



Research & improvement ELFT Quality Conference 2018



@ELFT_QI



qi.elft.nhs.uk
elft.nhs.uk/Research

Who's who...



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Improvement Advisor,
ELFT

Session Objectives

- Explore QI and Research
- Explore the enablers and barriers between QI/Research (Forcefield analysis)
- Explore some examples of QI and research working together from ELFT
- Explore how to fit QI and research together and think what this means in your context.

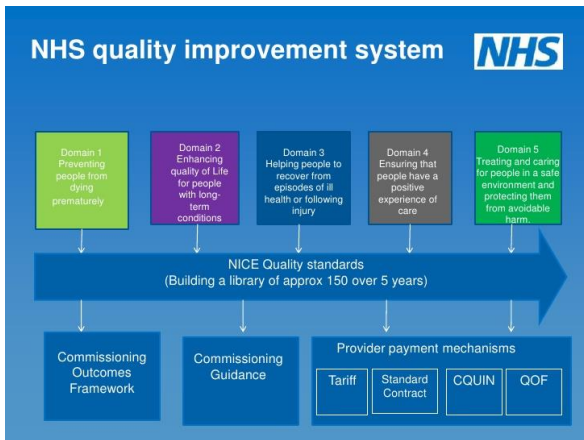
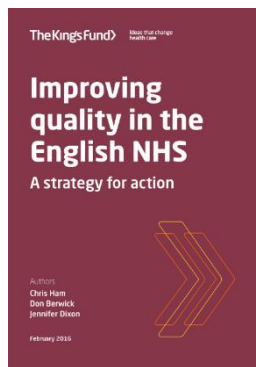
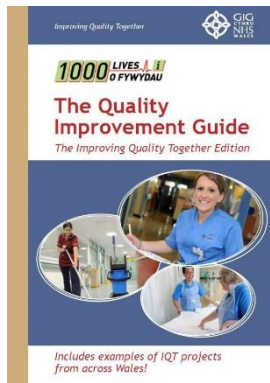
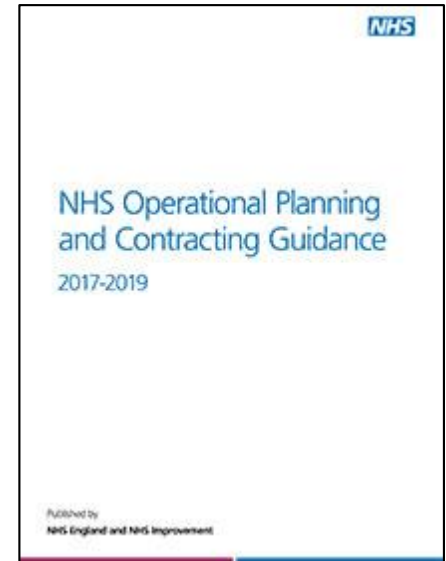
Exploring QI and research

What does it all mean...

First, let's define what we mean by Quality Improvement

inspiring improvement
#improve365

NHS
Improvement



Preliminary Improvement Plan

The PIP is built on six themes for IMMEDIATE action:



By engaging with staff at the Ask and Act workshops the Preliminary Improvement Plan will grow into a full Quality Improvement Plan

Colchester Hospital University NHS Foundation Trust



NHS
Improving Quality
NHS
Quality Improvement Scotland

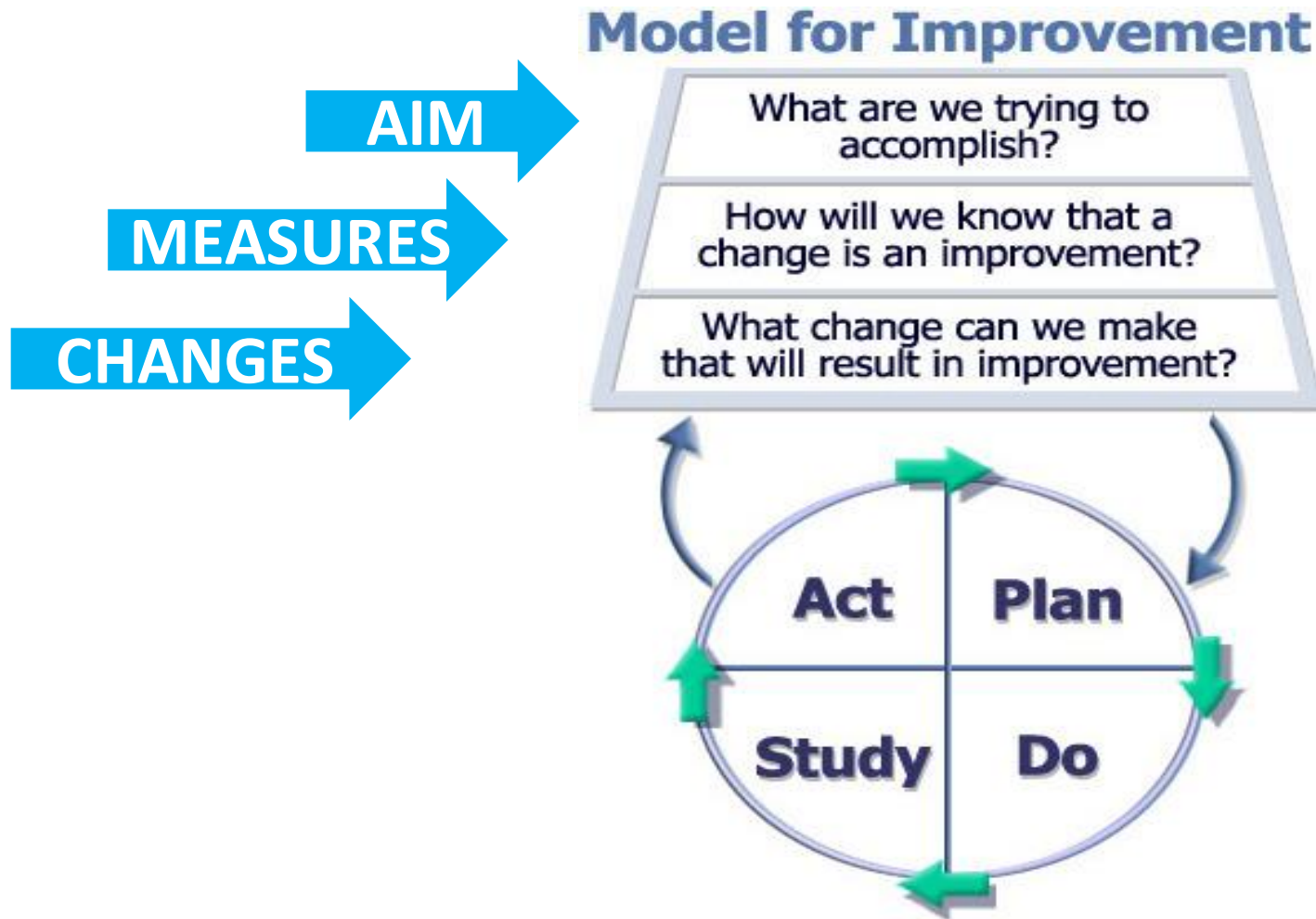
What is Quality Improvement ?



