QI in CITY & HACKNEY FACTSHEET 1: What is QI? *Jen Taylor-Watt, Improvement Advisor*

Quality Improvement (QI) is a set of tools and techniques that help us understand the systems we work in and strengthen the way we work, in order to deliver improvement in outcomes.

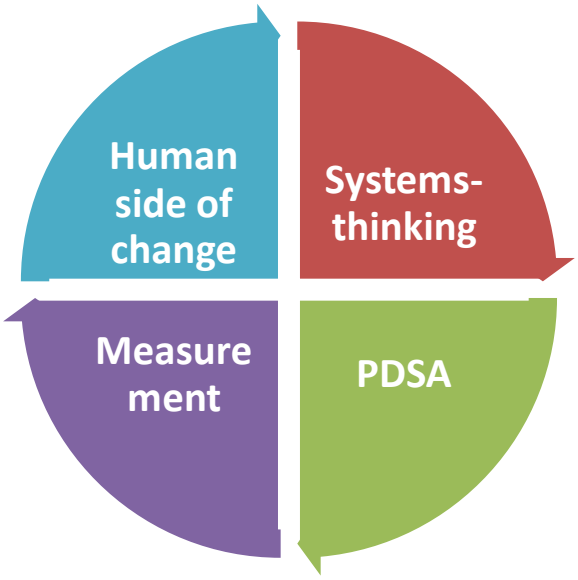
It involves 4 key dimensions, as shown in the diagram on the next page, which connect with each other:

1. Understanding that the services we work in are interconnected and complicated systems,

2. Using quick testing and learning in order to develop our understanding of what might help to improve the system (Plan, Do, Study, Act - or PDSA - cycles)

3. Having a robust system of measurement, using data over time, in order to know whether you are seeing improvement, and

4. Understanding and working with the human side of change



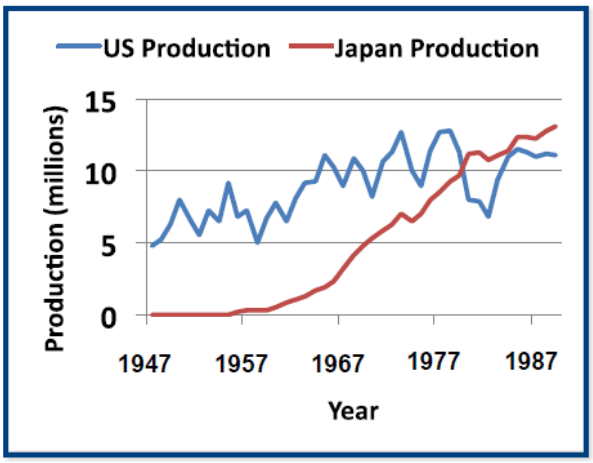
Quality improvement (QI) goes beyond traditional management, target setting and policy making. It utilises the subject matter expertise of people closest to the issue – staff and service users/carers – to identify potential solutions and test them.

Where does QI come from?

Surprisingly enough, QI stems originally from the work of a number of statisticians and engineers working within the manufacturing industries in the USA in the mid 20th century; Walter Shewhart, Joseph Duran & W Edwards Deming. They worked for companies like Western Electric and Bell Laboratories, helping to improve the quality and efficiency of these companies, through developing all 4 elements of QI methodology described above.

In the 60s and 70s, both Duran and Deming worked for a time in Japan and shared the approaches they had developed, notably within the Japanese car manufacturing industry. This input, which was further developed by companies like Toyota (who developed the ethos and ideas of “Lean”, which

fit under the QI umbrella), is a major reason why the Japanese car manufacturing industry became so competitive within the latter half of the 20th century; out-performing by a long way, their major competitors in the US, who had not been influenced by Deming & Juran (see charts below – these trends have continued since this data, reported in *The Machine that Changed the World*).



