Making Quality Improvement a key component of Professionalism

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Acute Medicine Physician

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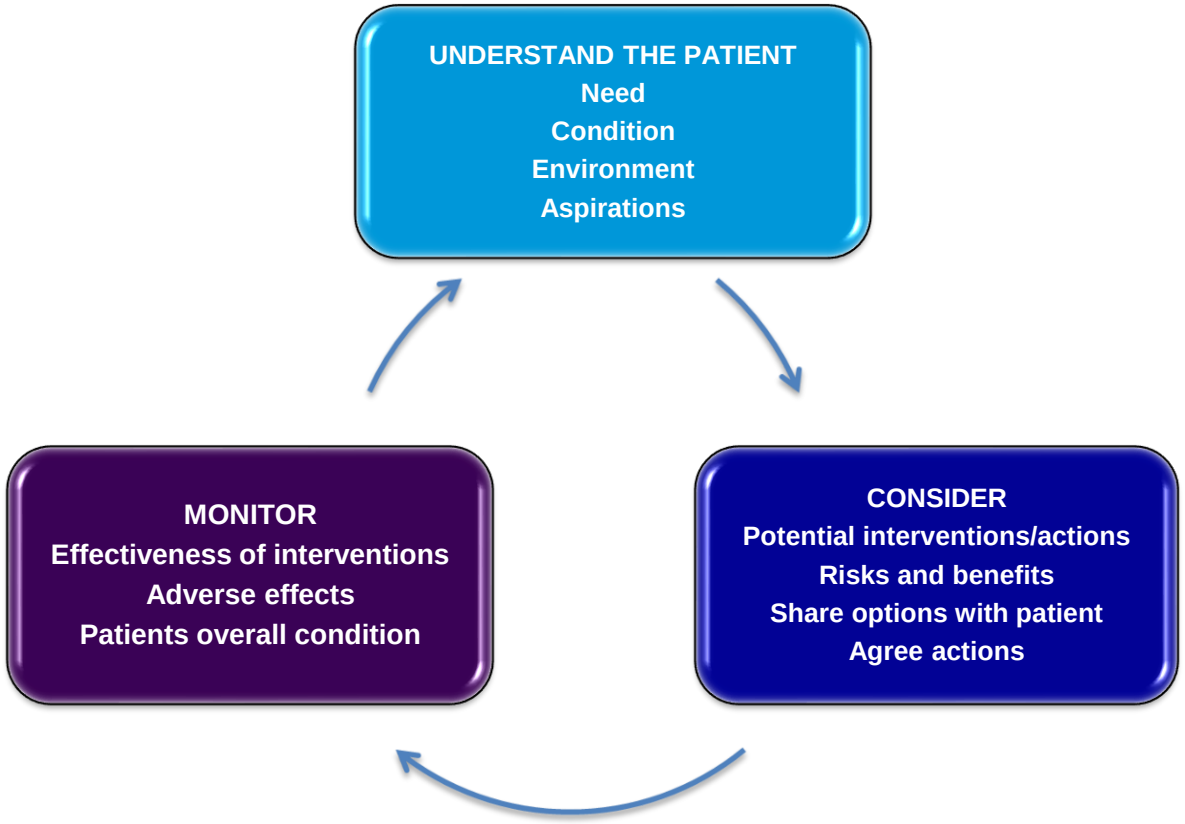
Clinical Practice.



"TWO JOBS? – OH, THE GREEDY TYPE, EH?"

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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

Quality and Safety at the RCP

Education

- Developing Physicians and teams at all stages of their careers

Improving quality and safety:

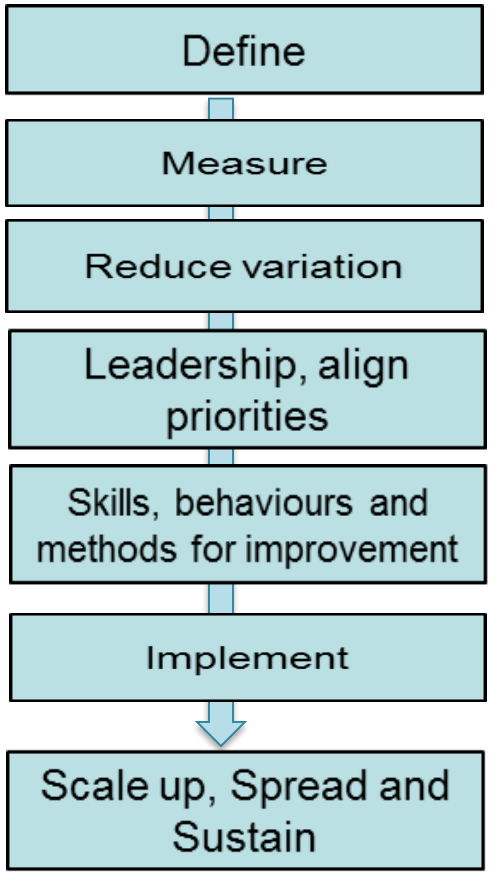
- Evidence based guideline development
- Clinical audit
- Health informatics

Assuring quality and safety:

- Accreditation of services
- Invited service reviews
- Patient safety

Innovating quality and safety:

- Future hospital
- Quality Improvement Programme



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RCP QI Programme

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

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All physicians aim to continuously improve their services for patients

They need the skills to work at 4 levels,

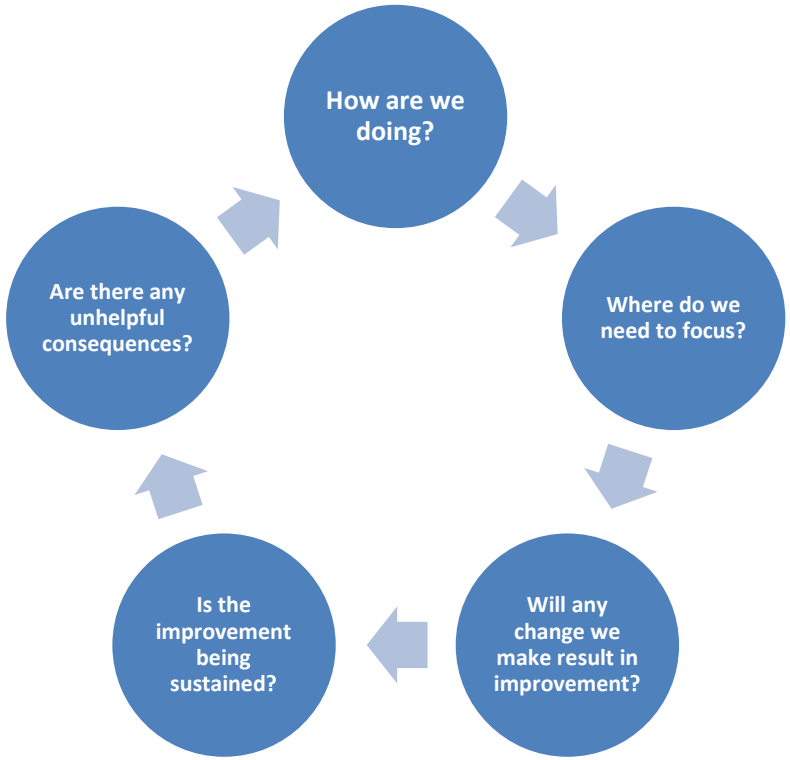
- Large Scale Change - for population level strategic changes
- Service design and improvement within and across pathways
- Process improvements within current services
- Day to day problem solving.

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

Professionalising Quality Improvement

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

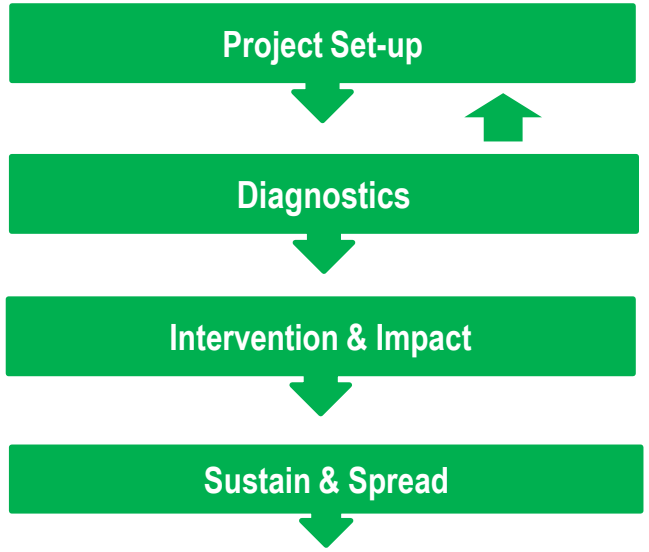
Capability 3: Measurement of change
quantitative and qualitative time series analysis, variation, assurance vs improvement

