Royal College of Physicians | Quality Improvement

The past, present and future of Quality Improvement.

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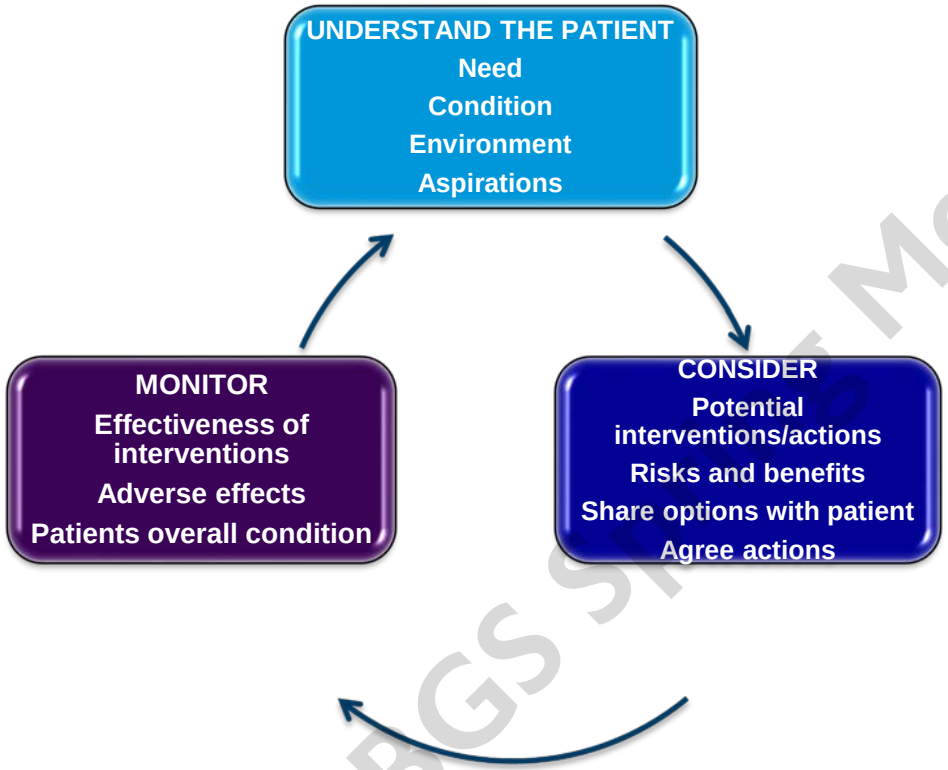
Clinical Practice.



Defining the RCP's approach to quality

The Royal College of Physicians' approach to quality takes a population, system and individual perspective.

When approaching quality, we need to create, maintain and improve the best possible balance between **population health** and **wellbeing, individual care,** and **sustainability.**

This balance requires a system-level approach to quality involving multiple partners and other agencies. The concept of value is the best balance we can achieve between these three domains.

Defining the RCP's approach to quality

The best possible care for the individual and the population should be:*

- **safe** – minimising harm to staff and patients from the care that is intended to help them
- **effective** – based on scientific knowledge reliably delivered to all who choose to benefit from it and refraining from actions to those not likely to benefit
- **person-centred** – care that is respectful of and responsive to the needs and values of the individual patient, family and carers. Care should be coordinated, and care decisions made in partnership between professionals and patients/carers
- **timely** – reducing waits and harmful delays for both those who receive and those who give care
- **efficient –** minimising waste and maximising benefits of resources, including skills, equipment, finance, ideas and energy
- **equitable** – care that does not vary in quality of delivery or outcome because of personal characteristics, geographical location, time of the day/week and socio-economical status

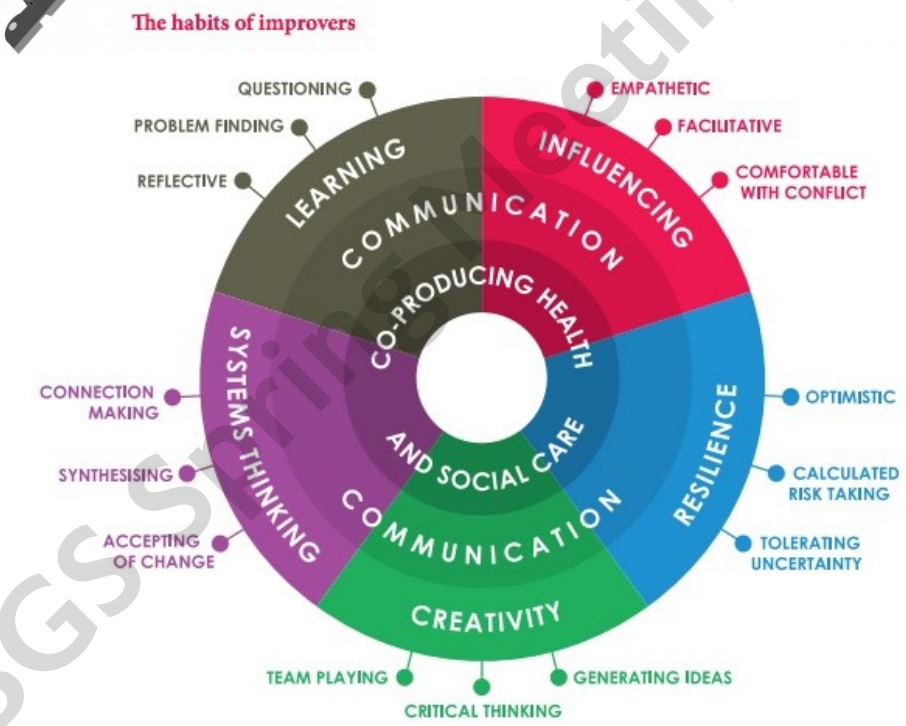
* After Institute of Medicine, 2001

Improving quality vs quality improvement

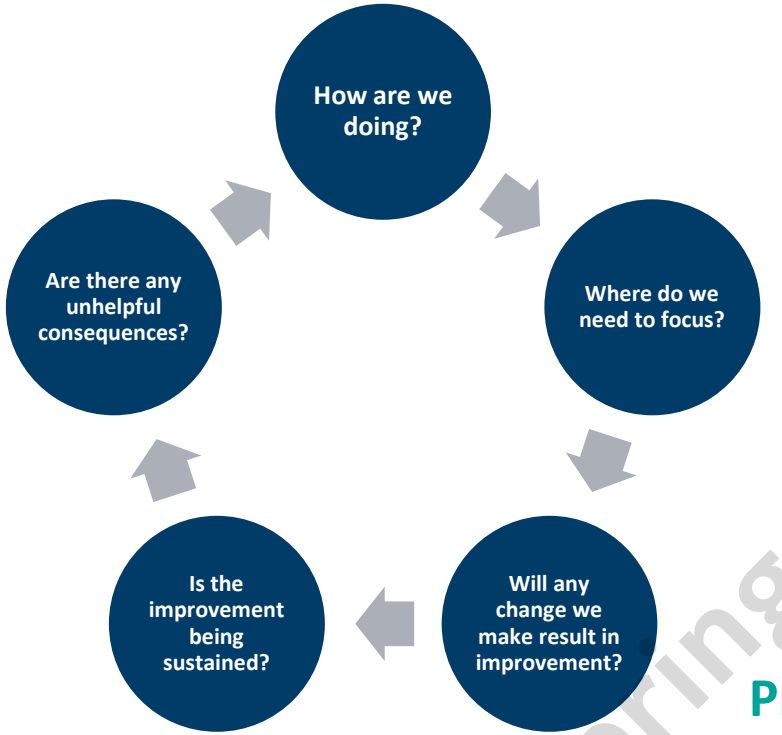
Improving quality: Making healthcare safe, effective, patient-centred, timely, efficient and equitable

Quality improvement: Aims to bring about a measurable improvement by applying scientific methods within a healthcare setting. Uses common approaches to improve quality

Art and Science of Leadership and Improvement



Mindset



Skills.

Capability 1: Understanding the system
analysis, method, complexity

Capability 2: Human elements of change
human factors, stakeholder, psychology of change

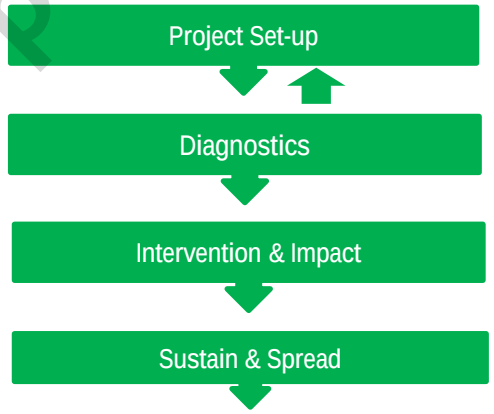
Capability 3: Measurement of change
quantitative and qualitative time series analysis, variation, assurance vs improvement

Capability 4: Implementing change
Interplay technical and behavioural and systems, coaching, project management

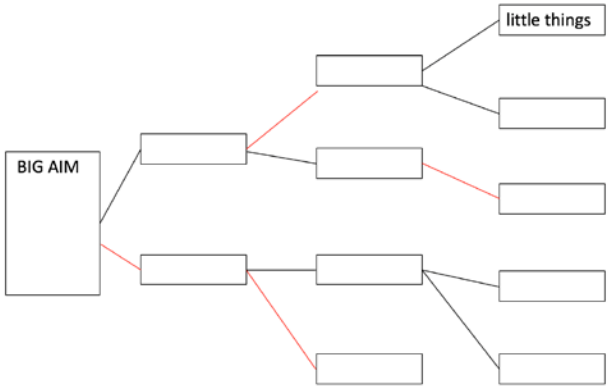
Capability 5: Sustainability and spread
Scale up and spread mechanisms, marketing, dissemination

Capability 6: Leadership and team working
Team leadership, team culture, resilience