Selected Metrics for US & Japan Automobile Manufacturers		
Product Development (mid 1980s)		
	Japanese Producers	American Producers
Avg. Engineering Hrs per New Car (millions)	1.7	3.1
Avg. Development Time per New Car (months)	46.2	60.4
Employees in Project Team	485	903
Supplier Share of Engineering	51%	14%
Ratio of Delayed Projects	1 in 6	1 in 2

The Lean Academy: Massachusetts Institute of Technology

Despite this long history, QI is a relatively new thing within healthcare. It wasn't until the late 1980s and early 1990s that Don Berwick, a US paediatrician, and other colleagues, came across the ideas and started to bring these approaches into healthcare. Berwick set up the Institute for Healthcare Improvement (IHI) in the US in 1991, which now supports improvement programmes across the world.

Since then, organisations the world over have led transformative quality improvement programmes, delivering incredible outcomes (see box 1).

In terms of the UK, whilst both Scotland and Wales have nationwide Quality Improvement programmes, the NHS in England has been slower off the mark and ELFT is considered to be at the forefront of QI in England, particularly in the field of mental health[1].

ELFT is now one of 13 strategic partners of the IHI globally.

[1] Quality Improvement in Mental Health, King's Fund, July, 2017
Building the Foundations for Improvement, Health Foundation, 2015

Box 1: Impact of Quality Improvement programmes elsewhere in the world

Virginia Mason, based in Seattle, provides integrated health services to the people of the Pacific North-West of the USA. In 2002, the organisation embarked on an ambitious, system-wide program to change the way it delivers health care and, in the process, improve patient safety and quality. Using Lean principles, Virginia Mason has achieved improvements, including increasing nurse bedside time from 35% to 78% and reduced ventilator acquired pneumonia form 34 cases per year to 2.

From 2008 – 2010 NHS health boards and trusts across Wales joined the 1000 Lives Campaign, a two-year improvement initiative adapted from a successful American campaign run by the Institute for Healthcare Improvement (IHI). The 1000 Lives Campaign sought to save 1000 lives and prevent 50,000 episodes of harm in NHS Wales. Data analysed in 2010 showed it reached these goals.

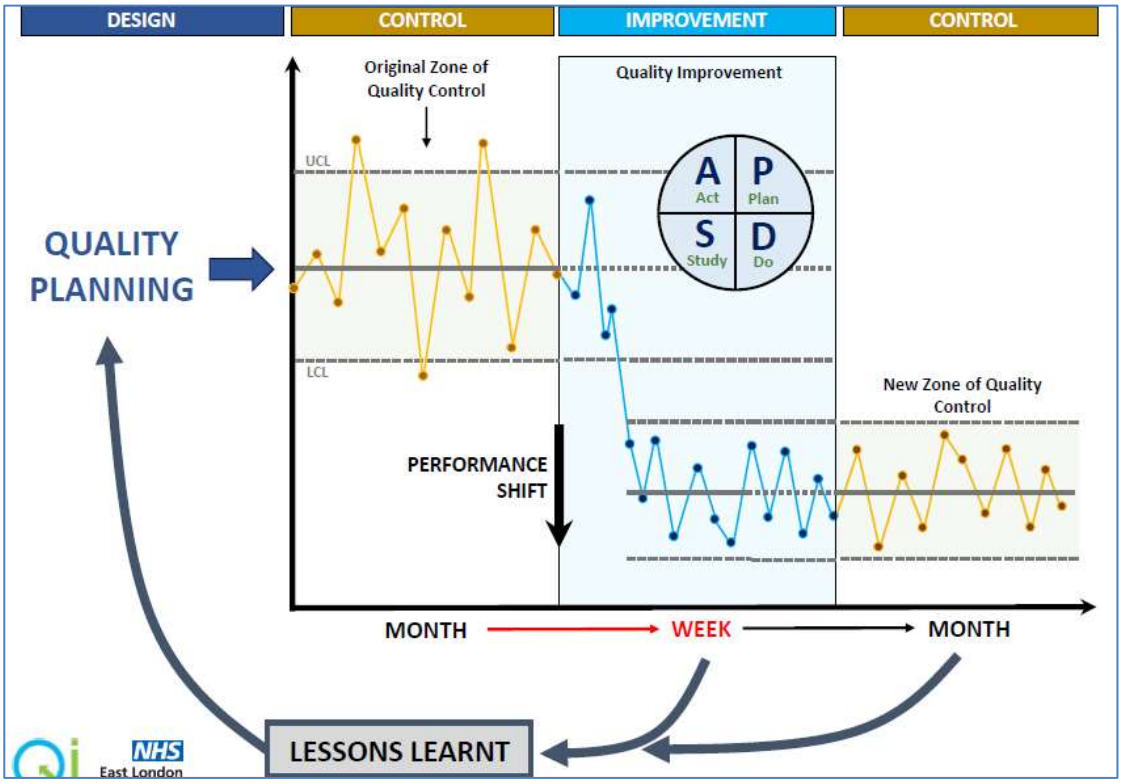
The Henry Ford Health System provides care to the people of Detroit and from 2001, began focusing on reducing suicides. The rate of suicide in Henry Ford's patient population decreased by 75 percent; from 89 per 100,000 patients to 22 per 100,000 in the first four years of the program's implementation. This is significantly lower than the annual rates for suicides in similar patient populations. In 2009 there were no suicides at all within Henry Ford Health System.