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

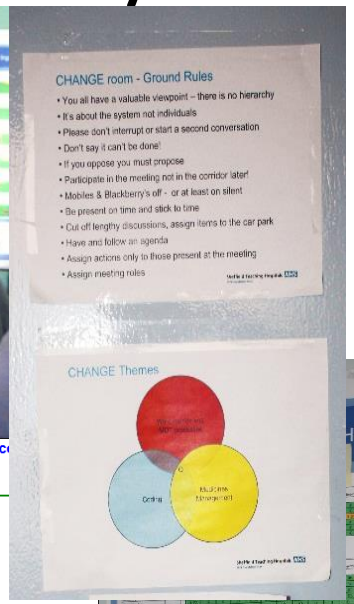
Capability 6: Leadership and team working
Team leadership, team culture, resilience

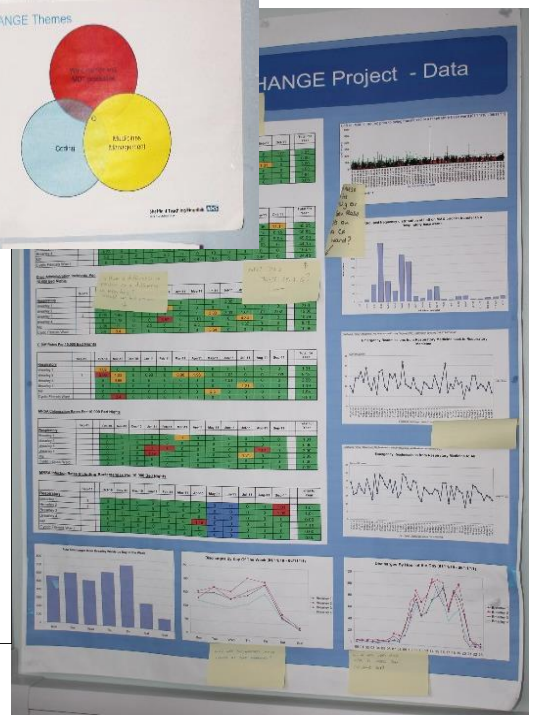
Process

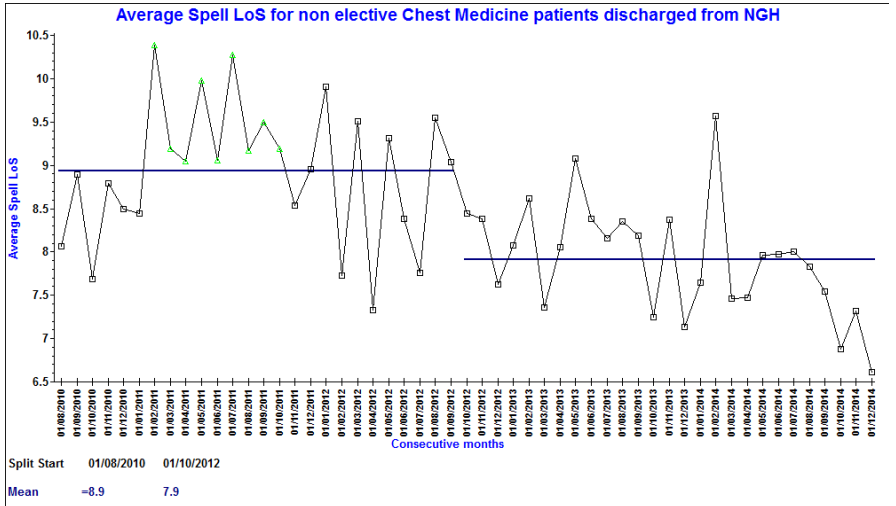


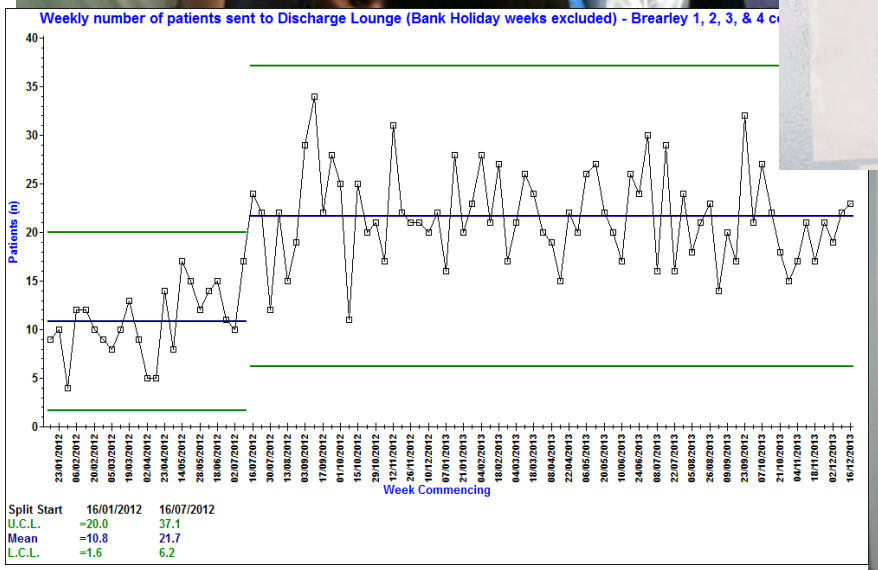
Habits of an improver

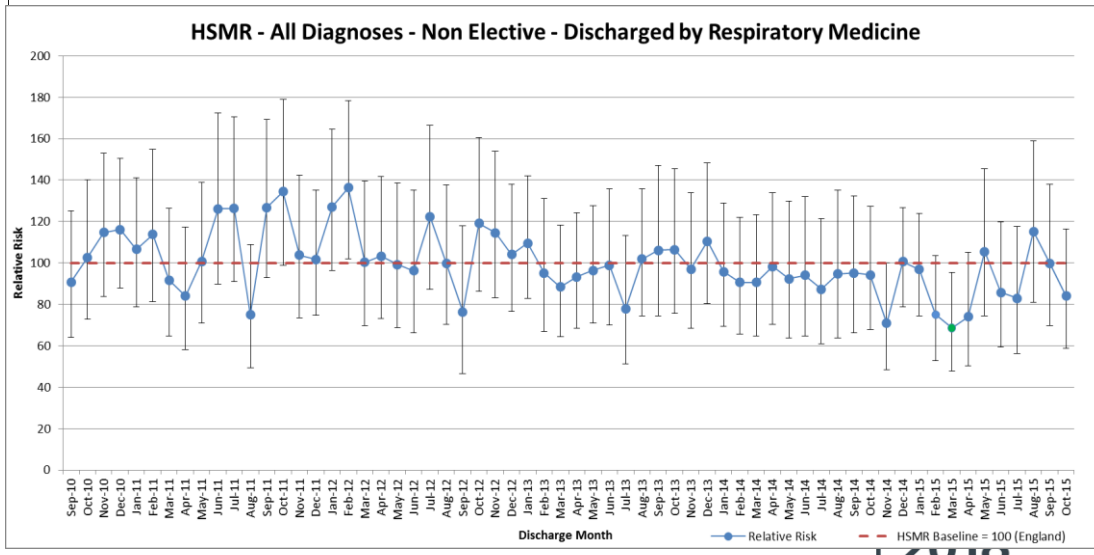
Respiratory Change Room - Sheffield.











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RCP Guidance CMTs and QI

- The skills, behaviours and knowledge of improving service delivery and quality is a core part of professionalism for physicians.

- Within the core medical training curriculum this is supported by the requirement to undertake a quality improvement (QI) project each year.

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.

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Improving the rate of timely EDAN completions on Ward J08

Amy Hicks, Andrew Batt, Khudaim Mobeen

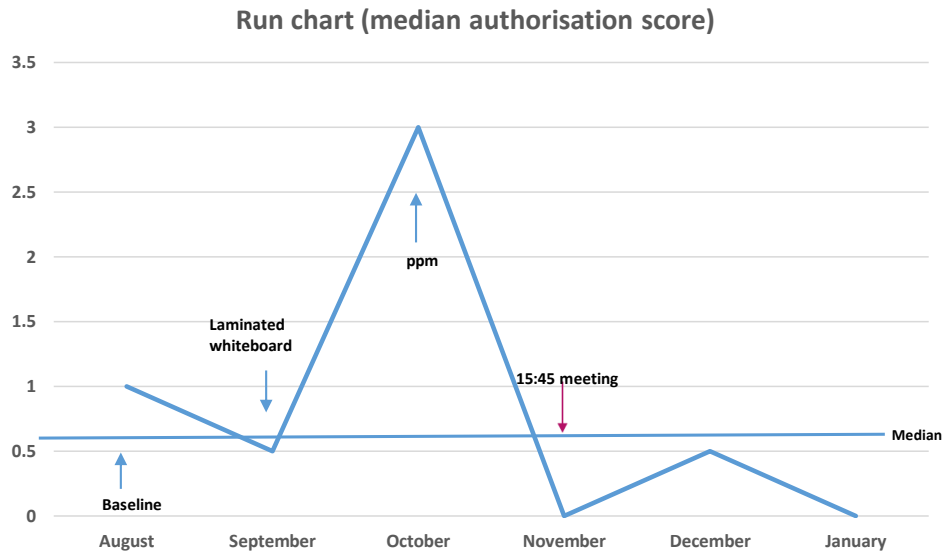
Trigger: Patient #NOF following delayed discharge

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

Interventions tested and adapted

Spread to other wards

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

Improving the time taken to release deceased bodies to bereaved families

Sooraiya Husnoo *(FY1),* ***Malcolm Littley*** *(Consultant Supervisor),* ***Erin Bolton*** *(Bereavement Care Coordinator)*
Sooraiya.Husnoo@elht.nhs.uk; Malcolm.Littley@elht.nhs.uk; Erin.Bolton@elht.nhs.uk

East Lancashire Hospitals NHS Trust

Safe | Personal | Effective

Background

Collection of the Medical Certificate of Cause of Death (MCCD) is the final act that families remember of the care provided in ELHT. Regardless of how good the care of their relative as an inpatient was or how understanding the staff were during the last moments, without a timely MCCD, they are left with the impression that we do not care about them in these difficult times. In addition to providing a better service, advantages to the Trust included reducing potential complaints.

