of evaluation?

Presentations were given by:

—Tom Ling, RAND Europe

—Gareth Parry, Institute of Healthcare Improvement

—Louise Wallace, University of Coventry

—Dale Webb, the Health Foundation

The context

The UK needs a healthcare system of the highest possible quality – safe, effective, person-centred, timely, efficient and equitable. In order to achieve this, health services need to continually improve the way they work.

The government is focusing on quality both as an instrument of reform, as outlined in its White Paper, *Equity and Excellence: Liberating the NHS*, and as a means of achieving the best value for money. And it is keen to foster innovation, on the grounds that this will be critical to improving healthcare outcomes. Quality improvement is being encouraged across the health service, through national schemes such as QIPP (the Quality Innovation Productivity and Prevention programme) in England, and the Efficiency and Innovation Programme Board in Wales.

Conducting detailed evaluation of this improvement activity is key to our understanding of which methods and innovations work to improve quality. We want to know which small scale changes can be replicated across the health service to bring to bring about improvement on a large scale.

However, evaluating efforts to improve healthcare quality is complex and challenging. Improvement programmes are often highly emergent in nature and operate in changing organisational contexts, making it very difficult to isolate the actual causes of change. There are also multiple stakeholders who need data and many ways that it can be interpreted. Improvement teams want to see their intervention is working, funders want to see the economic benefits, managers want to know how resources have been used, and clinicians want to know how outcomes have been improved for the patient.

There is also an ongoing tension between improvement and evaluation communities. Improvement experts question overly rigid evaluation approaches, while evaluators question the strength of the theory underpinning some quality improvement interventions and the lack of robust independent evaluation.

These issues were all reflected in the discussion that took place at the roundtable event. We hope that this debate can be productive, helping us to take forward the scholarship and practice of evaluation in order that we can develop the knowledge urgently required to improve healthcare quality.

The Health Foundation

The Health Foundation is an independent charity inspiring and supporting improvement in UK health services.

Our improvement programmes offer healthcare teams the opportunity to test out new ideas and demonstrate what works to improve quality and safety in patient care.

Since 2004 the Health Foundation has invested in a substantial programme of independent evaluation. To date we have commissioned 14 large studies, evaluating our major programmes. Each is designed to contribute to the knowledge base about successful improvement in healthcare.

Collectively, these studies represent a large body of understanding in two areas. First, they have developed significant learning about the barriers to improving healthcare and key solutions. Second, they shine a light on the state of the science of evaluating complex improvement interventions. Our evaluations help us to share learning about what works and what has been difficult to implement in practice. This learning combines to create a valuable bank of knowledge and evidence.

2. Improving healthcare quality: our learning

What works?

So what have we learned about what works to improve quality? During the morning session speakers shared their learning from successful improvement projects. This was followed by group discussions which centred on several key themes, summarised here.

A strong evidence base

Projects that are backed by strong evidence, which reinforces the need for change, are more likely to succeed. The Stroke 90:10 project coincided with the publication of a new national stroke strategy for England, alongside research which showed that rapid access to thrombolytic drugs during stroke treatment makes a big difference to patient outcomes. When these top level messages were combined with local information and the desire of clinicians to improve patient care, they produced a strong set of drivers for change.

Community, team work and collaboration

While there needs to be leadership from the top, it seems the more teams have a shared sense of ownership of the change, the more likely they are to be successful. Working with strong and well established teams is also important. The MAGIC programme focused on enabling teams to work together to implement new approaches, and used action learning and continuous improvement methodologies to keep the team committed to the task. During the Stroke 90:10 project, having multiple teams working together added motivation and drive to the project and created a strong sense of community.

Learning shared

Stroke 90:10: do improvement collaboratives work?

Twenty-two organisations signed up to take part in this collaborative project to improve stroke care. Maxine Power led this work in her previous role at Salford Royal NHS Foundation Trust. She shared learning from the project about the collaborative approach.

—There is huge power in teams working together.

—Face to face contact works best.

—Teams that designed their structures without rigid boundaries worked better.

—There was a strong sense of community and everyone wanted to work together.

—Teams inspired each other with new ideas – adoption of some interventions seemed to be viral.

—Teams had massive influence on each other, especially when we brought naive and experienced project teams together which made improvements move faster.