The Scottish Patient Safety Programme is a nationwide programme that aims to improve the safety and reliability of healthcare and reduce harm. From an initial focus on acute hospitals, the work has now extended to 6 areas including Mental Health and Primary Care. Achievements include a 21% reduction in 30-day mortality sepsis, a reduction of 19% in cardiac arrest rate across 11 hospitals, and, in the mental health programme, reductions in the use of restraint.

How does QI fit in to our broader leadership of Quality?

QI is just one part of our overall management and improvement of quality of care, experience and outcomes at ELFT. It fits with, and works alongside, the other key parts of quality leadership and management: quality planning, quality assurance and quality control.

In a nutshell, these elements work together as follows:



Firstly, we think about our strategic challenges and priorities for managing quality, as part of **quality planning** and we keep an eye on these areas through **quality assurance** systems like KPIs[2], PREMs[3], PROMs[4] and audit.

If we identify an area that needs improvement, we will need to think about the nature and complexity of the problem. If we think it is a really straightforward issue, it might just need to be managed through traditional structures; for example quick discussion with the team to agree how to resolve, or perhaps a simple action plan. If the issue relates to individual members of staff, then it will likely need to be managed through line-management structures.

Sometimes though, we hit on areas for improvement in healthcare that are more complicated and this is where **Quality Improvement** becomes really useful – in fact, we would argue it is critical to us being able resolve these problems.

For example, we've recently been working on reducing violence on the inpatient wards in City & Hackney (further detail is described in box 2). This was not something that a quick discussion or an action plan was going to resolve. Instead staff involved needed space and time to really understand what factors in our system lead people to be violent, and to test theories and ideas for what could help to address these factors.

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[2] Key Performance Indicators
[3] Patient Reported Experience Measures; e.g. Friends and Family Test
[4] Patient Reported Outcome Measures; e.g. DIALOG

If you use QI, you will measure your progress and once you have achieved improvement, you will have established a new level of performance. It is then really important that you ensure you hold the gains for the long term through what we call implementation planning (see section 5) and **Quality Control**.

Quality Control involves monitoring your data on a regular – and if possible and feasible, continuous – basis to identify if performance goes out of control, so you can then respond and take action. The connection between these areas of improvement is illustrated in the below diagram.

QI in projects

Quality Improvement in City & Hackney – and throughout ELFT more broadly – has largely been done through QI projects, whereby a team of people come together to work on a specific issue and then work through the key elements of the methodology.

Running QI projects does take time and energy though, so it is important we ensure projects are focused on things for which the methodology is useful and needed, as described in this guide.

QI outside of projects

In addition to the above, City and Hackney DMT would like to encourage staff who have developed their knowledge in QI, to use what they've learnt and apply this to their day to day work to help improve things in our services.

If you haven't done any QI training, as yet, we'd encourage you to do so and develop your understanding of QI. Some examples of how QI methodology has helped in day to day work outside formal QI projects are:

- Using process mapping during a whole team meeting to understand a complicated process that a team suspected could be made much more efficient
- Using Nominal Group Technique (brainstorming with post-its) to get a team's thoughts on an issue within an away day; this is a powerful technique that ensures everyone has a voice
- PDSA can be helpful to use in day to day work. The QI Team have QI booklets that you might find useful to jot down your PDSAs. Talk to our Improvement Advisor or your project team's coach to get one.