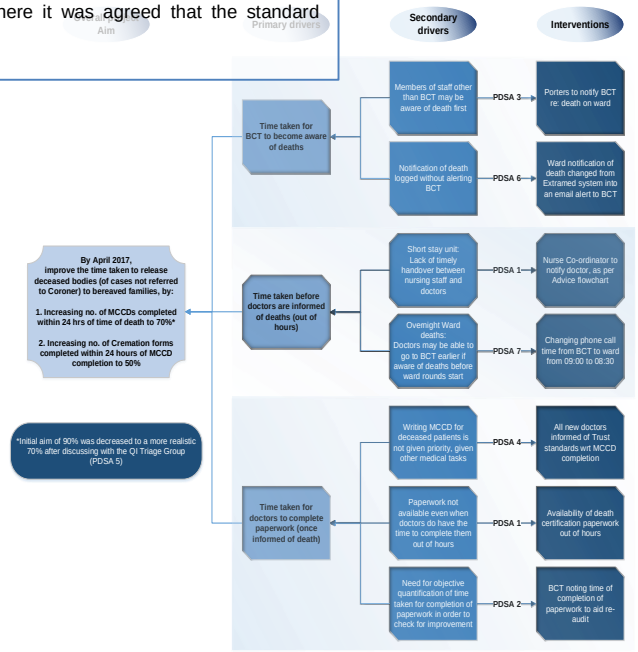
- After identifying this issue, a baseline audit was carried out in April 2016. It confirmed delays in the release of the MCCD and Cremation forms.
  This in turn led to delays in families being able to register deaths and making funeral arrangements.
- The audit results were presented to the Clinical Directors Forum, where it was agreed that the standard needed to be improved, hence this project.

Methods

- The process from the time of death up to the delivery of the MCCD and cremation forms (when required) to the bereaved family was examined to identify where time could be saved
- Changes were implemented, as shown in the diagram below, and data (about deaths on both wards and short stay units) was gathered over more than 6 months, with help from the Bereavement Care Team (BCT)
- To minimise bias, cases were selected using a systematic sampling method, and analysed after excluding cases referred to the coroner for further investigation

SMART Aims:

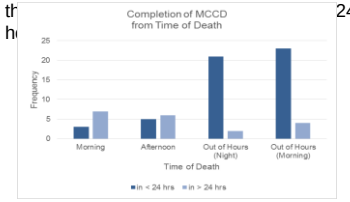
1. **70% of families (of cases not referred to the Coroner) will receive the MCCD within 24 hours of time of death**
2. **50% of cases (not referred to the Coroner) will have the Part 2 of the Cremation form completed within 24 hours of the MCCD (when required)**

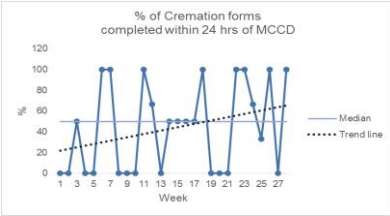


Key:
- MCCD: Medical Certificate of Cause of death
- BCT: Bereavement Care Team

Results (Measures)

1. 73.2% of families (of cases not referred to th… 24 h…





2. 51.8% of cases (not referred to the Coroner) had the Part 2 of the Cremation form completed within 24 hours of MCCD

Sustainability

In this project, different interventions were implemented to address the issue at different levels (especially with respect to human, task and team factors).

As a new cohort of junior doctors start every year in August, PDSA 4 (i.e. informing doctors of the need for timely completion of paperwork) is a task to be repeated yearly.

PDSAs 1, 6 & 7 are changes in the system likely to continue. Even though they may not be sufficient on their own, they provide an additive effect likely to sustain the improvement.

In order to confirm its sustainability, further data will be analysed in 6 months.

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7 Steps to Safe, Personal and Effective Care

Project Set-up

- **Step1** — Define Project Aims
- **Step 2** — Discover

Diagnostic Phase

- **Step 3** — Measure
- **Step 4** — Investigate Options

Intervention & Impact

- **Step 5** — Test out the Change
- **Step 6** — Implement Change

Sustain & Spread

- **Step 7** — Celebrate, Spread and Sustain

- Identify project aim-Think SMART
- Drivers for change
- Rationale for change
- Understanding the system

- Agree measures for success
- Use data to identify areas for improvement
- Investigate current process – find potential areas for improvement

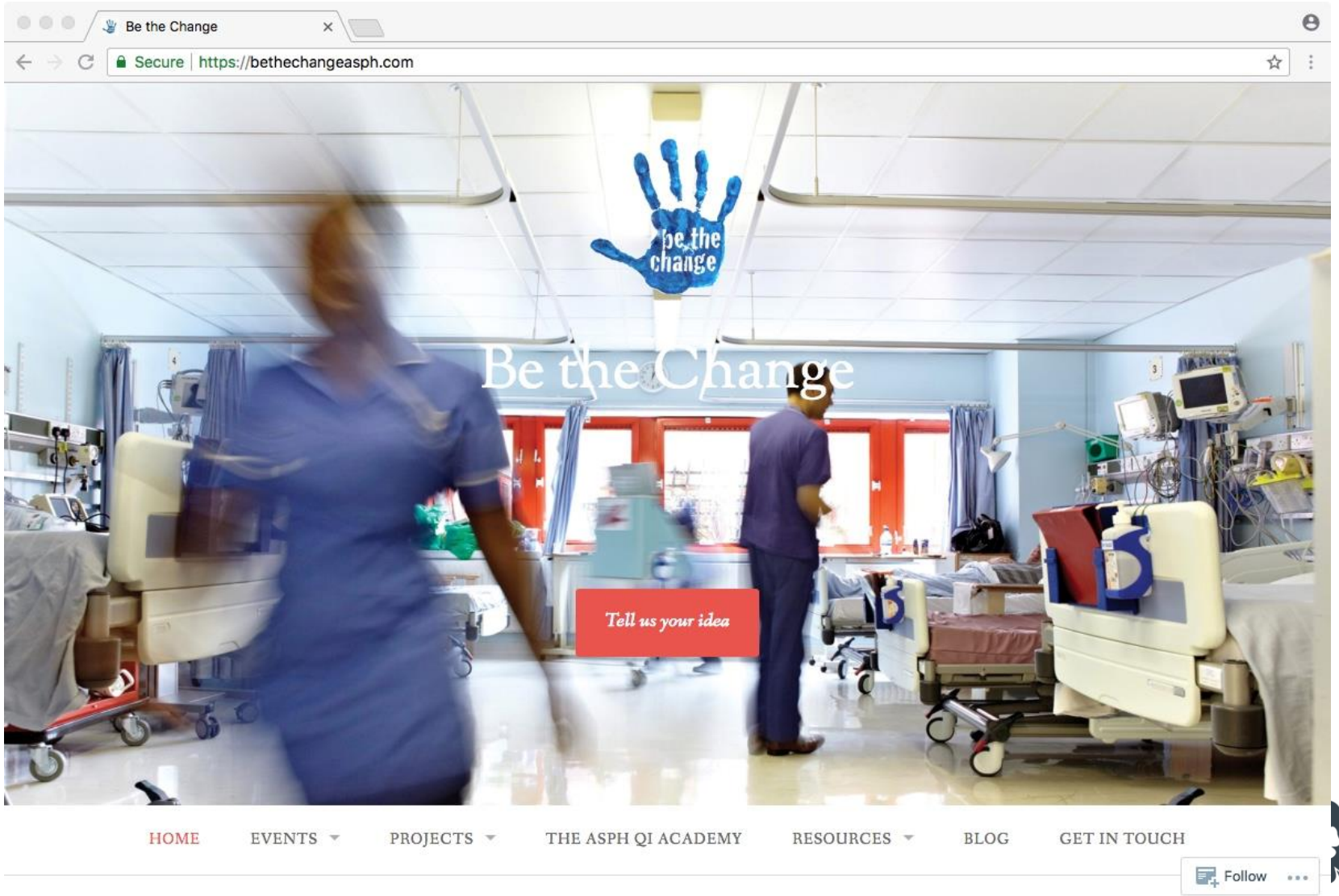
- Continuous small-scale improvement over time
- Testing and adapting options for change
- Measuring the impact of interventions and changes

- Celebrate & communicate success
- Share learning
- Integrate the changes into business as usual