Some characteristics of QI

- Involves a systematic methodology and set of tools.
- Work lies with the teams on the ground who have expertise in the issues
- Encourages testing of ideas on a small scale to see whether things improve
- Helps tackle problems where no solution might exist and learning is required
- Uses data over time to see if things improve

The Model for Improvement



improving
quality

≠

quality
improvement



Simplicity

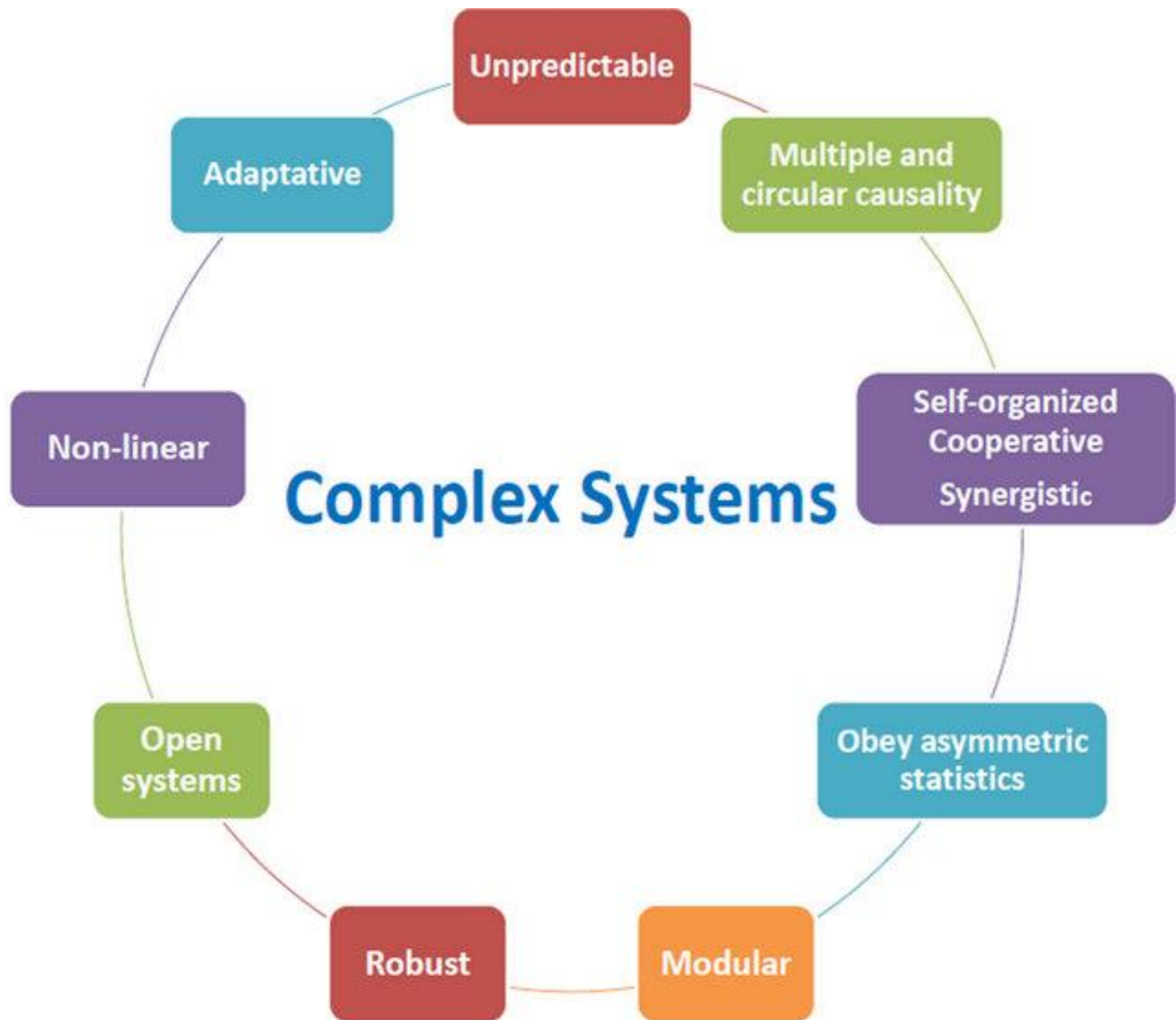


Complexity

Simple, Complicated and Complex Problems

SIMPLE	COMPLICATED	COMPLEX
Baking a Cake	Sending a Rocket to the Moon	Raising a Child
The recipe is essential.	Rigid protocols or formulas are needed.	Rigid protocols have a limited application or are counter-productive.
Recipes are tested to assure easy replication.	Sending one rocket increases the like lihood that the next will also be a success.	Raising one child provides experience but is no guarantee of success with the next.
No particular expertise is required, but experience increases success rate.	High levels of expertise and training in a variety of fields are necessary for success.	Expertise helps but only when balanced with responsiveness to the particular child.
A good recipe produces nearly the same cake every time.	Key elements of each rocket must be identical to succeed.	Every child is unique and must be understood as an individual.
The best recipes give good results every time.	There is a high degree of certainty of outcome.	Uncertainty of outcome remains.
A good recipe notes the quantity and nature of the "parts" needed and specifies the order in which to combine them, but there is room for experimentation.	Success depends on a blueprint that directs both the development of separate parts and specifies the exact relationship in which to assemble them.	Can't separate the parts from the whole; essence exists in the relationship between different people, different experiences, different moments in time.

Source: Westley, F., B. Zimmerman and M. Q. Patton, 2006, *Getting to Maybe: How the World is Changed*.



Arguably the most important competency for dealing with complexity is systems thinking

The three characteristics of systems thinking include:

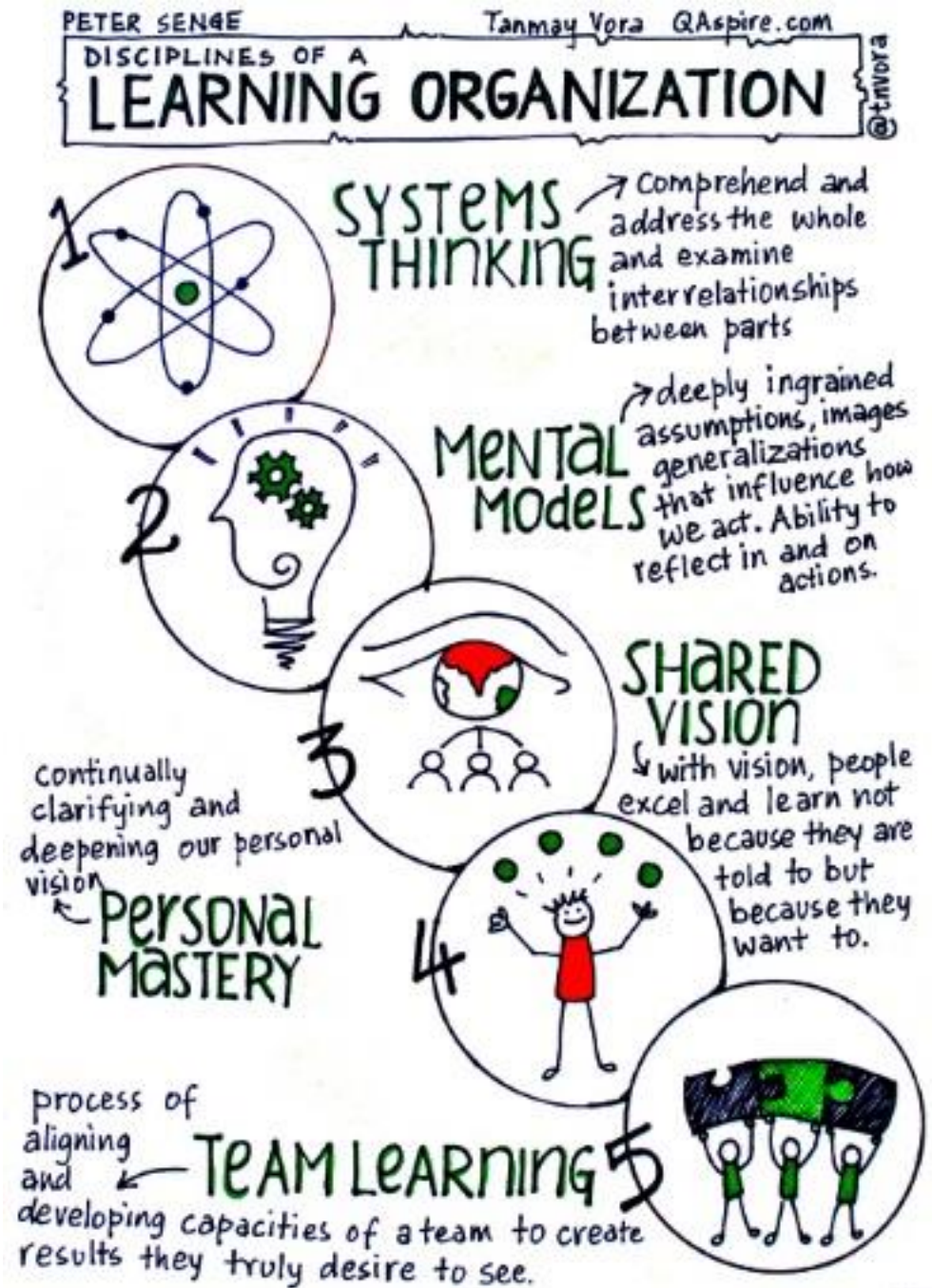
- 1. A consistent and strong commitment to learning**
- 2. A willingness to challenge your own mental model**
- 3. Always including multiple perspectives when looking at a phenomenon**

Peter Senge, *Fifth Discipline* , 2006

A Learning Organisation

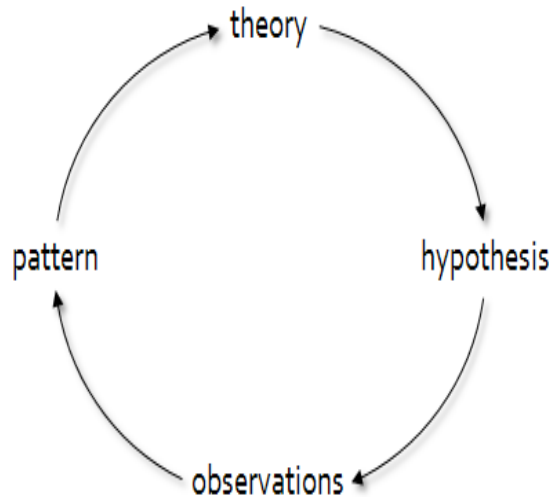
"...where people continually expand their capacity to create the result they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together"

Peter Senge

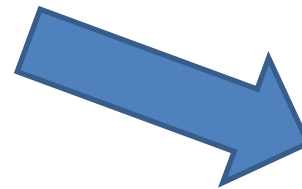


Inductive/Deductive Reasoning and the Model for Improvement

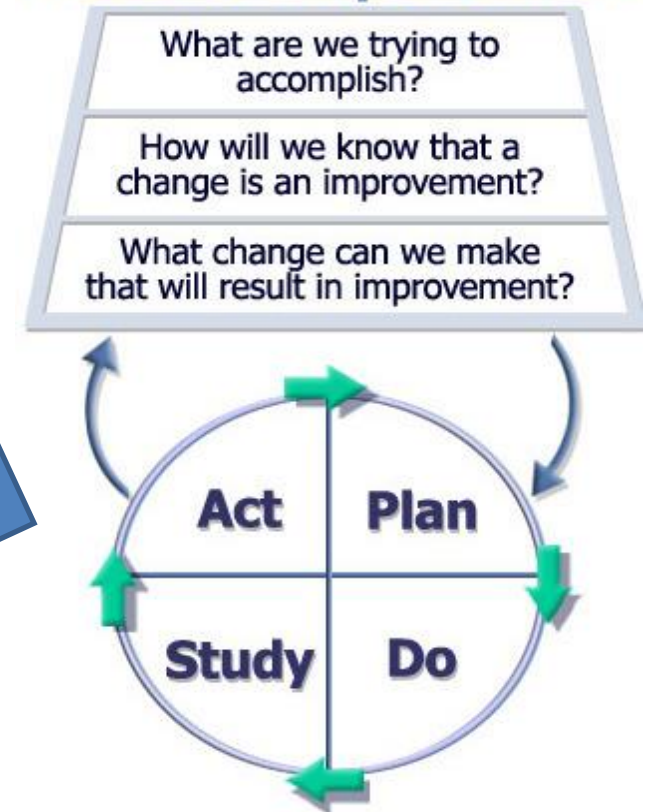
INDUCTIVE



DEDUCTIVE



Model for Improvement





National Institute for
Health Research

Ad 2. let's define
what we mean by...

RESEARCH



What is research - Definition

- ... research is defined as the attempt to derive generalisable or transferable new knowledge to answer or refine relevant questions
- Research is a careful and detailed study into a specific problem, concern, or issue using scientific methods.
- It is used to establish or confirm facts, reaffirm the results of previous work, solve new or existing problems, support theorems, or develop new theories

What matters to me? ...patients?

- Three main pillars of “good” care:
 - High quality, EBM, effective & safe interventions
 - Social inclusion and wellbeing agenda
 - Underpinning both – empathic and well functioning therapeutic relationships.

- All these are dependent upon:
 - Research & Innovation
 - Quality Improvement
 - and Education

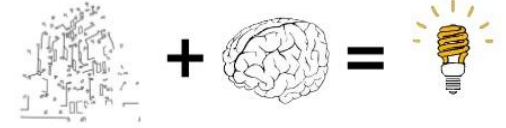


QI & Research: distinct but similar

- Research: testing innovations to understand what works (cause and effect, efficacy), knowledge is generalisable.
- Improvement: testing this in the real-world setting, making adaptations if necessary, and understand how to best implement interventions with known efficacy (effectiveness).
- Research is driven by specific and independent concepts
- QI mainly driven by clinical experience as a main source for ('applied science' in the real-world: multiple variables; to identify associations in time, not causal links.)
- Both generate **new knowledge**. Both rely on **data**

Common ground: Data

True value of project data



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- Commissioning: from block contracts to PbR (Clustering/HoNOS) to capitation
- QI: “no change without change measurement” (PDSAs, run charts, etc.)
- Clinical: Outcomes (PROM, PREM, CROM)
- Research: Various (Process, Change, ...)
- **What constitutes “significant change” ???**