Embedding shared decision making: what works?

The MAGIC (Making good decisions in collaboration) programme supported primary and secondary care teams to introduce shared decision making into routine practice. Iain Ryrie from the Office for Public Management shared what worked to get teams to adopt this new approach.

—Engage staff with messages that matter to them and work towards creating a critical mass.

—Make it about people not data. Infuse everything with patient perspectives.

—Adopt a top-led, bottom-fed approach.

—Avoid 'data hungry' research and let the team own their data.

—Take a pragmatic rather than perfectionist approach. Have the flexibility to test and change.

A flexible and pragmatic approach

The need to be pragmatic about how much change can be achieved was a recurring theme during the day. Participants discussed the need to balance aspirational goals with realistic targets in order to avoid teams losing enthusiasm or feeling they have failed. Goals should be practical and relate to specific outcomes, making them easier to evaluate.

It was also argued that a pragmatic, rather than perfectionist, approach to programme design works well. Participants discussed the benefits of 'a willingness to be flexible and run with things', and to 'have a go and throw it away if it's not working'. Being less rigid about a model means that teams can continue to reflect and adapt as the project goes on.

Leadership and senior support

Having strong leadership in place for improvement projects is vital. Even where teams own their change, they still need support from senior managers. However, securing buy in can be difficult. It is important to understand people's motivations for supporting the work and build in strategies to keep senior members of the organisation engaged throughout the project. Support from middle management is also vital, as they are the people most likely to be involved in the day to day running of the organisation.

Communication and engagement

How evidence is communicated to stakeholders is very important. The MAGIC programme has focused on promoting evidence that clearly demonstrates how shared decision making improves outcomes for patients. Communication has also emphasised how changes will help to save time and resources.

It is necessary to adapt messages for different audiences, keeping in mind people's different interests and learning styles. Participants discussed the need for a common language, particularly when working across teams and professions. In their experience, people were often talking about the same issues but using different words.

Take time to prepare

Solid planning and preparation is vital. This includes taking the time to: agree a theory of change; map the project with other changes happening in the organisation; consider data collection and evaluation; plan communications and engagement; ensure buy in from senior staff. Ideally, this should happen before the project gets underway. There was much debate about whether this activity should be built into a formal pre implementation phase of the project.

However, use of this time needs to be clearly thought through. Examples were given where teams had been given initial set up time, but still hadn't properly engaged with the project until the practical work had started, resulting in time wasted. It was agreed this pre implementation stage needs to be a fluid, dynamic and engaging time, where ideas can be developed and tested and teams can build the extra skills they need to participate in the project. Asking teams to come up with their own improvement plans during the set up stage also encourages their engagement.

Measurement and data

Participants discussed how the very process of collecting data can improve awareness and critical thinking and therefore lead to improvement by itself. In one example, the simple act of displaying information about improvement on a wall chart had caused teams to change their behaviour.

Participants agreed that where possible data collection methods should be designed so that they improved workflow and helped staff with the process of quality improvement. An awareness of different audiences and how the data will be used should also be taken into account when designing evaluations. For example, it was suggested that evaluations involving randomised control trials were particularly trusted by some clinical audiences.

User involvement

Patients can make valuable contributions to efforts to improve healthcare quality. Their experiences are used to build the case for change and to inform plans for improvement. Success is often judged on improved patient outcomes and feedback.

The MAGIC programme put patients at the heart of the change process. Users were involved in the design of materials and tools, provided feedback on impact, and helped to scrutinise the project through representative groups. Participants agreed that patient involvement can be central to success, but needs to be managed well, avoiding a situation where patients are 'wheeled in' to meetings and not truly consulted or involved.

Aptitude and self efficacy in teams

The self belief of the team carrying out the improvement is an important factor for success in projects, especially where the desired change is more transformational. Participants discussed how this could be built up gradually by encouraging organisations to start with small change projects, allowing teams to believe in themselves and their ability to bring about improvements. Analogies were made with sports teams, where self belief has a proven impact on s uccess levels. Skilling up teams in advance of big projects (or as part of the pre phase) was also discussed, particularly to build knowledge of data collection. This was a key learning point from Stroke 90:10.