Safe | Personal | Effective

Ashford and St Peters Hospitals NHS Foundation Trust

“Be the change”



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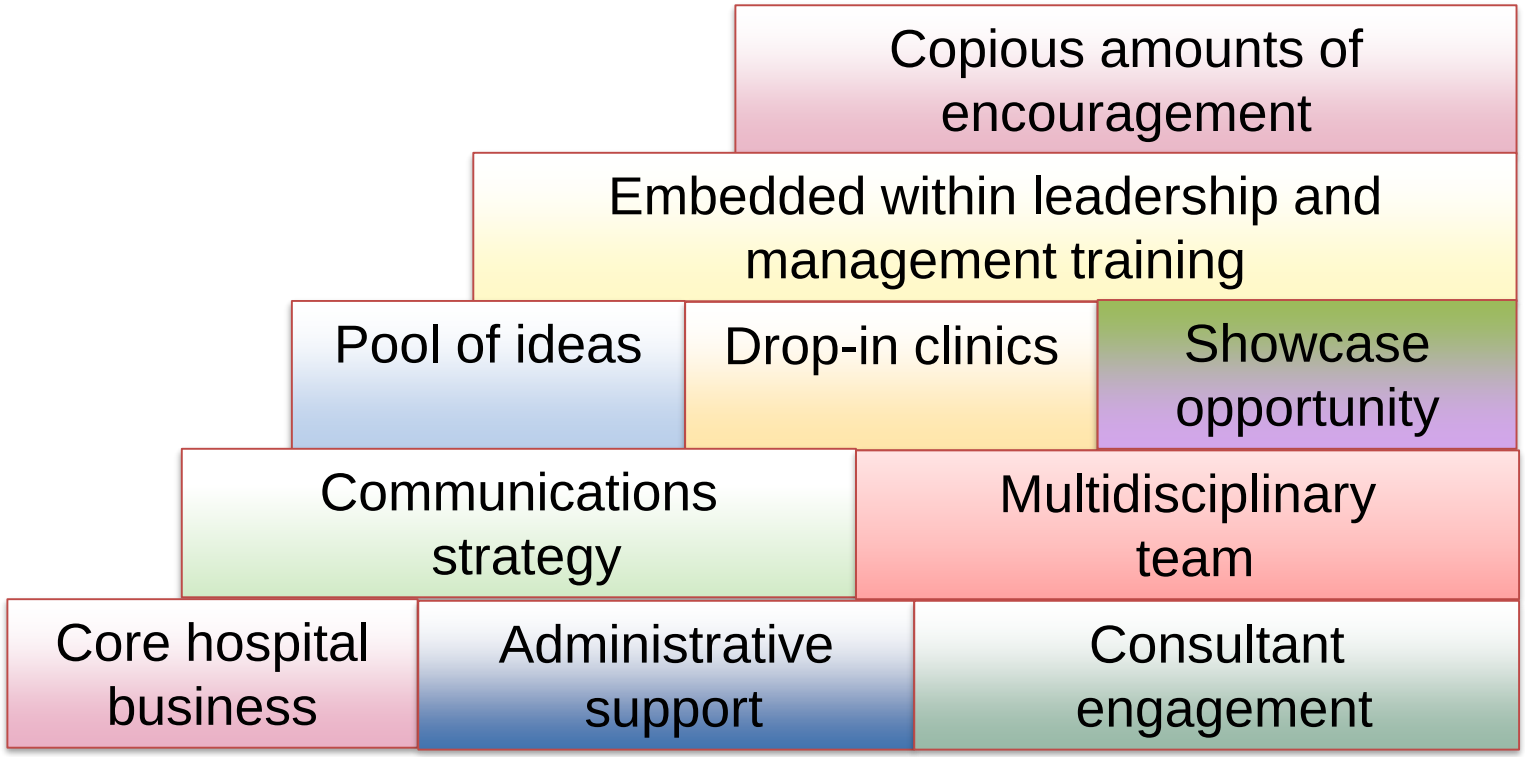
Key factors for success supporting QI for Doctors in Training



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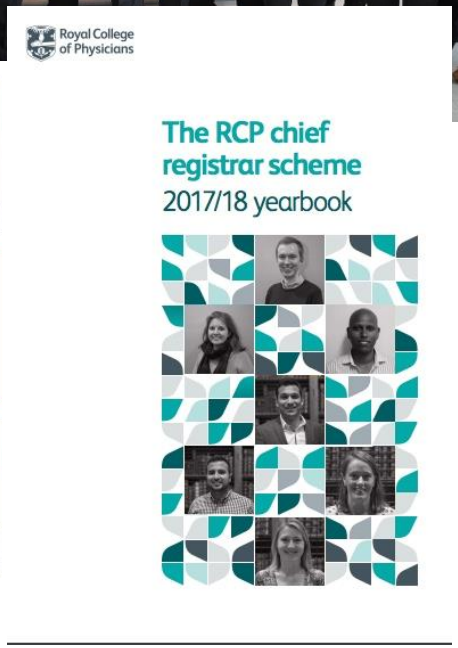
Chief registrar programme

- The FHP pilot began in April 2016
- Programme lasts for 12 months
- Third Cohort of 55 young doctors

❑ TOMORROWS LEADERS



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Cultural, organisational and system level challenges

Professional and personal drive for improved care

- Multiple changes in senior leadership
- Silos within organisation
  e.g. Nursing, medical, therapies, governance, QI, service development
- Regulation, operational and financial performance
- We know what to do.
- Organisational sign up and methodology
- Demoralised by failure
- Commissioning vs provision
- Time and space for QI and development
- Working as a single system
- Competing priorities

RCP QI Programme

rcpqi@rcplondon.ac.uk
@RCP_QI

QI Clinics

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

Engineering Better Care

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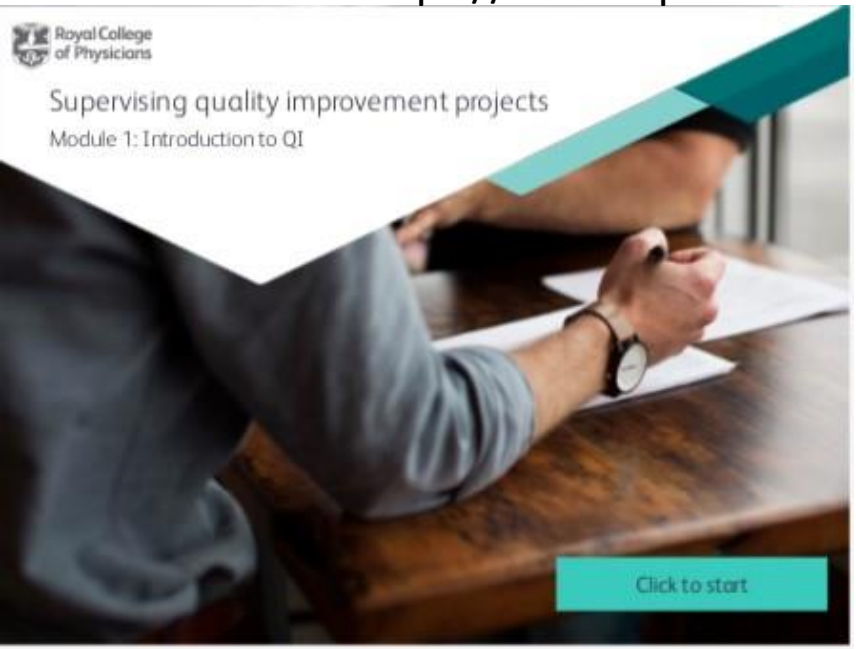
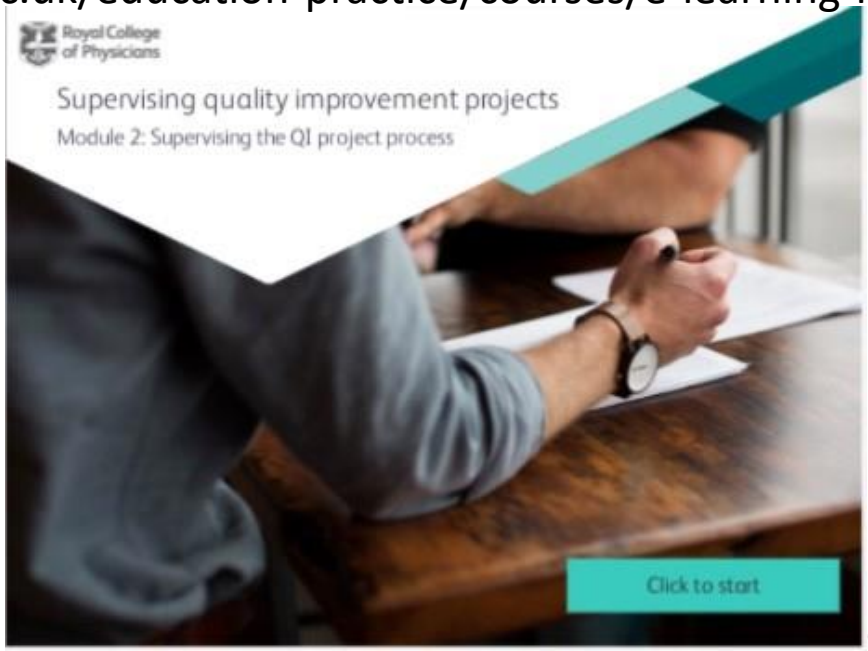
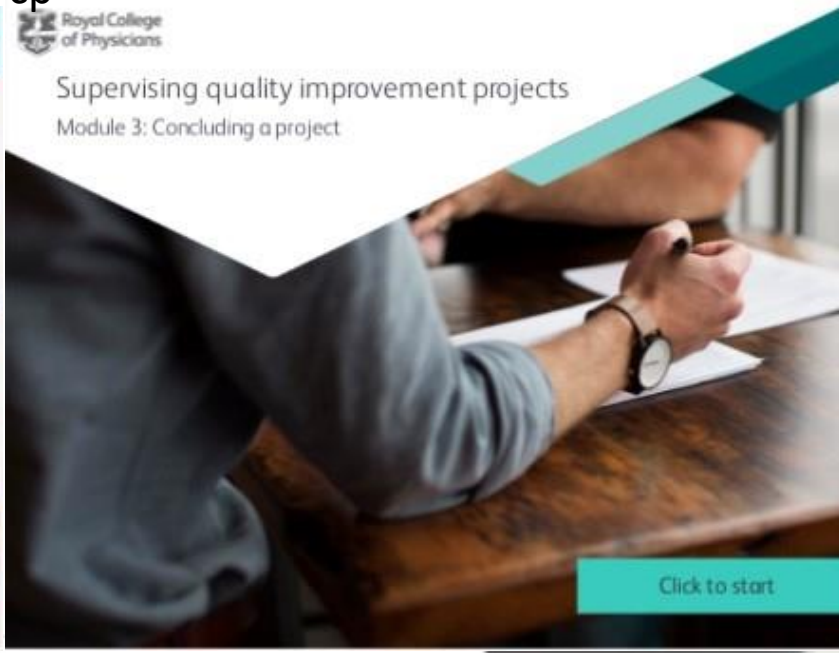
E learning for Supervisors