Summary of Research and QI Characteristics

Research	QI
<p>Research projects must meet REC requirements for protection of subjects.</p> <ul style="list-style-type: none">- Research Governance applies- Written informed consent required	<p>QI projects are not subject to REC requirements.</p>
<ul style="list-style-type: none">■ PI will have a specific hypothesis or research question.■ PI will conduct an organized review of relevant literature.■ PI will develop a research design that will lead to scientifically valid findings.■ Elements of a research design include: Control groups; random selection of subjects, statistical tests, sampling■ Goal is to advance general knowledge	<ul style="list-style-type: none">■ Hypotheses change through the project■ Ideas come from multiple sources■ Standard process of design■ Systematic testing of ideas using PDSA■ Working in the real system, so not worried about bias, control, randomisation■ Cannot draw conclusions on causation

Differentiating Research and QI

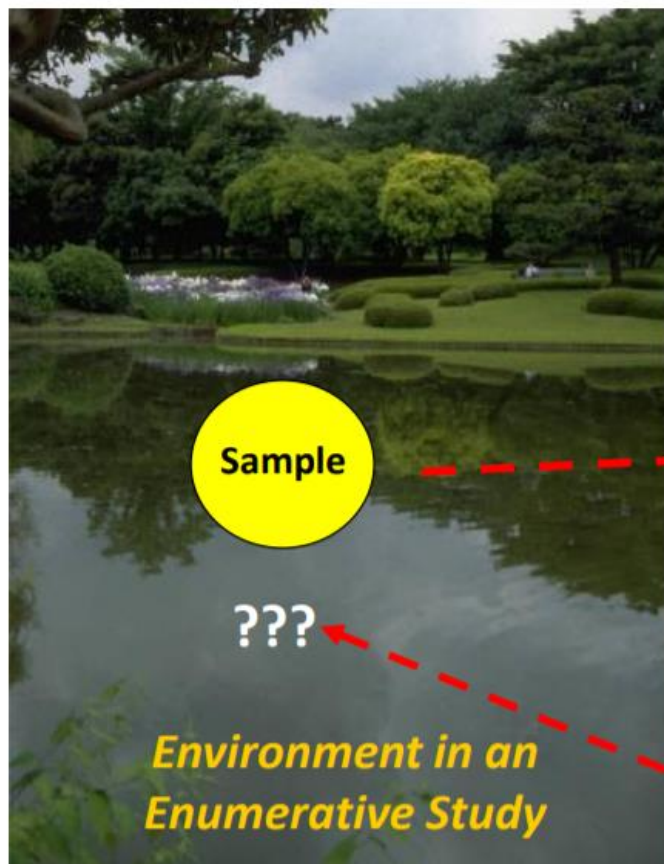
- Many of the best evaluation methods overlap with methods used in research (Jarvis, 2000)
- Many QI projects exhibit research-like qualities and research projects exhibit QI-like qualities
- Three criteria help differentiate research and QI:
 - a study's intents and purposes
 - degree of generalizability
 - associated risks

Inductive/Deductive Reasoning and the Model for Improvement

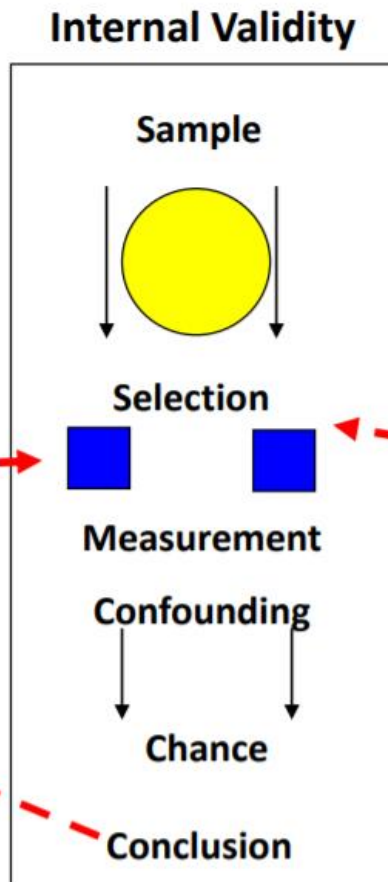
Pure Science – research done for the sake of new knowledge

Applied Science – makes practical use of this knowledge

Perspective: Enumerative and Analytic Studies

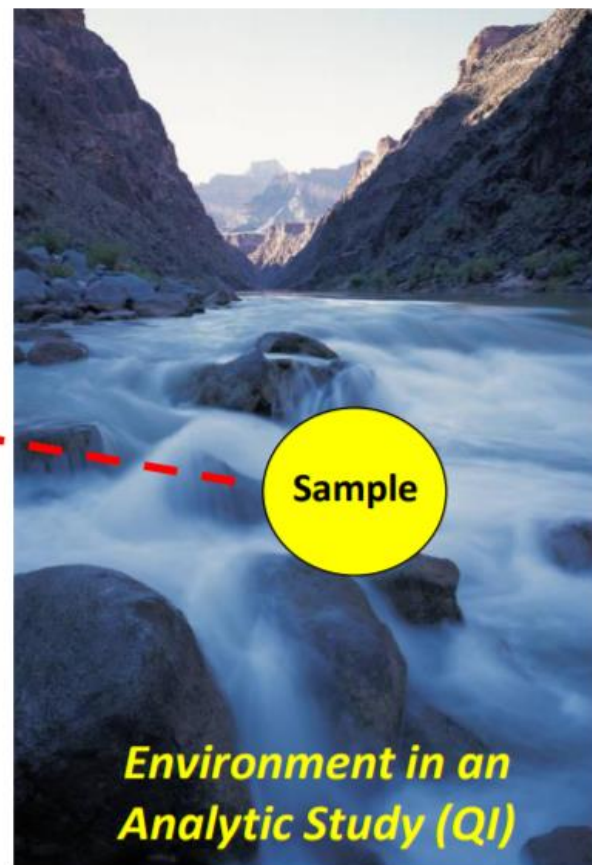


External Validity?



Clinical Epidemiology

Fletcher, Fletcher, Wagner



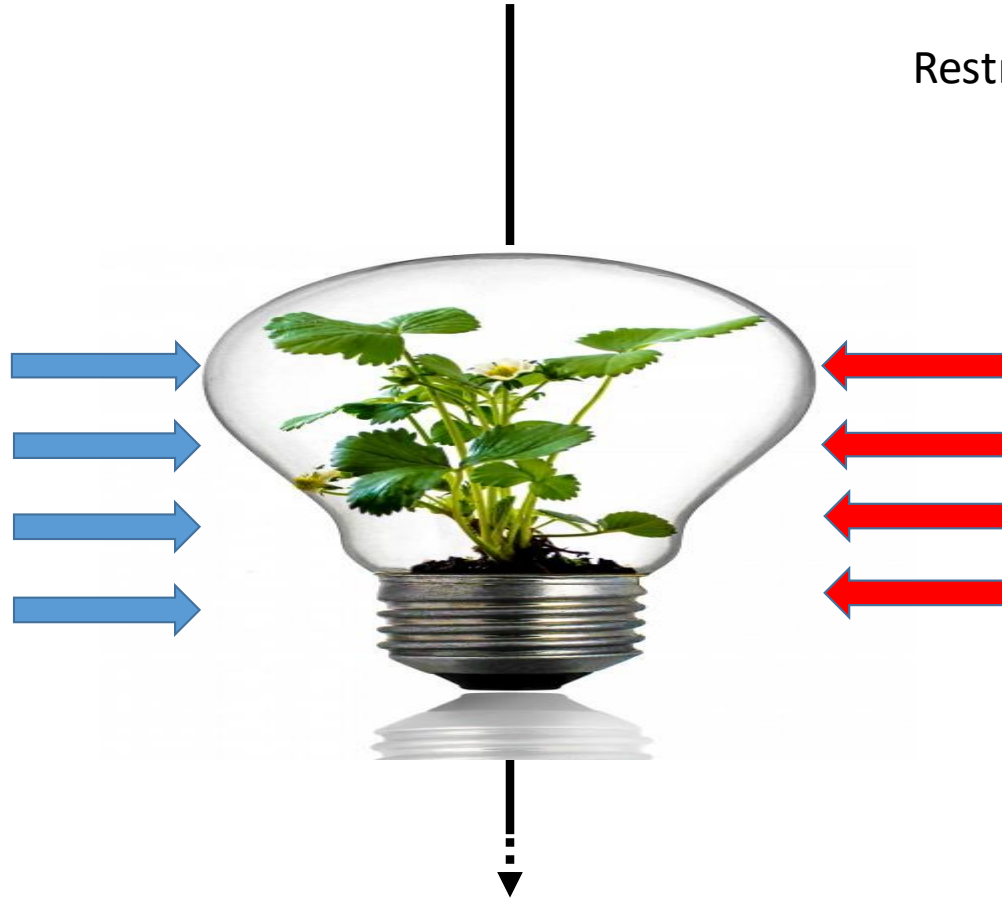
Prediction?