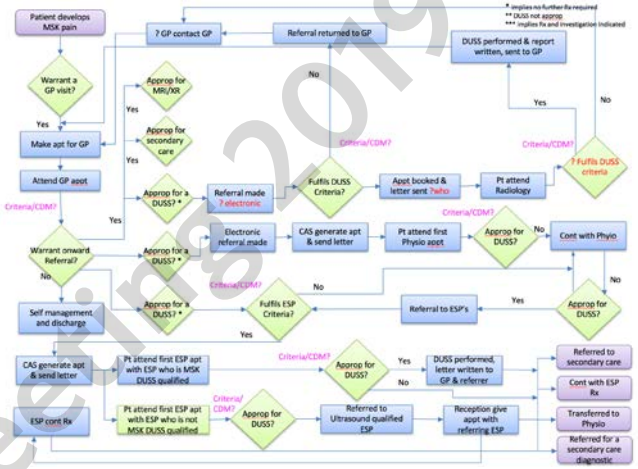
Process



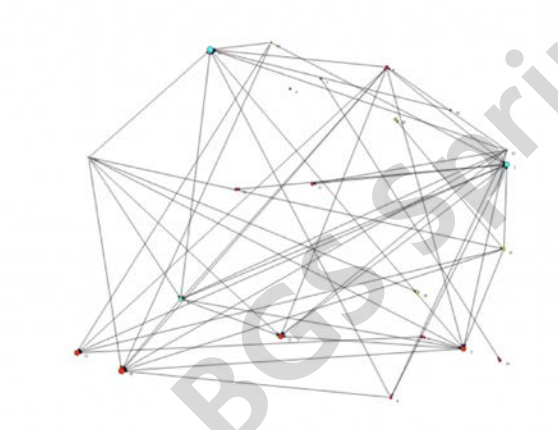
Action Effect Diagrams



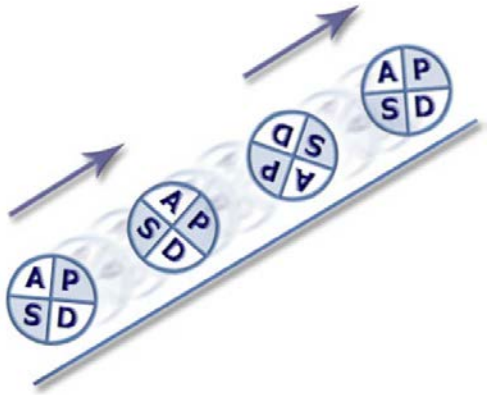
Process Mapping



Stakeholder management



Plan-do-study-act



All physicians aim to continuously improve their services for patients

They need the skills to work at 4 levels,

- Large Scale Change - for population level strategic changes
- Service design and improvement within and across pathways
- Process improvements within current services
- Day to day problem solving.

We will develop support to physicians and their teams at all stages of their career to deliver improvements in care and services - RCPQI

Royal
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The Pennine Lancashire Way

The Vital Signs Improvement Practice in Pennine Lancashire

TOGETHER
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The Integrated Health and Care Partnership
for Pennine Lancashire

TOGETHER
A HEALTHIER FUTURE

Your chance to help shape the future of health and social care in the area

You are invited to attend an engagement event on Monday September 12 2016 at:

Windsor Suite
King George's Hall
Blackburn
BB2 1AA

Arrival 5pm for light refreshments

5.30pm start. Finishes at 7.30pm

Please come along and help us shape the future of health and social care services in Pennie Lancashire. We need your views and ideas on what works well, what needs improving and how together we can face the challenges ahead.

Please confirm your attendance by emailing Involvement.mlcsu@nhs.net

Frailty: strategy to action via the Value Stream Analysis (VSA)

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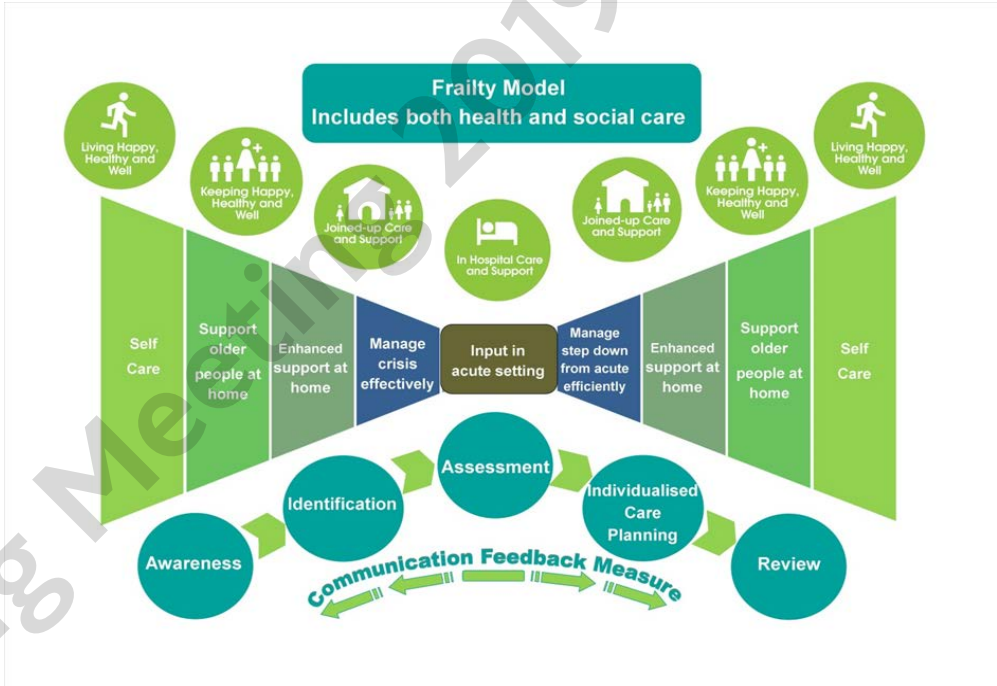

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Quick Access Cell…. Older Persons Rapid Assessment Unit, OPRA

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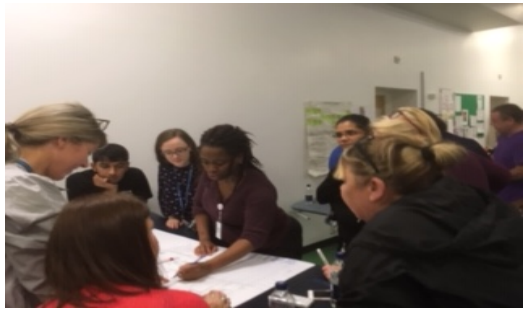