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



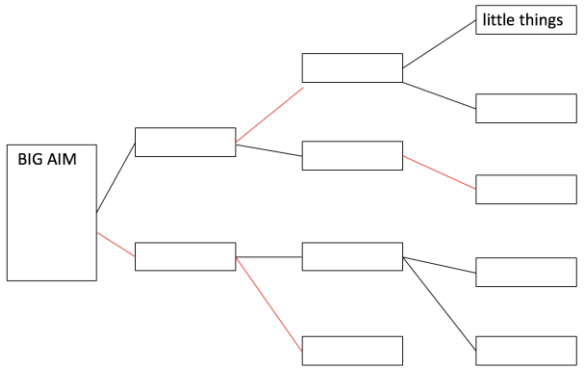




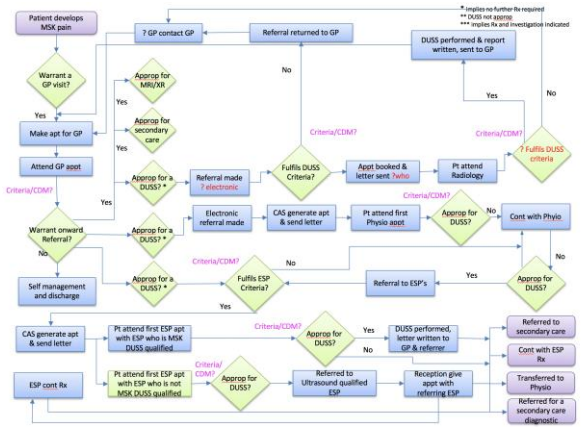
Characteristics of successfully implementing change

- Establish and adapt the change team
- Align with system/organizational priorities – setting clear measurable aim.
- Breaking the problem down into manageable parts
- Culture of possibility and learning (from “failure”)
- Leaders and followers
- Use qualitative and quantitative data to assess and adapt change (adaptive experimentation)
- Use change metholdogy
- National/regional/organisational programme – Local adaptation
- Patients champions and partners
- Perseverance