“Analytical studies: a framework for quality improvement design and analysis”, L. Provost, *The British Medical Journal Quality and Safety* 2011, 20 (Supplement 1):i92-i96.

Force Field Analysis

Driving Forces

Restraining Forces



Action plan for reducing restraining forces

Steps for a Force Field Analysis

1. Use notes to individually write down forces or factors that are driving the issue or restraining/holding it back (3 mins)
 - *One issue per note please*
 - *We usually do this in silence at this stage*
 - *Put these notes under the respective columns on the flip chart (green notes for driving forces, pink notes for restraining forces)*
2. In your groups, eliminate duplicate ideas and clarify any ideas that are unclear or not specific (2-3 mins)
 - *If you want to you can also order each of these factors (rank ordering) to set priorities engaging with the driving and restraining forces*



QI and Research Summary

- Sequential testing and scale-up of ideas through QI provides ownership for change
- Increasing degree of belief that a change can lead to improvement in multiple contexts.
- Vice versa: generating change ideas from research
- Sometimes QI can improve practice even though it is not fully understood how / which components or interventions are most effective or relevant.
- This could then lead into systematic and controlled research studies, using more rigorous study design to examine the efficacy of the intervention once all other known confounders have been controlled.



Examples of Research and QI working together at ELFT

1. QI Based on Research – Implementing Dialog
2. Research based on QI – Reducing physical violence on inpatient wards

An example:
QI based on Research
Implementation of “Dialog+”

Research (DIALOG+) for QI (eCPA)

- Applying findings from locally conducted research, i.e. the structured DIALOG+ therapeutic engagement and intervention tool.
- Design & Development process based on QI principles
- The Trust-wide deployment of the new recovery care focused CPA process integrates local service needs, QI methods and the locally derived evidence base from research trials

Implementation of DIALOG+ for eCPA

- **Aim:** CPA process to foster recovery care principles
- **Change Idea 1:** utilise DIALOG PROM scale as screening tool for needs, service user driven process **Change Idea2 :** utilise solution-focused therapy approach as developed in DIALOG+ to structure therapeutic engagement
- Replacing the concept of “risk” management by “safety plan” and “care” plan by “My recovery plan”
- Electronic eCPA platform

RiO Live DIALOG+ Screenshot

RiO

CPA Documentation (MH) Simon (HQ) Fewer | LIVE | Log

ZZTEST, Dummy (Ms) DoB: 1 Mar 1958 (58 years) Gender: Female NHS: 999 991 7690

Dialog+

Client: ZZTEST, Dummy Patient (Ms) - 1024059
 Date/time:

Please check and select the correct referral /admission for each Dialog+ form

Referral / Admission: Ref: (06 Mar 2012) Du

Stage of Treatment:

Select the appropriate option for this service user: [Link to Mental Capacity Assessment](#)

What recovery means to me? My long term goals. What I would like to achieve in 12 months time.

Living Independently
Working

What matters to me?

Family
Friends

My skills, strengths and experiences that will help me achieve my goals

1. use computer skills
2. attend college course

ABC **ABC** **ABC**

1 a) This form must be completed at point of entry into the service, at regular intervals throughout clinical contact and at discharge
 b) After each question, ask the service user: "Do you need any help in this areas?" (Yes/No)
 c) When discussing and creating an action plan please follow steps 1-3 for each area you agree to discuss today

Step 1: Understanding - why this rating and not a lower one? - what is working? Step2: Looking forward - best case scenario? - smallest improvement? Step 3: Considering options - what can the patient do? - what can the clinician do? - what can others do?

Likert Scale Rating

* Totally dissatisfied * Very dissatisfied * Fairly dissatisfied * In the middle * Fairly satisfied * Very satisfied * Totally satisfied

How satisfied are you with your mental health?	<input type="text" value="7 - Totally satisfied"/>	Does service user require help?	<input type="radio"/> Yes <input checked="" type="radio"/> No	Mental health goals and actions Record goals and actions 5 ways to mental health well being
How satisfied are you with your physical health?	<input type="text" value="2 - Very dissatisfied"/>	Does service user require help?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Physical health goals and actions Record goals and actions 1. attend GP health check appointment