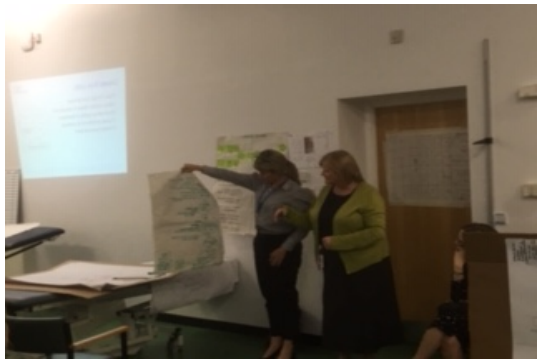



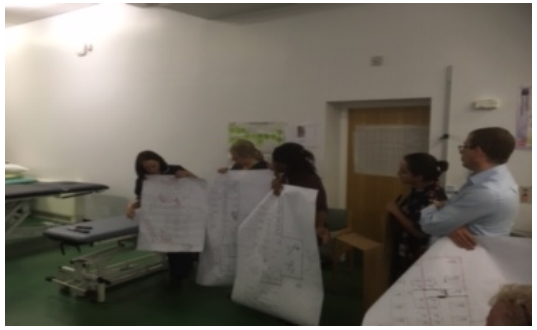

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Reliable processes

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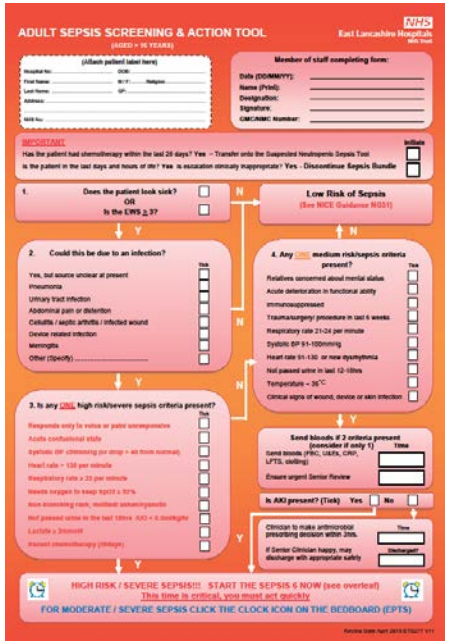
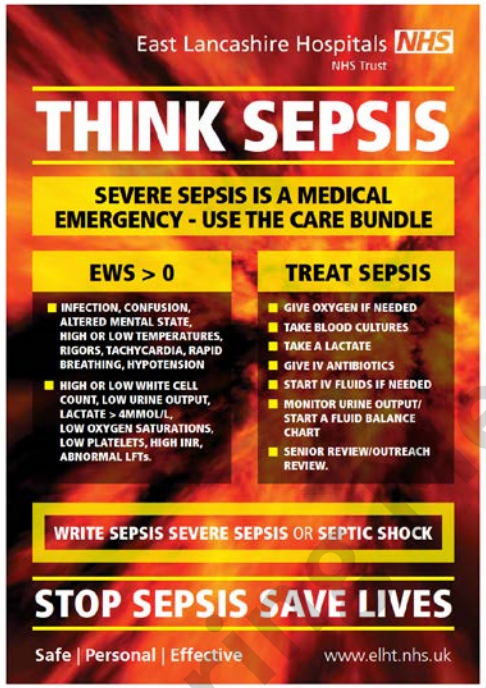
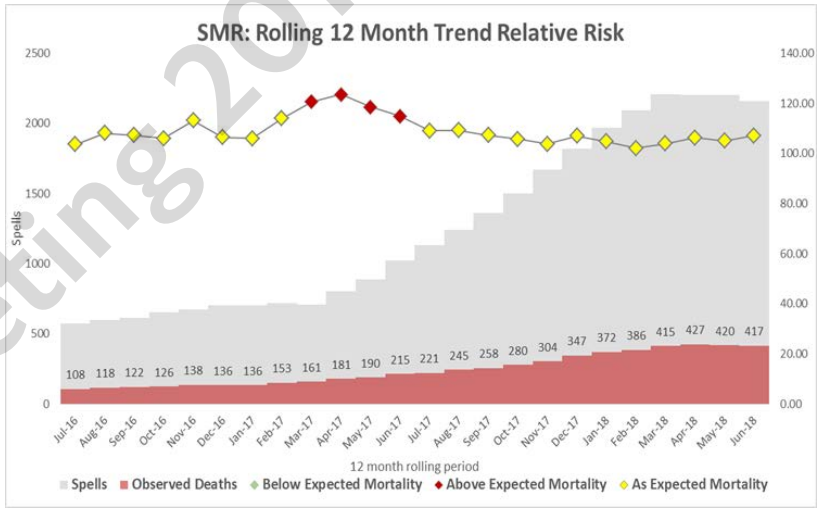
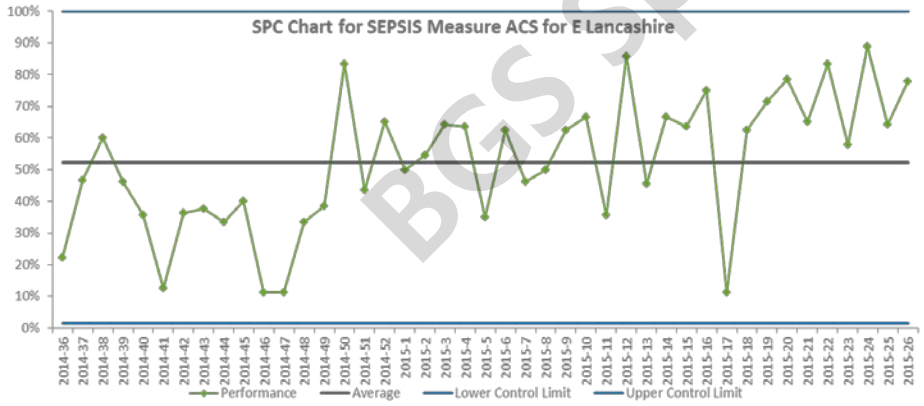
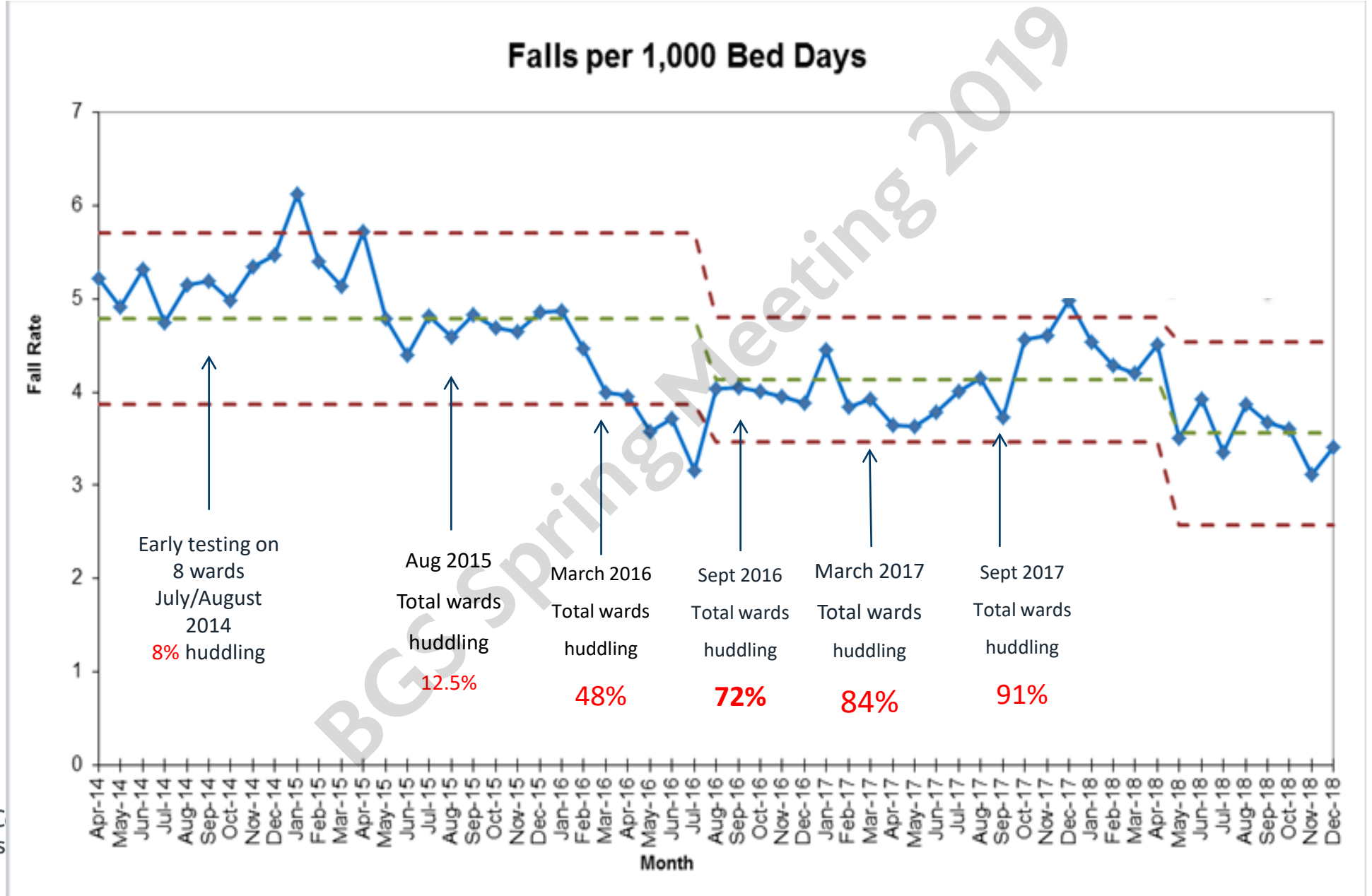








Evidence of Impact: Falls



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History of Quality Improvement in Healthcare

1920s Shewhart "Shewhart Cycle"

1940-60s

- Deming – Profound Knowledge
- Juran – Quality Trilogy

1960's to 1980s Growth of Process Engineering and Systems thinking

Toyota Production System

Six sigma (Motorola)

1980s onwards widespread adoption of QI in industry

Fad to mainstream .....

1890-1920s Setting Standards

1920s – 1990s Research and education, evidence based medicine

1960s Donebedian "Evaluating the Quality of Medical Care"

1988 Harvard Demonstration Project

1992 Institute for Healthcare Improvement

1999-2001 "To Err is Human", "Crossing the Quality Chasm"

2000-2010 Growth of QI approaches internationally

2000 NHS Plan, High Quality Care for All

2001 NHS Modernisation agency

2008 CLAHRCs

2010 Improvement Science Development Group

2013 Berwick report

AHSNs

2015 Q Community

2016 Training for Better Outcomes AoMRC

2017 Q labs

Developing People Improving Care (NHS I)
Engineering Better Care

2018 thisinstitute

2019 AoMRC QI Curriculum

Juran

Deming's

System of Profound Knowledge

Psychology

Systems

Variation

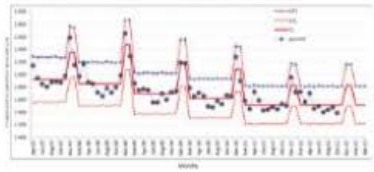
Theory

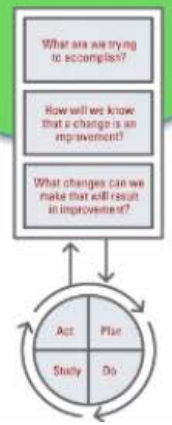
ROGER'S INNOVATION ADOPTION CURVE

Trying to convince the mass of a new idea is useless.

Prediction from SPC

The proportion of patients who die in hospital

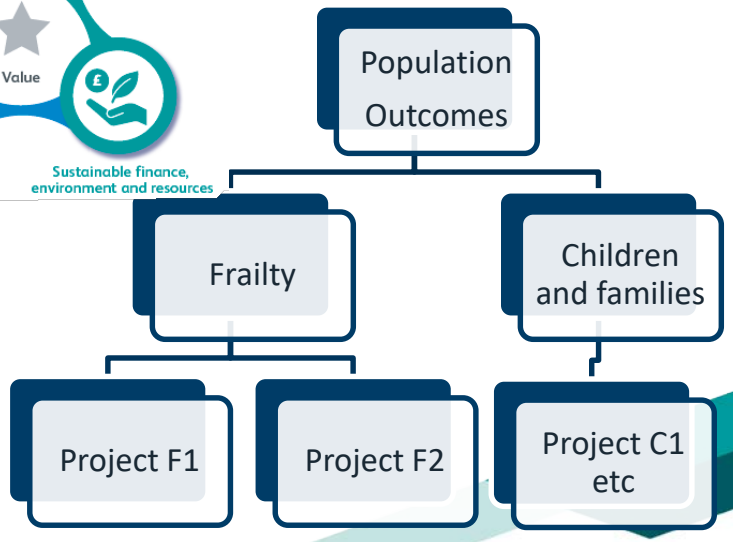




Connect assurance, improvement and planning

e.g. Deteriorating Patient:

- Planning – Rapid Response Teams
- Assurance – measurement framework
- Improvement – NEWS2 recording reliablilty



Leadership and Executive Visibility Wall

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MY JOURNEY

Quality improvement at the Royal College of Physicians (RCPQI)

Building capacity	Collaboratives	Virtual hub	Leadership for improvement	Research and development	Bespoke support
Equip the healthcare workforce with skills and expertise to continuously improve services	9 month, topic specific, quality improvement course for clinicians and their teams	Connecting people, best practice, tools and evidence	Develop medical leaders who can influence and embed a culture of quality and continuous improvement	Develop, adapt, design new improvement methods and knowledge	Provide expert assessment and support in tackling particular organisational and service challenges

RCP QI Faculty

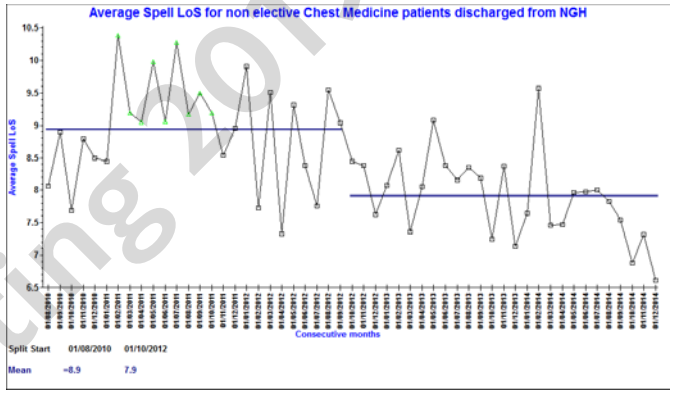
Aims to make quality improvement easily accessible to all doctors and support physicians in developing and providing safe, timely, evidence-based, efficient and patient-centred care to achieve the RCP's strategic aim of improving quality

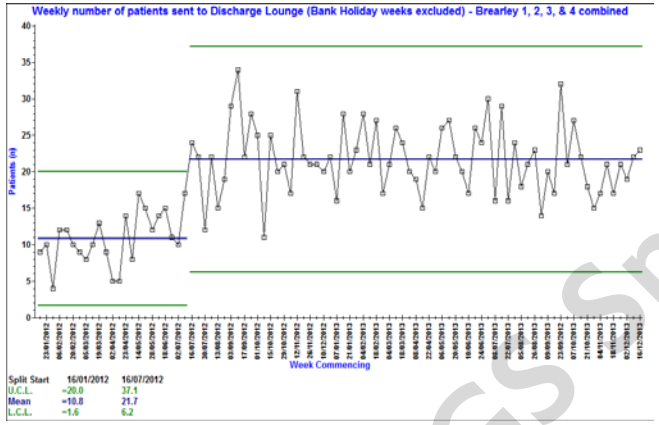
Delivered through 6 work streams, supported by a faculty of quality improvement experts

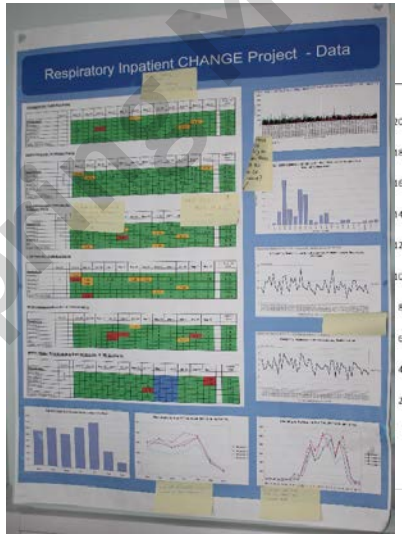
Royal College of Physicians | Quality Improvement

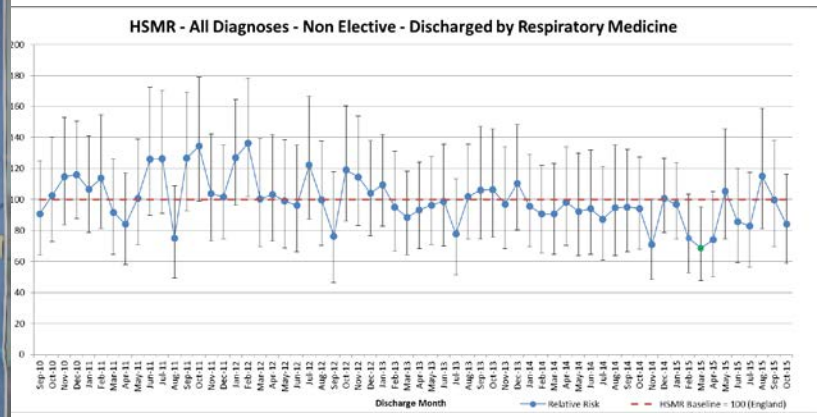
Today

Respiratory Change Room - Sheffield.

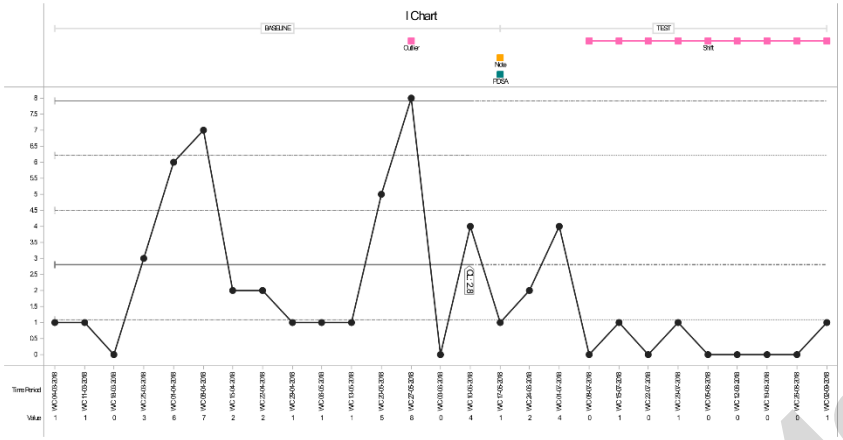






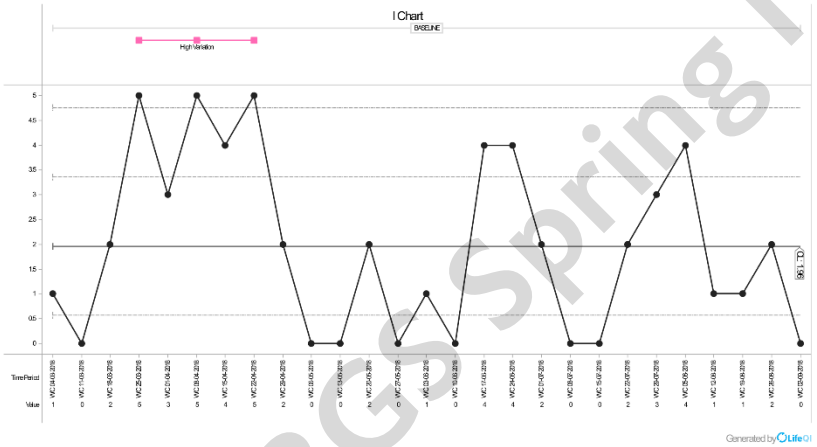


Nocturnal Hypoglycaemia – RCPQI Breakthrough Collaborative – Yeovil Hospital



Intervention ward

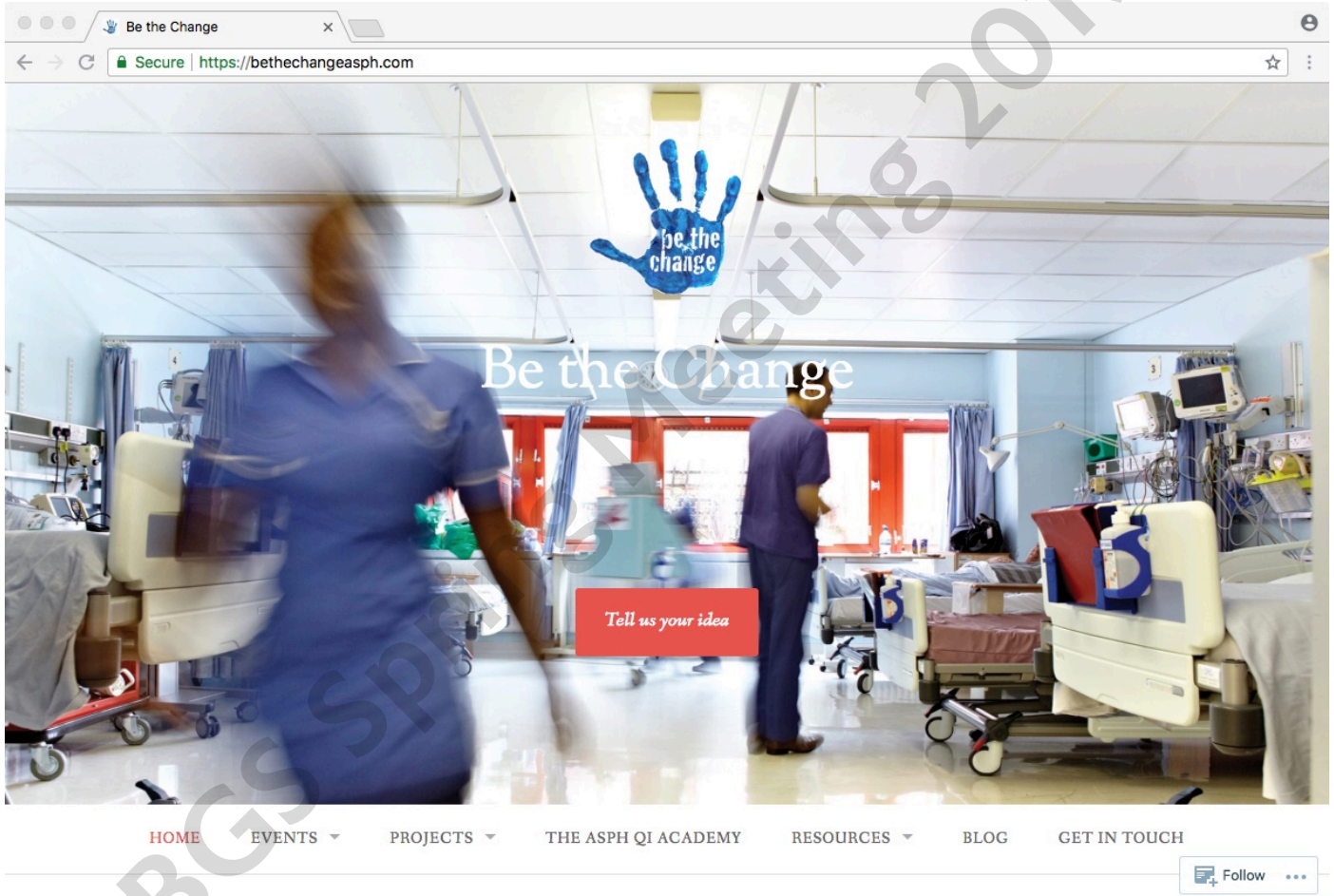
"Now I feel safe in hospital"