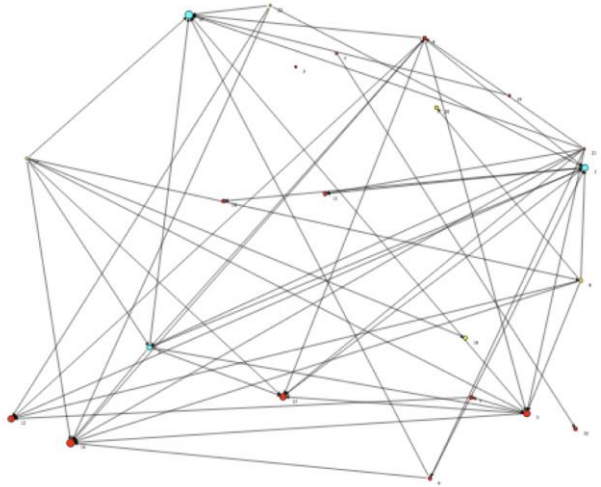
Action Effect Diagrams



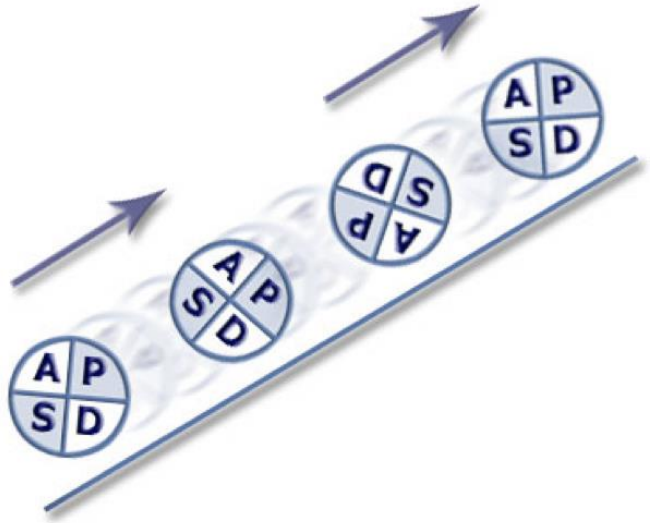
Process Mapping



Stakeholder management



Plan-do-study-act



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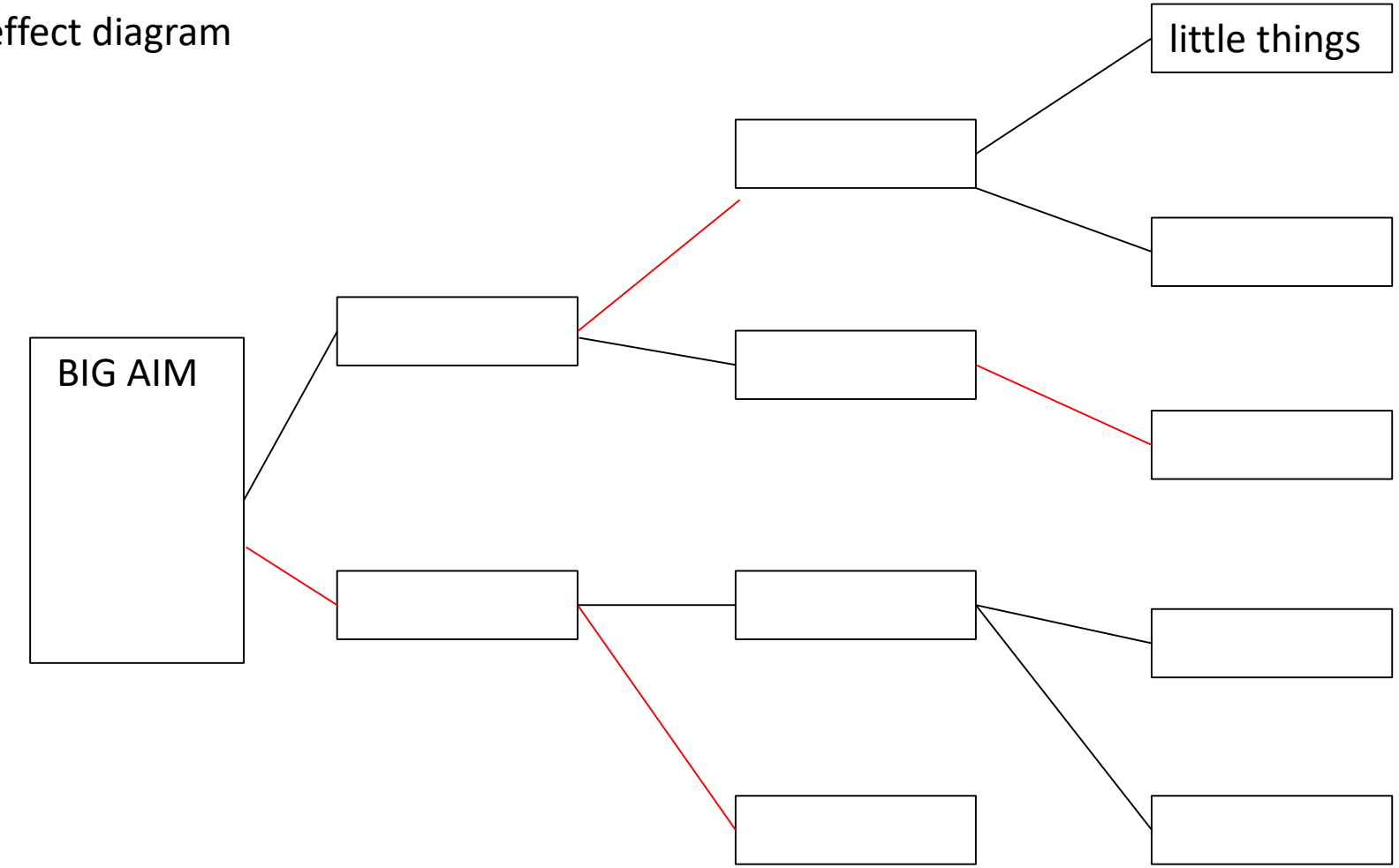
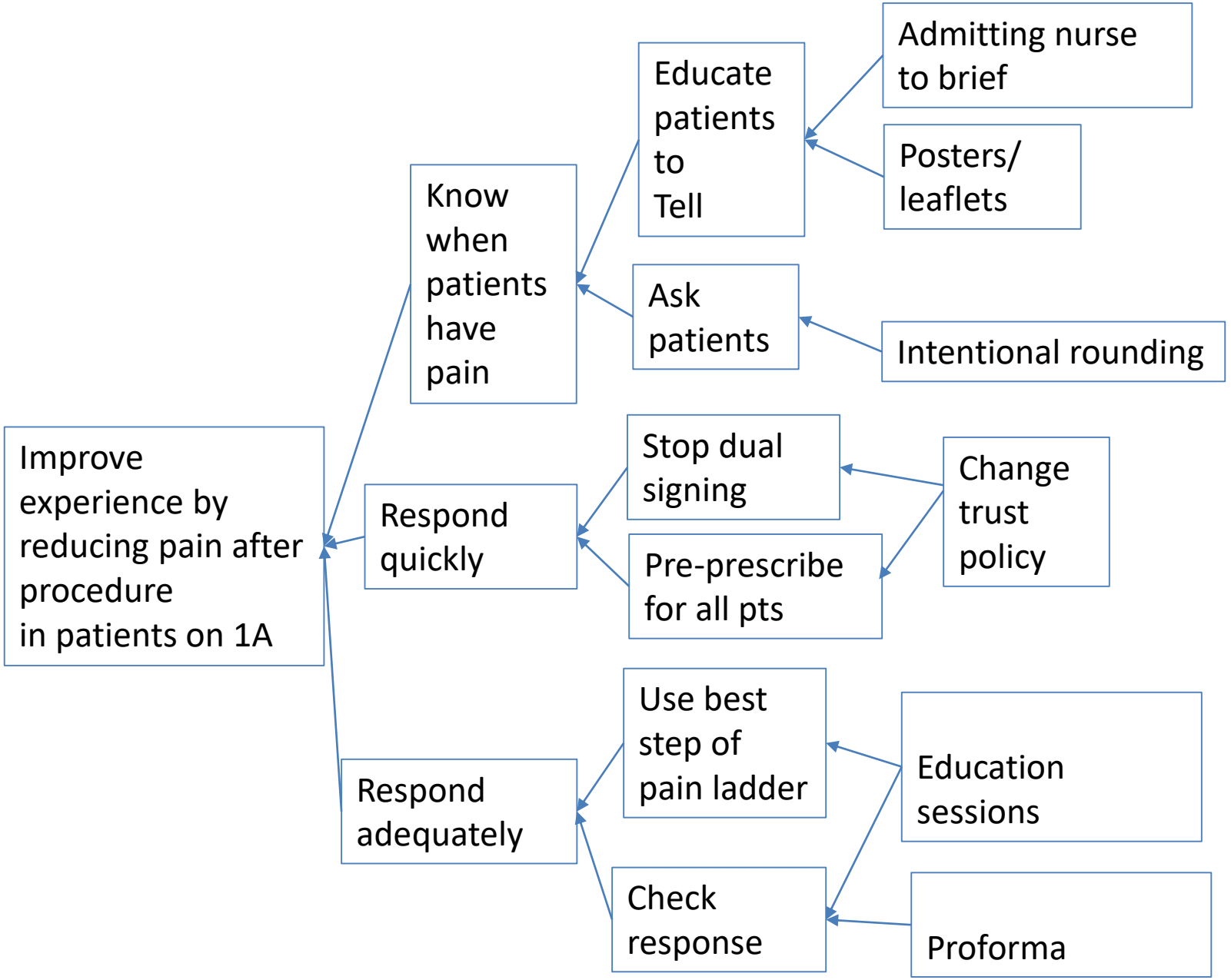
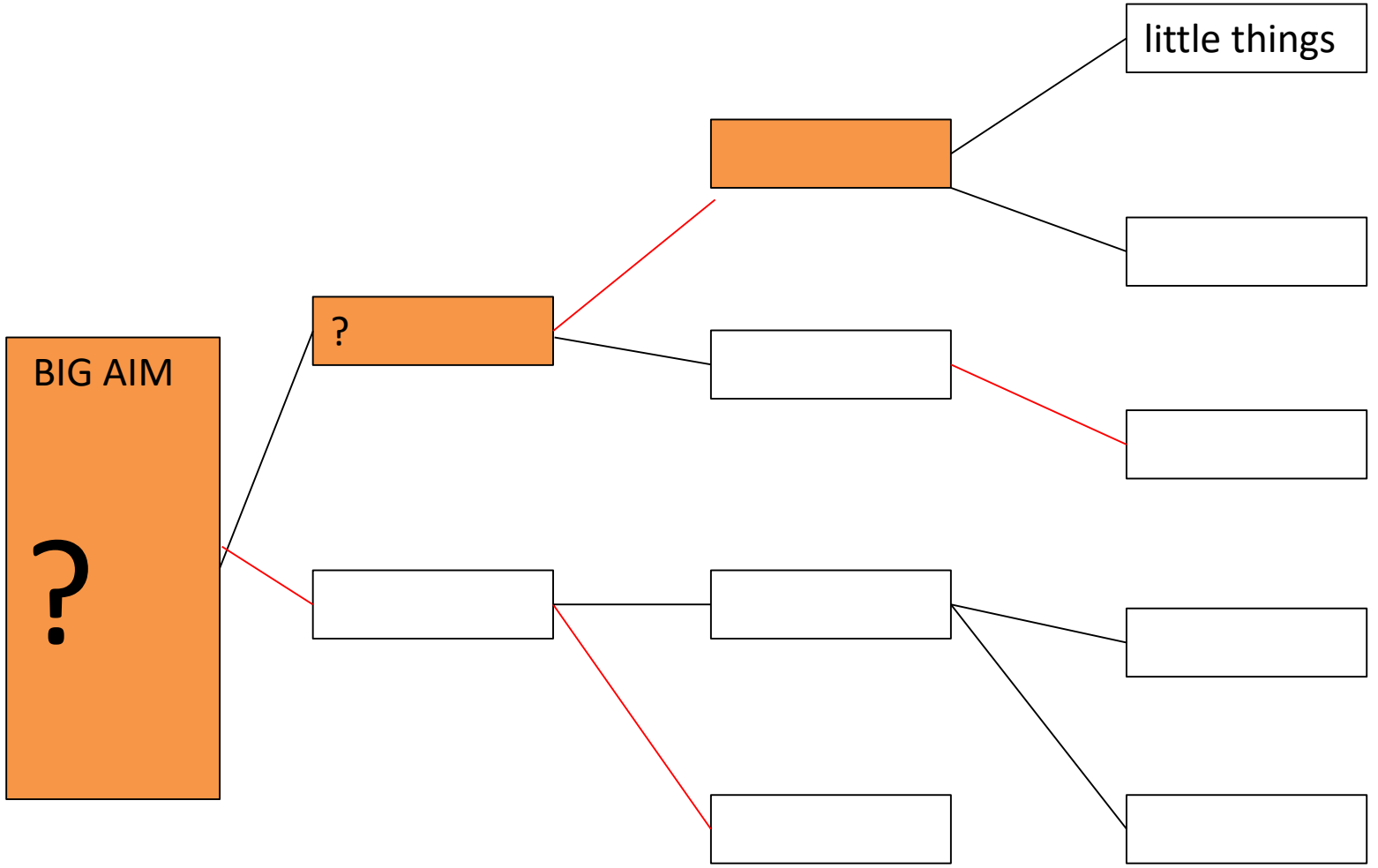
Action effect diagram