'There were some teams who just knew how to work with data, others who didn't but had an appetite for it, and others who just didn't care about the data. The first two groups moved a lot faster. We had to provide enormous support regarding the data collection in order to get where we are. Our main lesson was that we need to work on this in advance.'

Maxine Power

3. Evaluating improvement: the challenges

This section summarises presentations and discussion during the afternoon of the event which focused on the challenges of evaluation and the future of improvement science.

What is a 'theory of change'?

A theory of change clarifies what will be achieved and how. It is a combination of stakeholder assumptions about the process through which change will occur, and the way in which individual outcomes will lead to a long term goal. This helps to show how change can be evaluated.

A good theory of change is flexible and provides an explicit, shared narrative by which change can be explained. It also works as a collaborative tool, helping groups to align their thinking, language and goals.

Undefined theory of change

It can be difficult to design an evaluation when a project does not have a defined theory of change. If it is not clear how change will be achieved then it is hard to know whether you are collecting the right data in order to evaluate success at the end of the project. Agreeing a clear theory of change before a project starts helps to unpack the thinking of key stakeholders about how, where and when change will be achieved.

However this isn't always easy, especially when adopting more fluid approaches to improvement where different ideas are being tested and developed throughout the project. For these types of projects, the theory of change model of evaluation needs to be more flexible. A good programme theory will recognise that fidelity is not everything; instead the approach to evaluation will adapt with the project and any changes in the external environment.

Critically, a collaborative process to develop a programme's theory of change at the outset helps to determine whether the proposed 'dose' of intervention is likely to be sufficient to realise the stated goals and whether the intended effects will be localised or system-wide. This in turn helps to ensure the evaluation is well aligned to programme design and that measurement is taken at the specific places where we expect to see an effect.

Innovation, demonstration or scale up?

Used well, the theory of change model helps to create clarity about whether the aim of the proposed intervention is proof of concept, wider demonstration or spread and scale up. This has profound implications for evaluation design.

Proof of concept interventions aim to test out, at small scale, the feasibility of an approach to improving healthcare quality. They are likely to be fluid, and experience significant shifts in thinking and focus as different ideas are tried out. Outcomes are likely to be localised. An evaluation of a proof of concept programme should focus on understanding the processes and structures for the delivery of the programme. It could answer the question 'if the intervention were undertaken at greater scale, which outcomes (clinical and patient reported) are likely to shift, when and where?'

Demonstrations aim to establish or demonstrate the feasibility of a new improvement method or type of service, and they typically combine multiple, smaller interventions. Evaluations can help understand and refine the implementation process and identify variables that will be critical for implementing at even greater scale, including context, resources, capacity. They will have a focus on measuring outcomes, based on a clear and realistic expectation from proof of concept of which outcomes are likely to improve as a consequence of the intervention. Crucially, they should be clear about where the intervention is likely to have an effect in order to ensure that the evaluation is taking its measurements in the right places.

Scale up programmes aim to reach larger numbers of clinicians and managers – either within a single healthcare organisation or in a broader geographical area – by institutionalising programmes that have been shown to be effective. Scale up programmes need to have a clear spread strategy and a good sense of what is likely to be spread, where and when. Evaluations are then able to design a measurement strategy to reflect intended locus of activity and dosage.

Understanding the nature and scale of the intervention is therefore critical to determining what success means, and to framing the evaluation aims and focus in a way that will be most useful to decision-makers. Finally, the timescales of projects and subsequent evaluations can also be an issue. Often the final evaluation takes place too early, before all the long term results have been seen (either because projects have experienced delays, or because the impact will only be realised over a longer period of time). Some participants questioned whether there was a need for evaluation to take a longer perspective in understanding the impact of quality improvement.

Avoiding a 'conspiracy of enthusiasm'

At the outset of a programme there is a temptation for funders, improvement experts – and evaluators – to expect too much to be achieved. Also, improvement programmes often use 'stretch goals', aspirational targets that motivate clinicians to achieve better results. While these are important as motivational goals, they can be problematic as evaluative ones, as they risk forming a judgement of success on a goal that is unlikely to be reached.

It's therefore important to identify and separate out stretch and evaluative goals, and to avoid a 'conspiracy of optimism'. The reality is that not all interventions will lead to transformation; some may make modest contributions to improvement or have compound effects that can only be measured in the longer term, and this needs to be taken into account in the evaluation.