Control ward

Ashford and St Peters Hospitals NHS Foundation Trust

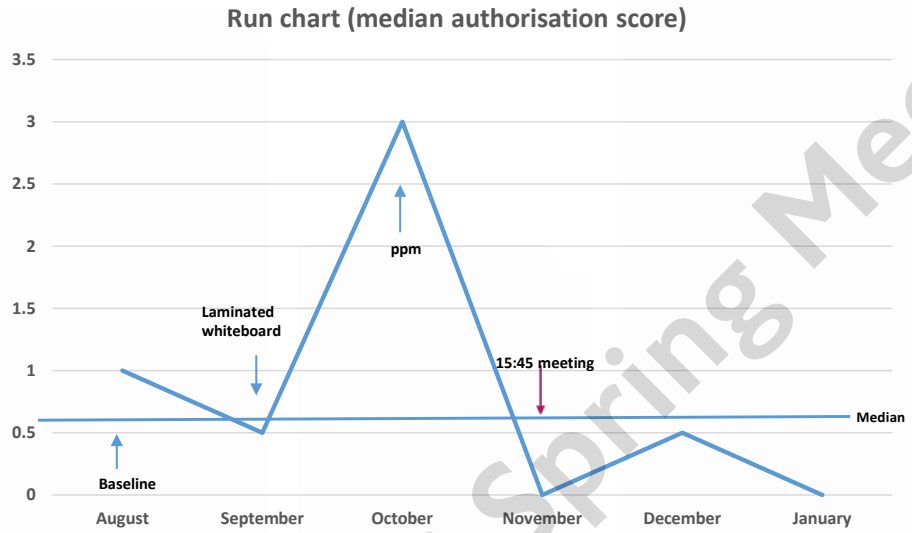
“Be the change”



Improving the rate of timely EDAN completions on Ward J08

Amy Hicks, Andrew Batt, Khudaim Mobeen

Amy's results



- There were no further delayed discharges due to clinical authorisation
- We were unable to keep an accurate record of the process measure

Trigger: Patient #NOF following delayed discharge

Team: Junior doctors, ward manager, ward clerk, AHPs

Interventions tested and adapted

Spread to other wards

Improving the Quality of Quality Improvement

THE PROBLEM WITH...

OPEN ACCESS

The problem with Plan-Do-Study-Act cycles

Julie E Reed,[1] Alan J Card[2,3]

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[2]Department of Management, University of Notre Dame, Notre Dame, Indiana, USA
[3]Evidence-Based Health Solutions, LLC, Notre Dame, Indiana, USA

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► http://dx.doi.org/10.1136/bmjqs-2015-005094

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To cite: Reed JE, Card AJ. *BMJ Qual Saf* 2016;25:147–152.

INTRODUCTION

Quality improvement (QI) methods have been introduced to healthcare to support the delivery of care that is safe, timely, effective, efficient, equitable and cost effective. Of the many QI tools and methods, the Plan-Do-Study-Act (PDSA) cycle is one of the few that focuses on the crux of change, the translation of ideas and intentions into action. As such, the PDSA cycle and the concept of iterative tests of change are central to many QI approaches, including the model for improvement,[1] lean,[2] six sigma[3] and total quality management.[4]

PDSA provides a structured experimental learning approach to testing changes. Previously, concerns have been raised regarding the fidelity of application of PDSA method, which may undermine learning efforts,[5] the complexity of its use in practice[5 6] and as to the appropriateness of the PDSA method to address the significant challenges of healthcare improvement.[7]

This article presents our reflections on the full potential of using PDSA in healthcare, but in doing so we explore the inherent complexity and multiple challenges of executing PDSA well. Ultimately, we argue that the problem with PDSA is the oversimplification of the method as it has been translated into healthcare and the failure to invest in a rigorous and tailored application of the approach.

THE VALUE OF PDSA IN HEALTHCARE IMPROVEMENT

The purpose of the PDSA method lies in learning as quickly as possible whether an intervention works in a particular setting and to making adjustments accordingly to increase the chances of delivering and sustaining the desired improvement. In contrast to controlled trials, PDSAs allow new learning to be built in to this experimental process. If problems are identified with the original plan, then the theory can be revised to build on this learning and a subsequent experiment conducted to see if it has resolved the problem, and to identify if any further problems also need to be addressed. In the complex social systems of healthcare, this flexibility and adaptability of PDSA are important features that support the adaption of interventions to work in local settings.

A successful PDSA process does not equal a successful QI project or programme. The intended output of PDSA is learning and informed action. Successful application of the PDSA methodology may enable users to achieve their QI goals more efficiently or to reach QI goals they would otherwise not have achieved. But it is *also* successful if it saves wasted effort by revealing QI goals that *cannot* be achieved under realistic constraints or if it identifies new problems to tackle instead of the originally identified issue. A well-conducted PDSA promises learning. But it does not, and cannot, promise that users will achieve their desired outcomes.

As PDSA has been translated into healthcare from industrial settings, an emphasis has been placed on rapid small-scale tests of change, often on one, three and then five patients in 'ramps' of increasing scale, and responsibility delegated to frontline staff and improvement or quality managers. This pragmatic approach has been embraced and has been seen as providing a new freedom for healthcare staff to lead change and improvement in local care settings.

However, the process of change rarely progresses in simple linear ramps.[6 8] The conduct of PDSAs can reveal other related issues that need to be addressed in order to achieve the improvement goal. Such issues may relate to minor changes to current practices or processes of care, but can often reveal larger cultural or organisational issues that need to be addressed and overcome.

ORIGINAL RESEARCH

OPEN ACCESS

Evolving quality improvement support strategies to improve Plan–Do–Study–Act cycle fidelity: a retrospective mixed-methods study

Chris McNicholas,[1,2] Laura Lennox,[1] Thomas Woodcock,[1] Derek Bell,[1] Julie E Reed[1]

► Additional material is published online only. To view please visit the journal online (http://dx.doi.org/10.1136/bmjqs-2017-007605).

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► http://dx.doi.org/10.1136/bmjqs-2018-008305

Check for updates

To cite: McNicholas C, Lennox L, Woodcock T, *et al*. *BMJ Qual Saf* Epub ahead of print: [please include Day Month Year]. doi:10.1136/bmjqs-2017-007605

ABSTRACT

Background Although widely recommended as an effective approach to quality improvement (QI), the Plan–Do–Study–Act (PDSA) cycle method can be challenging to use, and low fidelity of published accounts of the method has been reported. There is little evidence on the fidelity of PDSA cycles used by front-line teams, nor how to support and improve the method's use. Data collected from 39 front-line improvement teams provided an opportunity to retrospectively investigate PDSA cycle use and how strategies were modified to help improve this over time.

Methods The fidelity of 421 PDSA cycles was reviewed using a predefined framework and statistical analysis examined whether fidelity changed over three annual rounds of projects. The experiences of project teams and QI support staff were investigated through document analysis and interviews.

Results Although modest, statistically significant improvements in PDSA fidelity occurred; however, overall fidelity remained low. Challenges to achieving greater fidelity reflected problems with understanding the PDSA methodology, intention to use and application in practice. These problems were exacerbated by assumptions made in the original QI training and support strategies: that PDSA was easy to understand; that teams would be motivated and willing to use PDSA; and that PDSA is easy to apply. QI strategies that evolved to overcome these challenges included project selection process, redesign of training, increased hands-on support and investment in training QI support staff.

Conclusion This study identifies support strategies that may help improve PDSA cycle fidelity. It provides an approach to assess minimum standards of fidelity which can be replicated elsewhere. The findings suggest achieving high PDSA fidelity requires a gradual and negotiated process to explore different perspectives and encourage new ways of working.