Save
Clear
Cancel



Idea tested
through
quality
improvement

Build degree
of belief that it
results in
improvement

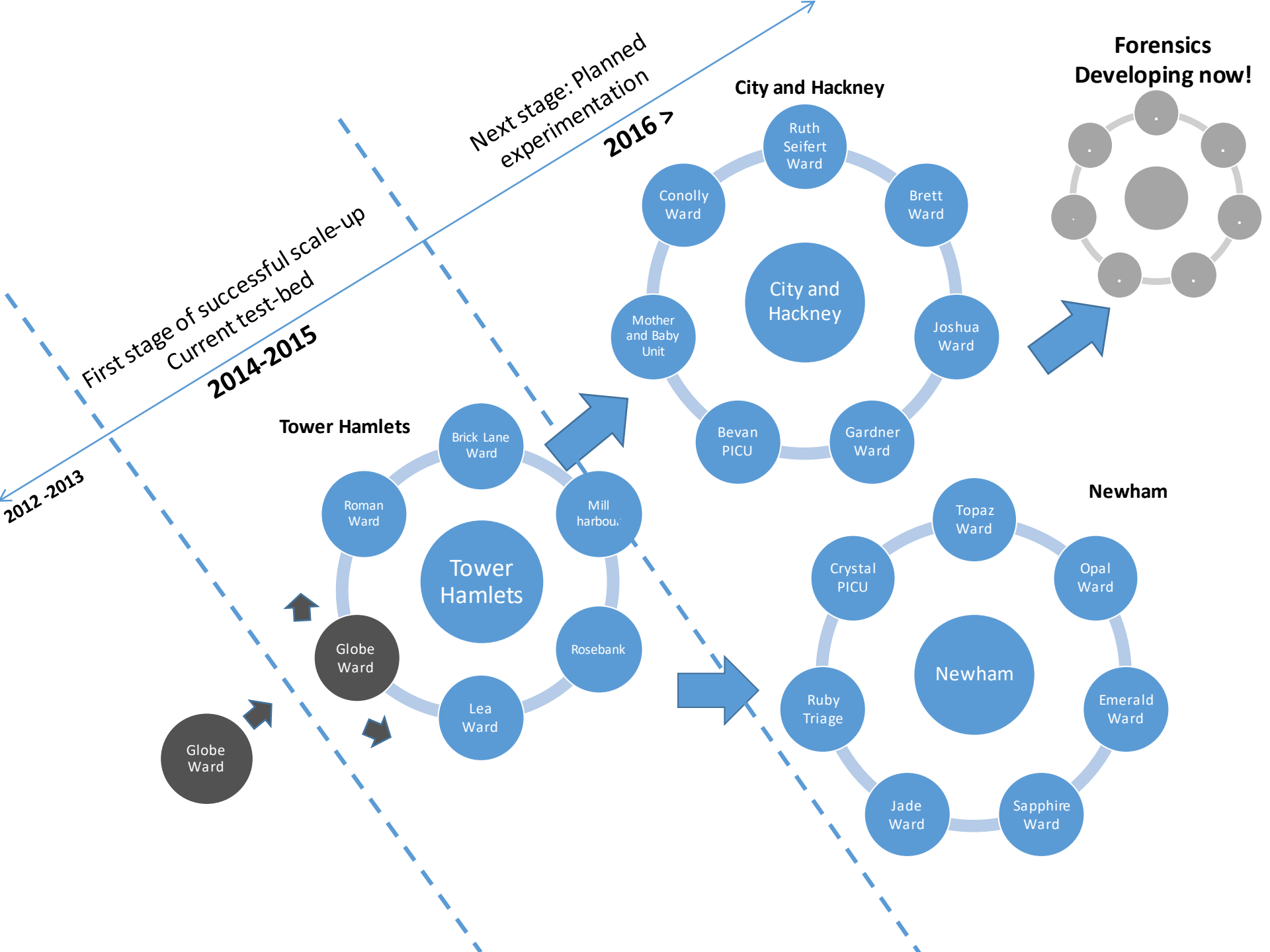
Design a
research study
to evaluate
cause & effect
relationship

Research Based on QI work

Reducing Physical violence on
Inpatient wards

Interventions tested using PDSA

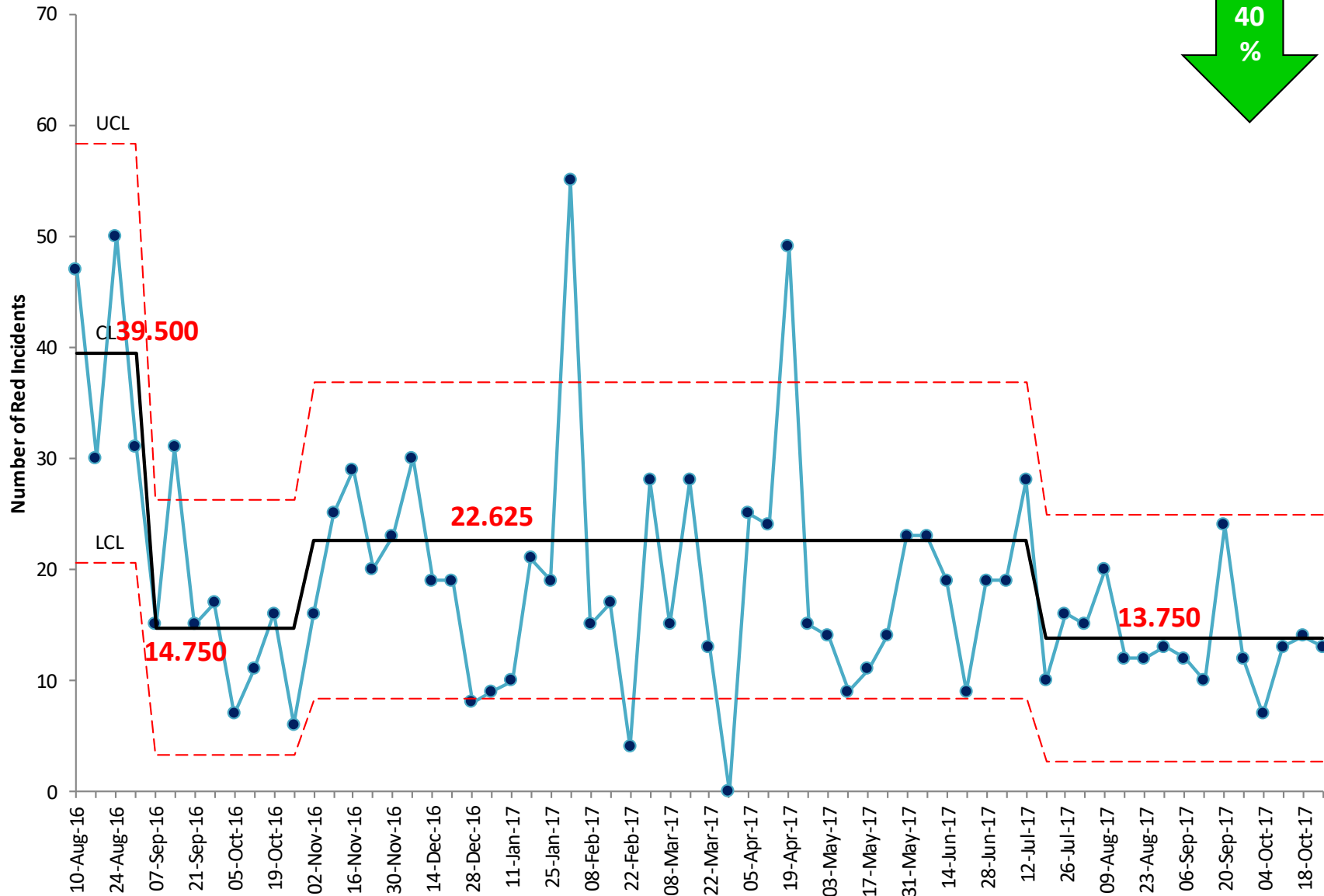
- Starting point: Evidence base around interventions to reduce inpatient violence on mental health wards was searched.
- Interventions tested through PDSA
 - Broset violence checklist
 - Safety Huddles,
 - Publicly Displayed “Safety crosses”
 - Community meeting discussion about violence



All Wards – Outcome Measure

Red Incidents recorded every week on the Safety Cross, (All Wards in City & Hackney) - C Chart

40 %



“Our ward feels much safer. There’s a greater awareness of predicting and preventing violence, and people are much more open to talking about it and the impact it has. The social therapists are great at identifying when a service user is starting to escalate and will need intervention - they’re so much more confident now”

Hannah Ballard, Ward Manager
Brick Lane Ward

“It is the best it could have been for myself”
Service User, Roman Ward

“The violence reduction collaborative work has not only reduced incidents on Lea ward but has brought the team closer together. It has developed passion within us to go the extra mile to keep our patients and each other safe”

Shabanaz Begum
Social Therapist, Lea Ward

“A place to be in a time of crisis, a place of safety”
Service User, Lea Ward

“There is a big difference in attitude, willingness and belief in how the safety culture has developed. Teams are more proactive”



“Well, what can I say, the team are fantastic! Thank you for helping all the patients here. You save lives and give us a second and third chance”