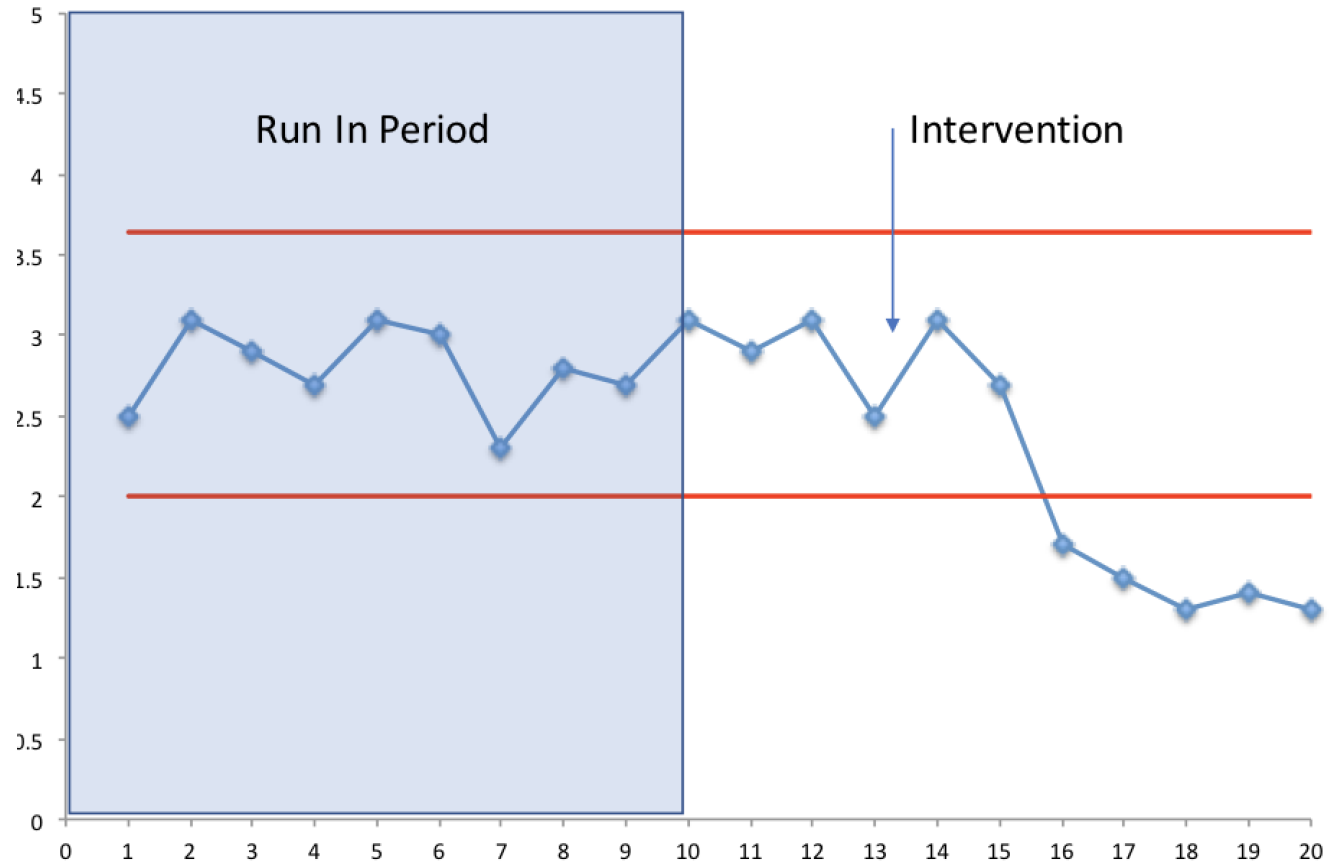



Improve experience by reducing pain after procedure in patients on 1A
Know when patients have pain
Educate patients to Tell
Admitting nurse to brief
Posters/ leaflets
Ask patients
Intentional rounding
Respond quickly
Stop dual signing
Change trust policy
Pre-prescribe for all pts
Respond adequately
Use best step of pain ladder
Education sessions
Check response
Proforma


little things
?
BIG AIM
?

SPC

???


Run In Period
Intervention
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Stakeholder management

Ward manager Jill	Protective of nurses workload	Emphasize project will reduce work	1:1 meeting	Bill	Chat on ward today
Clinical Lead	Reluctant to free JD time for meetings	Communicate that meetings will be 15 min	1:1 meeting	Jo	Arrange meeting with secretary
Nurses on ward	Not aware of proposal	Short talk	Every handover for 2	Cath/Pete	Divide up dates

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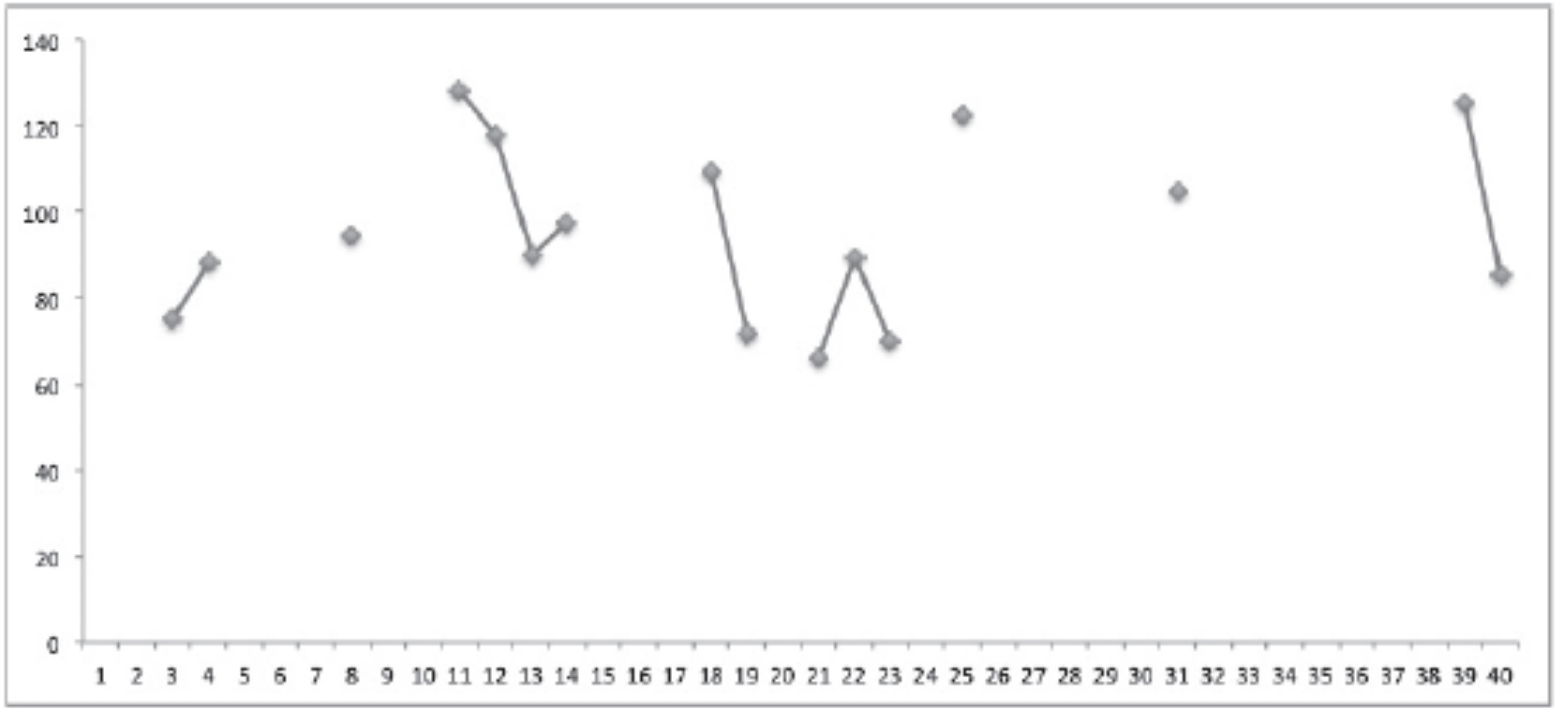
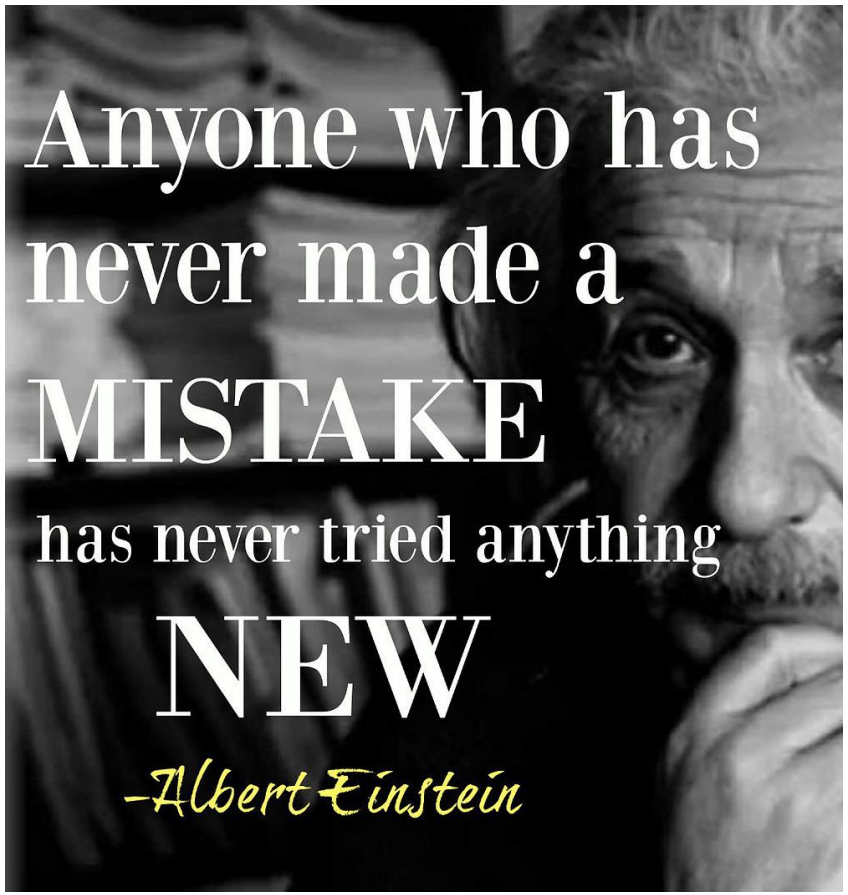
Challenges of QI with JDs