INTRODUCTION

Quality improvement (QI) approaches continue to grow in popularity in healthcare. This increased emphasis and uptake of the approaches needs to be balanced by an understanding of how to ensure their effective use to enable the delivery of improvements in patient care. Without such assurances there is a danger that QI remains a 'slogan of intent' to improve quality rather than an authentic application of the concepts in practice.[1 2]

The Plan–Do–Study–Act (PDSA) cycle method is widely recommended as an effective approach to QI; however, previous research has demonstrated that the fidelity of the method reported in peer-reviewed literature is low[5] and barriers are encountered in its use.[4–6] PDSA cycle fidelity has been defined as the degree to which a PDSA cycle is carried out in accordance to the guiding principles of its use (table 1).[5] Measuring fidelity of the PDSA cycles demonstrates whether the method has been used as intended, which in turn can inform assessments as to whether its desired benefits have been achieved: learning to inform the evolution of a change idea to support achievement of a stated aim.[7] There is little overarching empirical evidence, however, of the fidelity of PDSA used by front-line teams or understanding of factors that may influence the fidelity of PDSA cycle use.[8]

This study explores the PDSA cycle conduct of front-line healthcare improvement teams supported by the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care (CLAHRC) Northwest London (NWL) programme 2008–2013. It takes advantage of the documentation collated by the CLAHRC NWL programme to conduct a retrospective study. Specifically it aims to (1) assess the fidelity of a range of PDSA cycles documented in real time by front-line improvement teams; (2) determine

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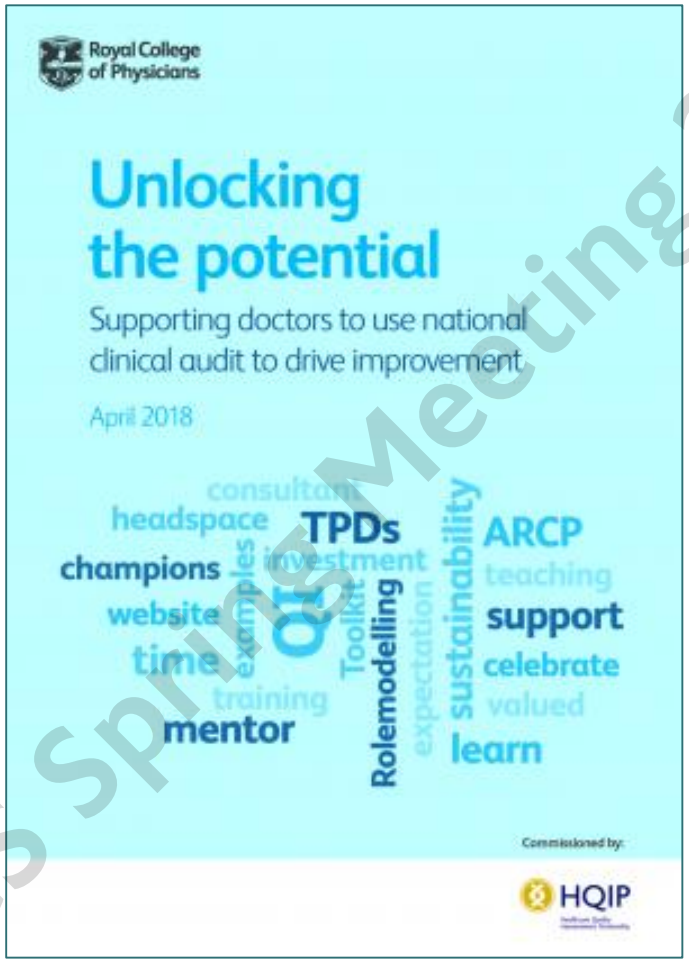
Learning to make a difference

"Stronger educational and organisational infrastructure for trainee doctors is vital in promoting the benefits of NCA data, and in supporting doctors to use the data"



"Doctors should be provided with enough mentoring, time and space to be allowed to access and use data to drive improvements in care"

RCP guidance for CMTs

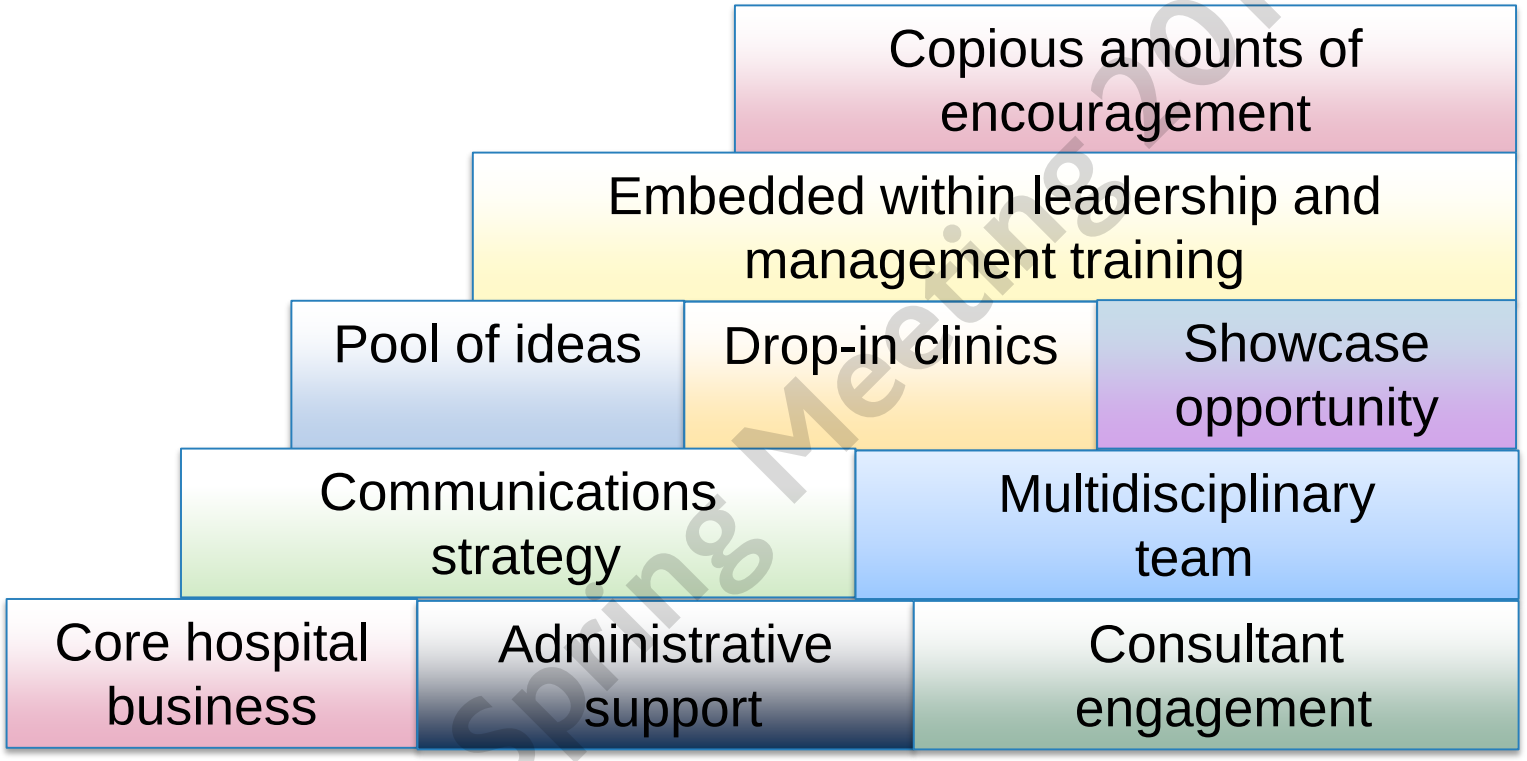
QI projects should:

- Not consist solely of data collection
- Involve working as part of a multiprofessional team
- Utilise QI methodology such as plan, do, study, act cycles and real-time measurement based on timeseries data
- Consider long-term sustainability from the start.

QI projects may:

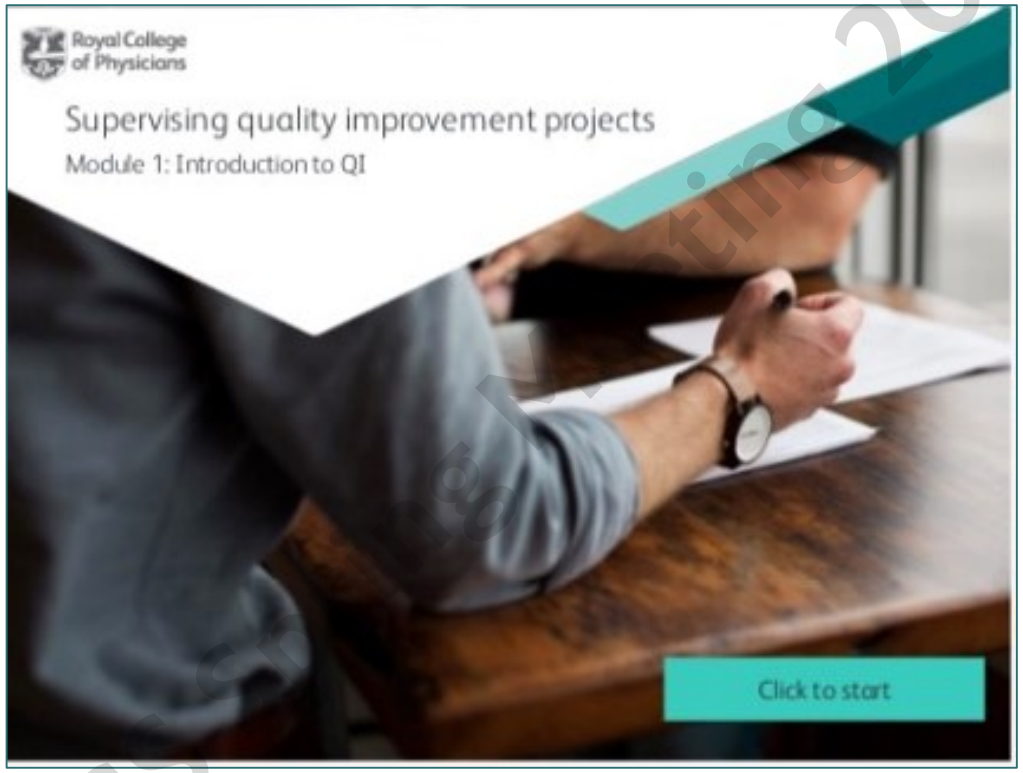
- Not be completed within a year
- Be implemented over two years of core medical training
- Not reach their ultimate goal
- Continue, spread or sustain work that is already underway
- Use national audit data as the stimulus for a quality improvement project, but should incorporate elements of discovery and measurement beyond pure data collection