Service User, Lea Ward

The staff were amazing so nice and supportive
Service User, Globe Ward

“The team feels more confident and are having better discussions around issues that may arise. The team are talking about risk and making decisions - something that would never have happened 18 months ago”

“There’s a better therapeutic environment and patient satisfaction. You can feel the lowered levels of stress for staff and patients. There’s a much closer working relationship and respect between disciplines now and I think this has been a driving force”

Dr Ferdinand Jonsson, Consultant, Globe Ward

Outcomes of the Work

- 40% reduction in physical violence was seen across six acute wards.
- Physical violence reduced from 12.1 incidents per 1000 occupied bed days in 2014 to 7.2 in 2015.
- Predominantly lower level violent incidents
- Unclear as to which component or combined impact of the bundle effective

Reducing physical violence and developing a safety culture across wards in East London

Jen Taylor-Watt, Andy Cruickshank, James Innes, Brian Brome, Amar Shah

East London NHS Foundation Trust has identified reducing incidents of physical violence on its inpatient mental health wards as a major quality improvement priority. In 2013, physical violence was the most frequent type of reported safety incident causing harm across the trust—responsible for 48% of all harm reported. The last national audit of violence in England identified that 18% of service users had been physically assaulted while an inpatient in a mental health setting, and this figure rose to 46% for nursing staff (Healthcare Commission, 2007).

The annual NHS staff survey shows a national average of 19–20% of staff that have reported experiencing physical violence from patients, relatives or the public in the past 12 months, in each of the past four years (2012–2015). These experiences can result in high levels of psychiatric morbidity within the staff group; high staff turnover and difficulty with retention; decreased morale; absenteeism; injury claims and reduced quality of patient care (Chen et al., 1998; Kna, 2008; Roche et al., 2009; Chen et al., 2010).

Current knowledge on factors contributing to violence and interventions to prevent violence. The literature suggests that a broad range of factors may contribute to the escalation of aggression, including psychopathological symptoms such as delusions and hallucinations, limiting patients' freedoms or boundary setting, drug and alcohol use, frustration, overcrowding and staff attitude (Harris and Varney, 1986; Powell et al., 1994; Lances et al., 1999; Mortimer, 2003; Shepherd and Lavender, 1999; Barlow et al., 2000; Oquendo and Mann, 2000; Dushbury and Whittington, 2003; Flannery et al., 2006).

Evidence for interventions to prevent incidents of violence suggests the use of structured risk assessment, the discussion of violence in ward

ABSTRACT

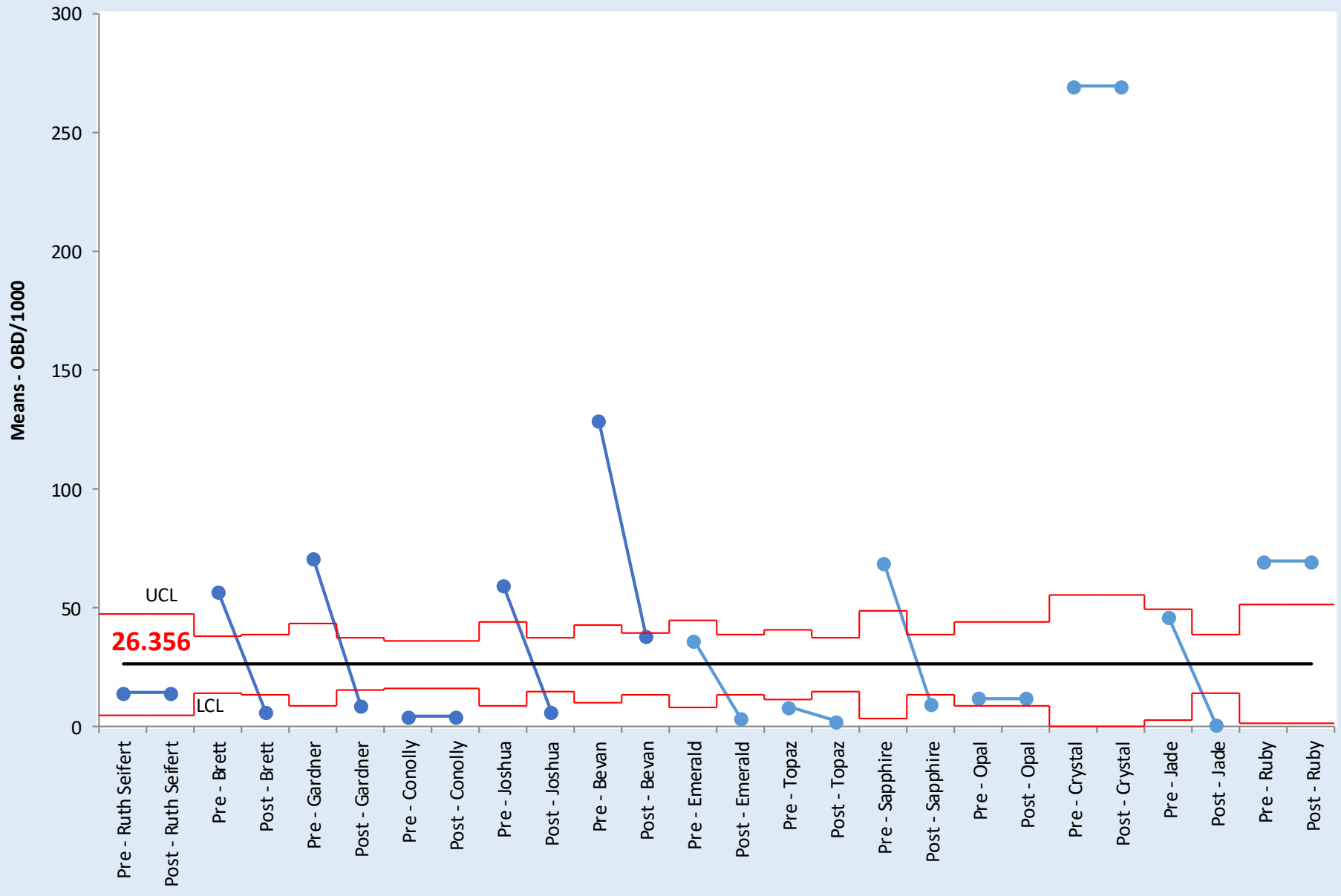
Violence is the biggest cause of reported safety incidents at East London NHS Foundation Trust. Evidence suggests the utility of structured risk assessment, discussion of violence in ward community meetings and the use of restraint and seclusion in psychiatric wards. The Tower Hamlets Violence Reduction Collaborative brought together six wards with the aim of reducing violence by 40% by the end of 2015. A collaborative learning system was used to test a bundle of four interventions on the four acute admissions wards and two psychiatric intensive care units. A 40% reduction in physical violence was seen across the six wards. Physical violence reduced from 12.1 incidents per 1000 occupied bed days in 2014 to 7.2 in 2015. Across the four general acute admissions wards there was a 57% reduction in physical violence. Key elements of the system that have been addressed through this work have been developing a more predictive approach, and developing a more open and shared experience of violence and aggression on the wards.