Anyone who has
never made a
MISTAKE
has never tried anything
NEW
-Albert Einstein

Southport and Ormskirk Hospital NHS
NHS Trust

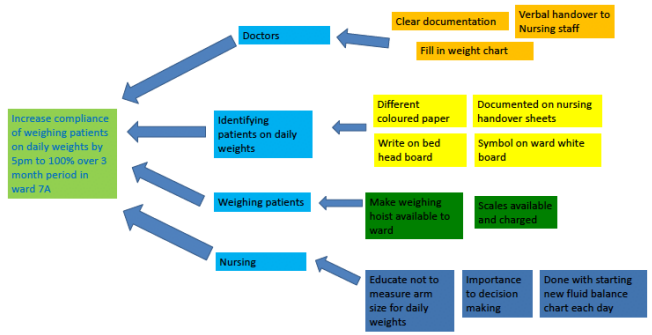
LEARNING TO MAKE A DIFFERENCE

Improving the quality of measuring patient's daily weights

Dr Wong (CMT1), Dr Black (CMT1), Dr Everson (FY1) and Dr Little (FY1)
Supervisor – Dr Mohammed (Consultant Cardiologist)

Benefits of daily weights

•In Heart failure, patients accumulate fluid in lungs causing shortness of breath or in body causing swelling.
•Amount of fluid accumulating in body is reflected by patient's weight.
•Measuring patients arm size will NOT give accurate measurement of amount of fluid in patient's body
•Accurate daily weight for the trend of fluid loss or gain is important for titration of diuretics.
•Overdosing in diuretics can cause kidney failure.



Methodology

What are we trying to accomplish?	1)Increase compliance of weighing patients on daily weights by 5pm to 100% over 3 month period in ward 7A. 2)Engage junior doctors, nurses and AHPs in quality improvement methodology
How do we know a change is an improvement?	1)Compliance of daily weight increases on 7A 2)Embed new skills in QI methodology and demonstrate learning and development
What change can we make that will result in an improvement?	Use QI methodology at the frontline to make a visible change

PSDA Cycle 1: The size of the problem

PSDA Cycle 2: Face to face discussion

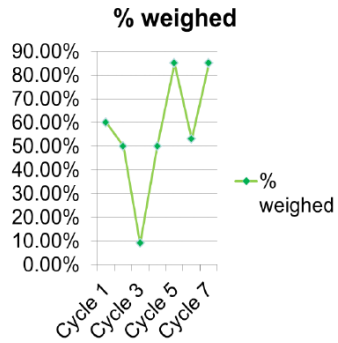
PSDA Cycle 3: Sign placed above headboard

PSDA Cycle 4: New charts

PSDA Cycle 5: Re-education

PSDA Cycle 6: Spring hoist introduced

PSDA Cycle 7: Daily reminders at 4:30-5pm



What went well?

•New way to identify daily weights as you would identify falls risk with head board signs
•Requested funding for additional equipment for the ward
•New weight chart with good verbal feedback
•Educated nursing staff of the importance of daily weights
•By end point – an increase of 25%

What didn't go well?

•Slow progress of the QI project
•Doctors change over
•Did not meet initial aim to increase compliance to 100%
•Relying on constant reminders / auditor action
•Priority of weights still low
•Not enough sample size
•Not enough PDSA cycles

What could be improved?

•Make one change at a time
•Increase length of observation per change for a bigger sample size
•Involve more auditors
•Shorter break in between each cycle to build habit and momentum

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Optimisation of Time to Antibiotics in Neutropenic Sepsis Patients in the Haematology Department, Royal Hallamshire Hospital, Sheffield

Dr Alice Thorpe & Dr Jack Goddard
Supervisors: Dr H Barker & Dr N Morley

Sheffield Teaching Hospitals NHS
NHS Foundation Trust

Background:

- Neutropenic sepsis is a medical emergency with a mortality of 2-21% if untreated[1].
- **All** Neutropenic Sepsis patients should receive antibiotics within 1 hour of pyrexia/presentation[2].
- Rapid treatment has reduced mortality & ITU admissions to <5%[3].
- A departmental audit conducted May-June 2014 showed only 36% of patients received antibiotics within 1 hour. Anecdotal evidence suggested that this was likely to be the same in 2016.

Project Aims:

- To assess current compliance with national Neutropenic Sepsis guidance in the STH (Sheffield Teaching Hospitals) Haematology Department over a 6 week period.
- To ensure 100% of patients with suspected or proven Neutropenic Sepsis admitted to the STH Haematology Department receive intravenous antibiotic therapy within 1 hour of presentation over a 1 year period.

DO
- Baseline Data: 18.2.16 – 29.2.16
- Change implementation: 7.3.16
- Data Collection 1: 7.3.16 – 14.5.16
- Anonymised data collected in Excel

PLAN
Changes
- Introduce Neutropenic Sepsis Pro-forma
- Distribute posters in clinical areas to notify of change

Measures
1. Time of fever/admission to Antibiotics
2. Variation of primary measure according to time of day

STUDY
Results
- 1 hour target met in 31% of patients

Learning Points
- Pro-forma effective when used
- Use of Pro-forma limited
- Greatest variability of duration to antibiotics over night

ACT
- Findings presented at local Service Improvement Meeting
- Process map generated with MDT
- Key stakeholders identified within the department and Hospital at Night (H@N) team
- Targets for change identified alongside H@N team

PDSA Cycle 1

DO
- Data Collection: 6.3.17 – 31.3.17
- Anonymised data collected in Excel
- Questionnaire circulated to H@N ANPs

PLAN
Changes
- Educational Programme delivered to H@N Advanced Nurse Practitioners (ANPs) (6 SpR/SHO led sessions October 2016 to March 2017)

Measures
1. Time of fever/admission to Antibiotics
2. ANP confidence in managing Neutropenic Sepsis

STUDY
Results
- High percentage of missing data
- Difficult to draw significant conclusions
- ANPs reported increased confidence

Learning Points
- Poor documentation barrier to quality of data collection

ACT
- Next steps: Neutropenic Sepsis Quick Reference Cards developed and trust-wide BUFALO stickers introduced, Patient Group Directive in progress
- Plan for repeat data collection

PDSA Cycle 2

Graph of Measure: **Average Time to Antibiotics by Shift in Minutes**

The difference made and relevance to practice & patient safety:

- The Hospital at Night Team structure has been changed with more individuals taking responsibility for the rapid administration of antibiotics, including ANPs. Anecdotally, individuals feel this system is working better and patient care has been improved.
- In a questionnaire circulated to the H@N ANPs they reported increased confidence and understanding of the importance, identification & management of Neutropenic Sepsis. Some trainee ANPs are now spending time on Haematology to gain more experience.

Difficulties and next steps:

- Completeness of note keeping was a major barrier to data collection in this QIP. STH has introduced a trust-wide BUFALO sticker for sepsis patients; this will prompt more comprehensive documentation and aid data collection. We have planned a repeat data collection in July 2017 to re-assess change.

Learning points:

- Implementing sustainable change is difficult and often requires a change in the working culture.
- This takes time and requires establishing close working relationships with all stakeholders to identify potential barriers to change.
- Working within a multi-disciplinary team to implement change to improve patient care and safety is extremely rewarding and satisfying.

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References:

1. Herbst C, Naumann F *et al*. Prophylactic antibiotics or G-CSF for the prevention of infections and improvement of survival in cancer patients undergoing chemotherapy. *Cochrane Database of systematic Reviews*. 2009; :CD007107. doi: 10.1002/14651858.CD007107.pub2
2. National Chemotherapy Advisory Group. *Chemotherapy Services in England: Ensuring quality and safety*. Department of Health; 2009. Available online at: http://webarchive.nationalarchives.gov.uk/20130107105354/http:/www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_104501.pdf
3. NICE Clinical Guideline 151. Neutropenic sepsis: prevention and management in people with cancer.

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