Key factors for success in supporting QI for doctors in training

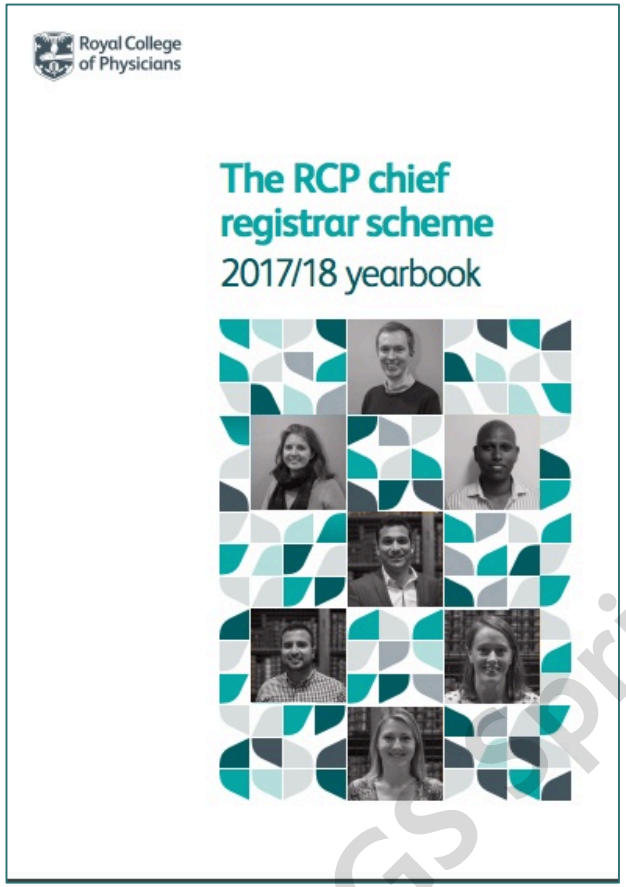


E-learning for educational supervisors

https://www.rcplondon.ac.uk/education-practice/courses/e-learning-rcp



Chief Registrar Scheme



Tomorrows leaders

Flexible portfolio training

- With Health Education England
- Give doctors training in General Medicine protected time to pursue alternative professional development, alongside their usual training:

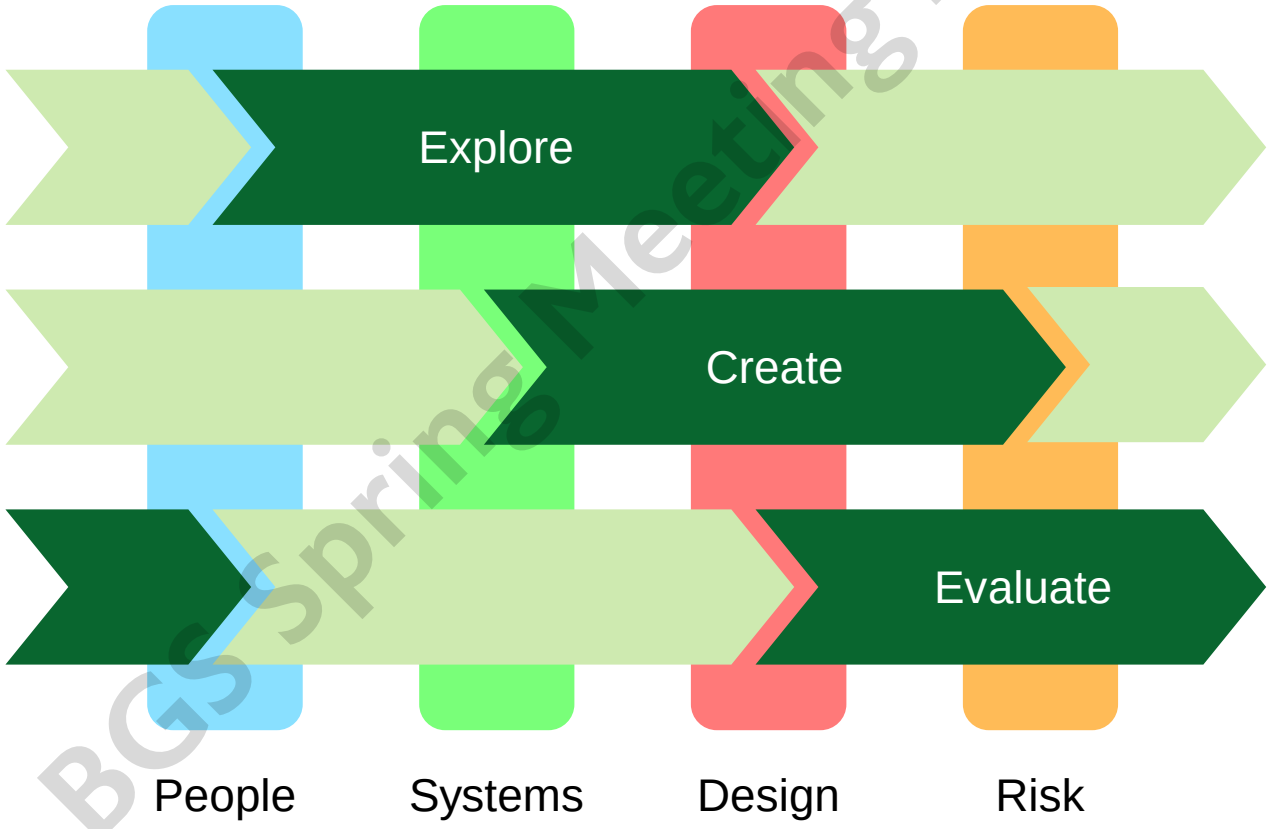
Within the pilot, trainees will:

- get one protected day a week, or equivalent to concentrate on your complementary pathway (medical education, research, **quality improvement** or clinical informatics)
- have opportunities for focused professional and personal development
- be able to develop and strengthen key competencies and new skills in a different environment
- still achieve CCT in the usual timeframe (subject to satisfactory training progression).

Start in post August 2019

Engineering Better Care

1 Engineering for Better Outcomes



1 Engineering Better Care

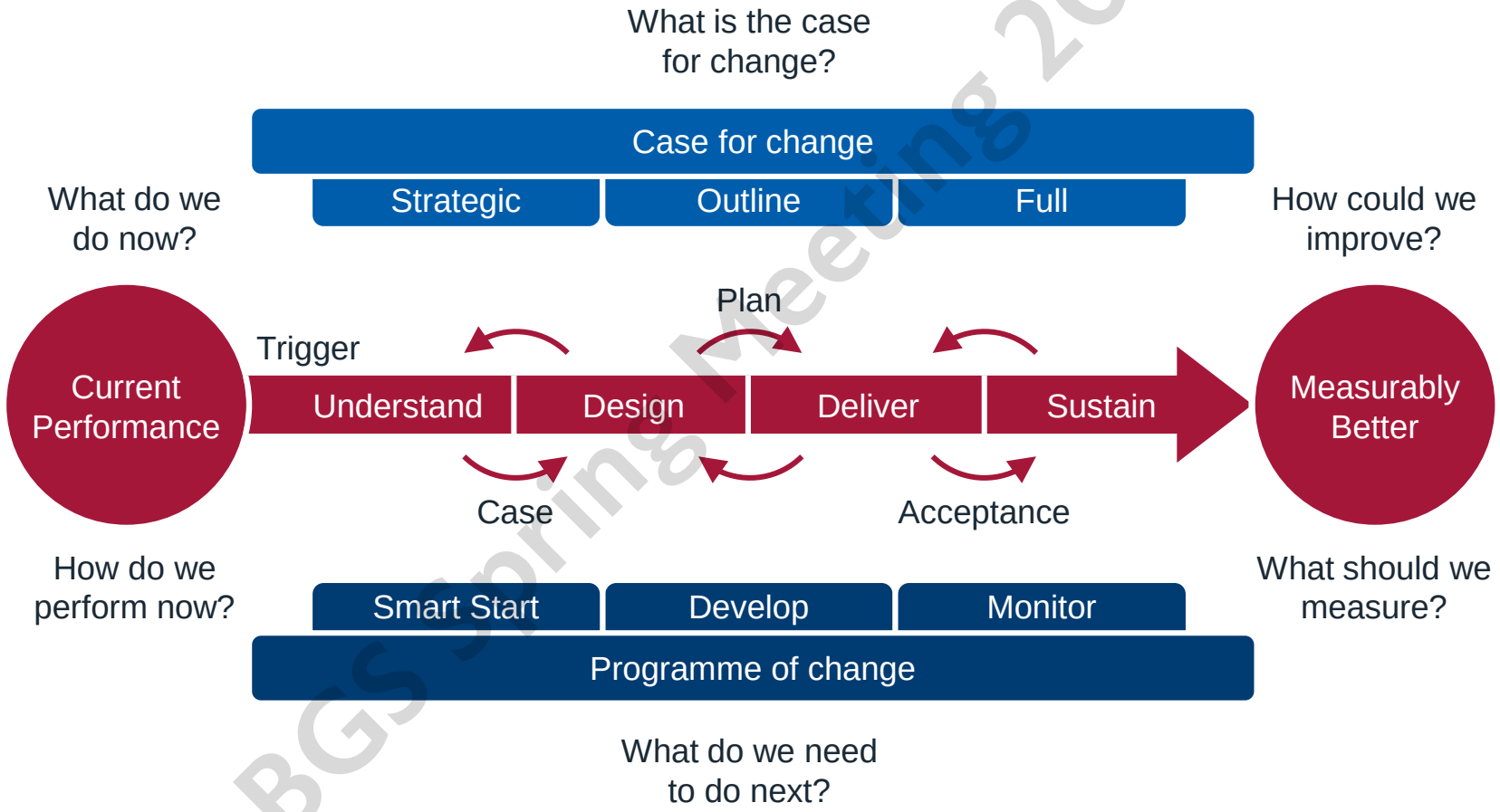
What is the purpose of the system?