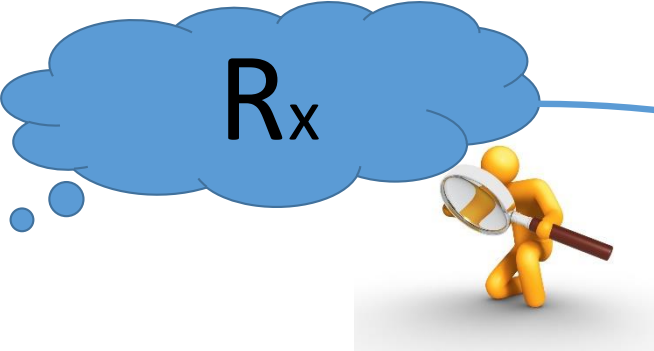
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Taylor-Watt, Jen, et al. "Reducing physical violence and developing a safety culture across wards in East London." *British Journal of Mental Health Nursing* 6.1 (2017): 35-43.

Test Site	CHANGE PACKAGE				RELIABILITY		OUTCOME MEASURES		BALANCING MEASURES			
	Safety Cross	Safety Huddles	BVC Checklist	Community Meetings	Safety Huddles	BVC Checklist	Average number of Red Incidents per 1000 Occupied Bed Days (OBD)	Bed Occupancy %	% of Red Incidents resulting in Restraint	% of Red Incidents resulting in Seclusion	% of Red Incidents resulting in Rapid Tranquilisation	
Brett	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	89%	06/16 - 09/16 09/16 - 08/17	90%				
Conolly	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	73%	06/16 - 08/17					
Emerald	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	71%	08/16 - 10/16 10/16 - 08/17	79%		100% REDUCTION		
Gardner	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	90%	04/16 - 05/16 05/16 - 08/17	69%				
Joshua	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	89%	04/16 - 05/16 05/16 - 08/17	73%				
Opal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		09/16 - 08/17					
Ruth Seifert	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	72%	04/16 - 08/17					
Sapphire	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	48%	49%	57%				
Topaz	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	97%	08/16 - 10/16 10/16 - 08/17	51%		100% REDUCTION		
Bevan	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	58%	08/16 - 11/16 11/16 - 08/17	53%				
Crystal	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	55%	09/16 - 08/17					
Jade	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	74%	09/16 - 10/16 10/16 - 08/17	94%				
Ruby Triage	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	53%	09/16 - 08/17					

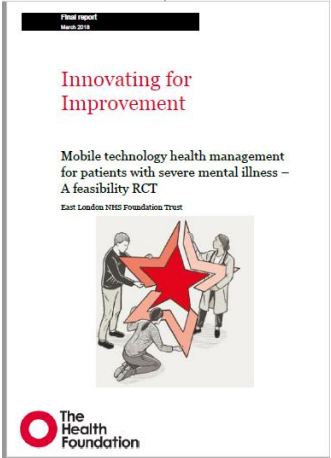
Pre and Post mean number of incidents per 1000 OBD – U Chart (City and Hackney / Newham)





RESEARCH QUESTIONS

Research and QI: A potential life cycle



Board Meeting



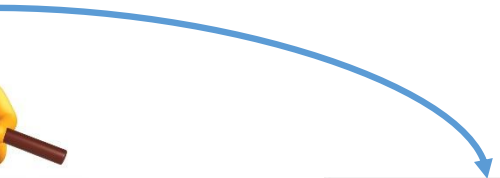
Testing under a variety of conditions (variety of staff and service users)

Small Scale testing (one member of staff/service user)

Implementation?
Spread?



Learning



What's next...

- Bedford and Luton inpatient wards looking to begin the work.
- Testing continuing in Forensic services (secure inpatient units).
- Develop a quality control system in Tower Hamlets and City and Hackney.

Research project arising

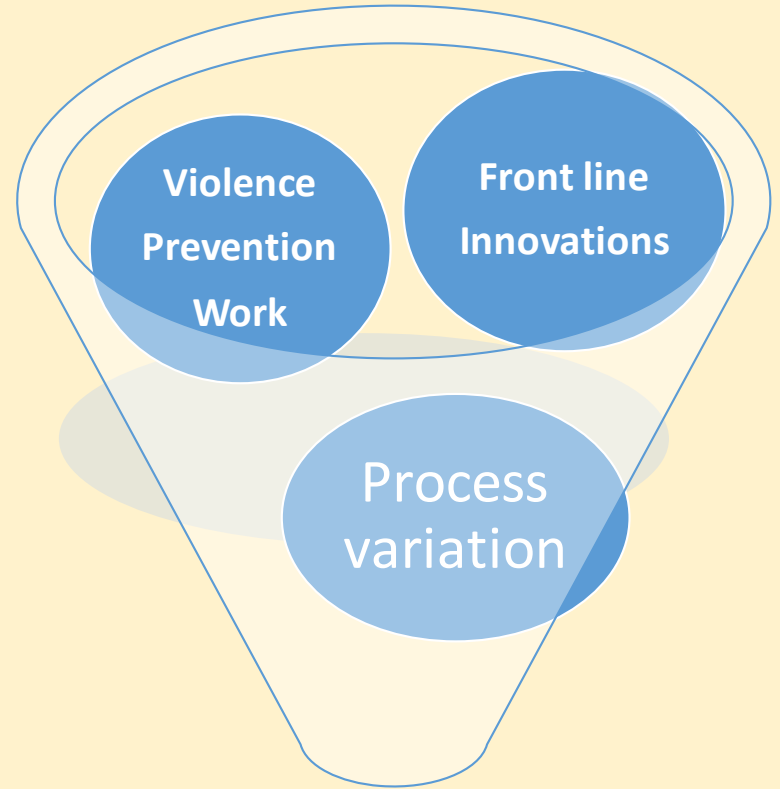
- **Hypothesis:** Team building as active ingredient
- **Research Question:** What is the effect of team building, structured / objectified clinical observation (Broset), and 'Safety Huddles' on incidents of physical violence on psychiatric inpatient wards?
- **Study Idea:** experimental multi-centre study
- **Design:** Cluster RCT with three arms. Patients / clusters will be allocated to one of three intervention conditions each of which will be delivered on acute psychiatric wards for a period of six months.

Fitting QI and Research together

Opportunities, Conversations and Spaces



Ideas for QI



Ideas for Research





Idea tested
through
quality
improvement

Build degree
of belief that it
results in
improvement

Design a
research study
to evaluate
cause & effect
relationship

Horizon Scanning Expert Panel

- Link between research findings and quality improvement
- “Horizon Scanning Expert Advisory” panel
- Aim: scanning available information from a range of different sources to gather ideas for testing in QI
- Priorities defined according to trust-wide QI themes e.g. Violence reduction on inpatient wards
- Change ideas identified: “Patient Controlled Admissions” for frequently admitted patients who often pose challenging or violent behaviour on admission.
- Research from Scandinavia showed significant reductions
- Now being tested in a couple of QI projects at ELFT.

Exercise

1. Using the forcefield analysis and the discussion we've had, how might you explore using QI and research together in your organisations.
2. What might this look like in the short term (one month), medium term (six month) and long term (one year).1988
3. How might you further connect with external partners.

Summary

- Research literature provides a wealth of knowledge for improvement projects when looking for potential change ideas/interventions.
- Research methods can be useful in helping understand what problem to tackle with QI methods i.e thematic analysis.
- The QI approach of sequential testing develops a degree of belief around what leads to improvement. When we aren't sure which component is most effective a research study can help determine this for generalizable knowledge.

Find out more about:

qi.elft.nhs.uk

Follow us on Twitter: @ELFT_QI



&

<https://www.elft.nhs.uk/Research>



NHS

East London
NHS Foundation Trust