Use of counterfactual designs

Counterfactual designs attempt to show what would have happened anyway if the programme had not been implemented. The intellectual rigour introduced by asking this question is important, and many evaluation models side-step it. However, counterfactuals that take the form of control groups can be difficult to set up in some healthcare improvement programmes. Problems include the challenge of identifying appropriate comparator sites, the potential for 'contamination' between sites, and the difficulty of isolating specific causes of change in complex and multi-faceted interventions.

Changing government policy, merging organisational boundaries and a multitude of other uncontrollable internal and external changes all have an impact on the results of improvement projects. However, this can be very hard to measure. It can therefore be difficult to be certain whether changes in quality can be attributed to the intervention being evaluated. These problems are well understood across public policy interventions.

4. Developing approaches to evaluation

So what needs to happen to further develop evaluation science and practice in quality improvement?

'Evaluation methods need to catch up with the challenges.'

Mary Dixon-Woods

Best practice in evaluating healthcare improvement projects

1. Take a collaborative approach to agreeing a clear theory of change.
2. Plan for evaluation at the beginning.
3. Be clear about your purpose and design evaluation with key audiences in mind.
4. Think about evaluation when setting improvement targets – identify and separate out stretch and evaluative goals.
5. Adopt a formative learning approach to evaluation and align evaluation design to programme design.
6. Be flexible and plan for change, review your evaluation model regularly.
7. Build in ongoing evaluation throughout improvement projects and use data to inform quality improvement plans.

Finding a consensus between approaches

There has, at times, been a tension between the evaluation and healthcare improvement communities. Improvement experts have questioned some of the approaches used to evaluate interventions. Likewise, evaluators have questioned the strength of the theory underpinning some interventions and the lack of robust independent evaluation.

These tensions can be productive, helping to take forward the scholarship and practice of evaluation, supporting much needed quality improvement in patient care across the health system. During discussions, participants returned many times to the question of how ongoing evaluation can be built into the process of quality improvement and contribute to its success.

Uniting evaluation and improvement

Used well, evaluation can be a quality improvement tool. Evaluating on an ongoing basis can help to make important decisions about whether to continue with particular aspects of a project, which approaches need to be adapted, and where innovations should be spread further. There was debate about how much time and money should be spent on evaluation to justify these benefits. However it was generally agreed that rapidly evolving projects need evaluation to give early indications about whether interventions are working. This in turn helps to save valuable time and resources otherwise wasted.

The consensus was that a collaborative approach to designing evaluation as part of the programme design enabled it to be a more useful tool than when it was designed independently. However, teams still need input from professional evaluators to ensure they are making best use of the data available. Evaluators also provide an independent, potentially different, perspective.

New methods or new mindsets?

Evaluation as a discipline is full of competing methodologies and approaches. What we need most are not new methods. Instead participants agreed that we need a more cumulative approach to evaluation scholarship that takes the best of different approaches. Evaluation would benefit from a more collaborative and developmental approach to scholarship, in which the proponents of different approaches stop making claims for the complete newness of their approach but instead make claims for modest and valuable modifications to the work of predecessors.

There is no magic solution and we should resist the argument that any single approach to measuring improvement is right overall; just as we should resist the idea that certain methods are not appropriate to evaluate improvement.

'Perhaps we don't need new methods, but instead a new integrated approach or mindset – a different perspective which values the complementary role that different evaluation approaches have to offer. Crucially, we need a mindset that doesn't falsely separate out data for judgement and data for improvement. People talk about competing paradigms – I don't think it's about paradigm differences but about the will to collaborate and learn from different perspectives.'

Dale Webb

The Health Foundation is an independent charity working to continuously improve the quality of healthcare in the UK.

We want the UK to have a healthcare system of the highest possible quality – safe, effective, person-centred, timely, efficient and equitable. We believe that in order to achieve this, health services need to continually improve the way they work.

We are here to inspire and create the space for people, teams, organisations and systems to make lasting improvements to health services.

Working at every level of the healthcare system, we aim to develop the technical skills, leadership, capacity, knowledge, and the will for change, that are essential for real and lasting improvement.

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