Where is the system?

Who will use the system?

What does good look like?

1 Improvement Process



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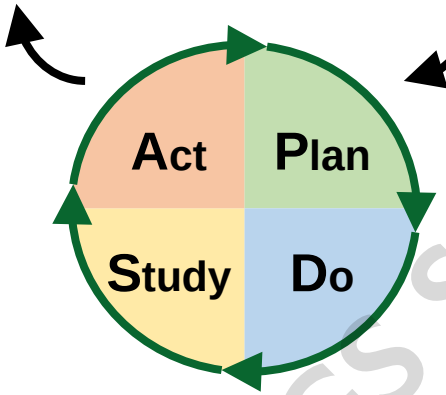
ROYAL ACADEMY OF ENGINEERING

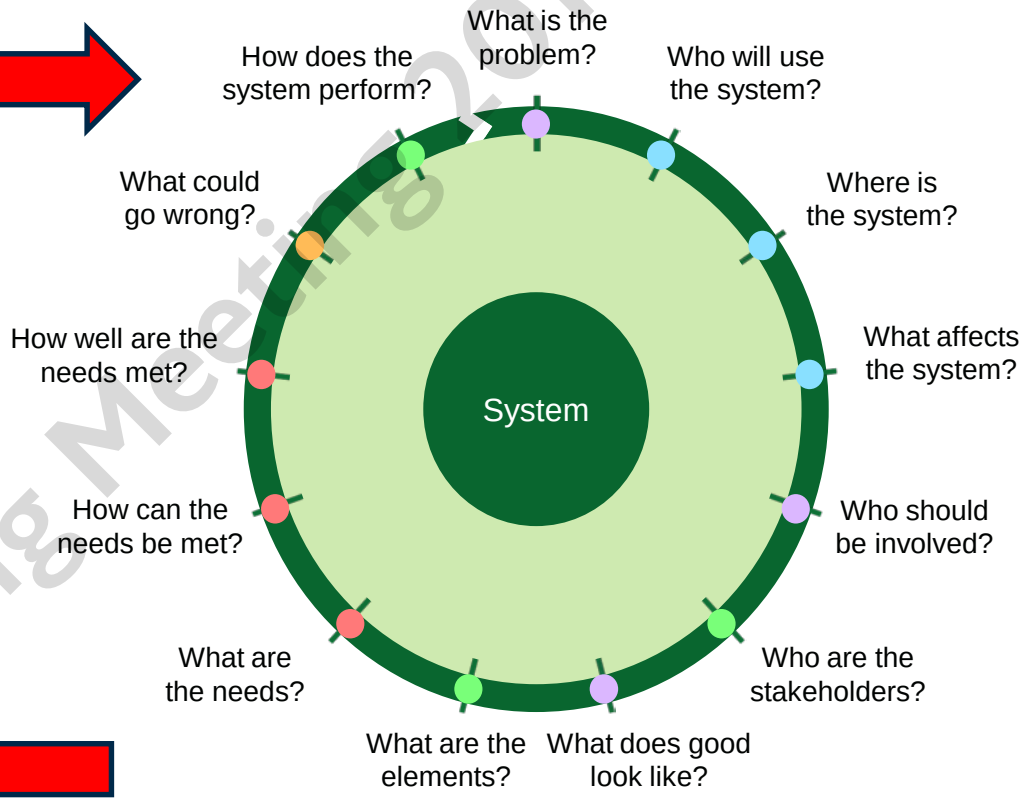
Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?





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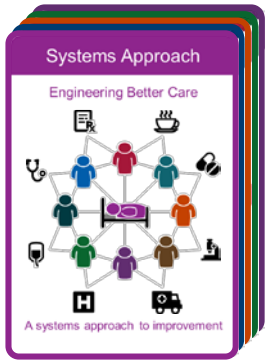
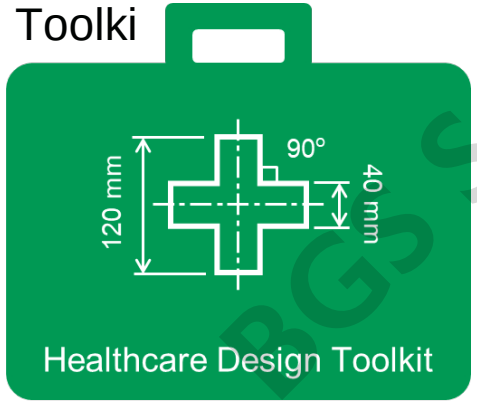
3 Improvement Toolkit



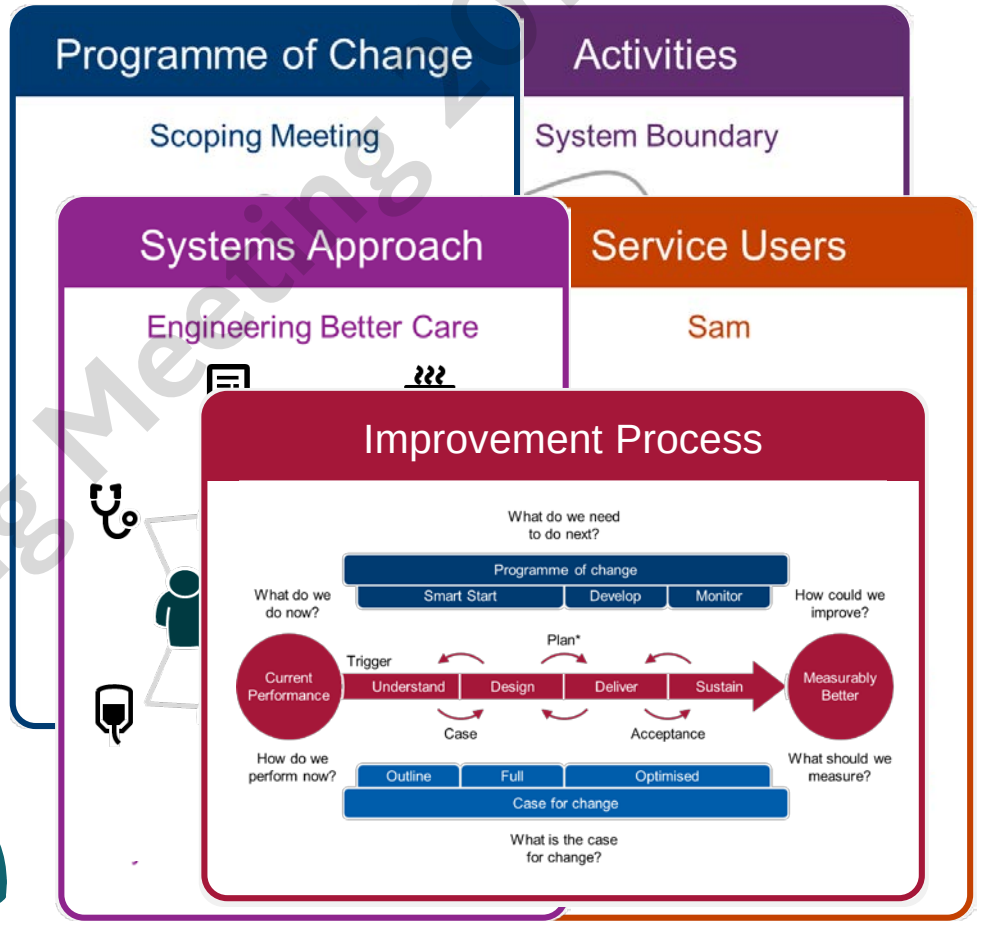
Cards

Guidance

Toolki



User



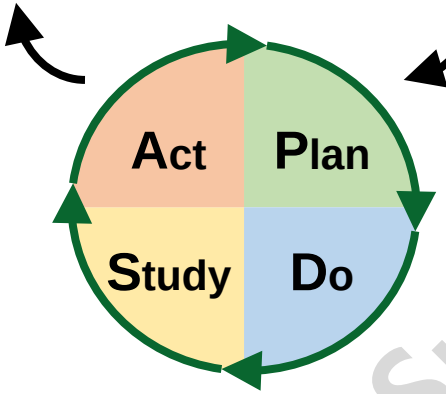
Posters / Worksheets

Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?



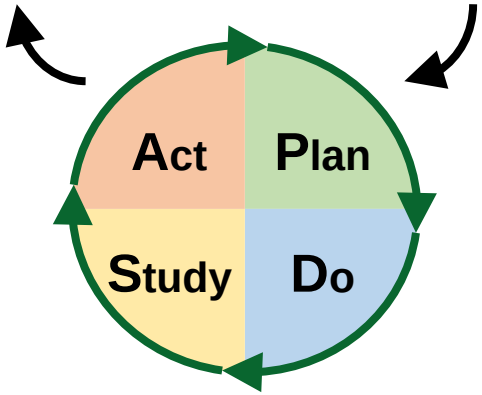
Model for Improvement Plus

What's going on?

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?



Hypothesis Testing

What could possibly go wrong?

Professionalism

- doctor as healer
- patient partner
- team worker
- manager and leader
- learner and teacher
- advocate
- innovator.

Quality improvement as a core part of professionalism

Improving Quality Improvement – now and in the future

1. Systems and system level approach
2. Connect assurance, improvement and planning
3. Professionalise QI
4. Better measurement and analysis
5. Patients and families at the core
6. Use the right methods for the right question - Fidelity
7. Focus on behaviours and relationships
8. Create time and space for improvement
9. **KEEP LEARNING AND ADAPTING**

What does this mean for you?

Clinical Service leader – analyse and identify priorities for improvement, build the team. Connect with experts, connect across the system

Consultant – identify opportunities, lead or be part of an improvement team, support trainees in projects

Trainees – get together, network, keep it small and achievable, be part of an improvement team, share your work

ALL – Learn through doing, supported by peers, develop your skills, create and sustain a culture of learning and continuous improvement, be the change

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