

UNITED KINGDOM · CHINA · MALAYSIA

Patient Safety Collaboratives: what is the evidence, how should we evaluate?

Professor Justin Waring Centre for Health Innovation, Leadership & Learning University of Nottingham

'The long and winding road' of patient safety

- Emerging evidence
- Prominent scandals
- New conceptual approach
- A policy call to action
- National reporting system
- Prominent scandals (again)
- New call to action
- The collaborative approach?





1. Collaboratives: a new paradigm of learning & improvement

2. Evaluating and evidencing 'what works'

3. The future of patient safety: research and practice

1. Collaboratives

- Compelling evidence that service improvement takes too long or doesn't easily happen with introduced '*from above*'
- The premise: (Kilo, 1998)
 - There is a gap between evidence and practice (what we know & what we do)
 - There are persistent variations in practice
 - There are examples of 'best practice' that are not always evidenced or shared
 - Collaboration can share good practice, reduce variation and speed up change
 - Rapid improvement methodologies can accelerate change
- 'Collaboratives' bring together clinical & QI experts within a 'learning community' to develop, test and share 'best practice'

Collaboratives

- A multi-disciplinary team of experts
- A clear focus for improvement
- Improvement methodology, e.g. rapid improvement cycles or PDCA
- Structure change and learning activities, e.g. action learning
- Measurement & evaluation (Ovretveith et al 2002):

Participants Select Printed Topic Reports Prework Identify Change Concepts National Planning LS 1 Congress Group Supports E-mail Visits Phone Assessments One Page Reports

Figure 1. The breakthrough series model

The Collaborative Approach

- Illustrates a fundamental shift in learning & improvement...
- From 'top-down' to 'bottom-up'
 - Problem-owners work together at the level of the clinical micro-system to implement rapid change and share practice
- From 'knowledge management' to 'communities of practice'
 - Learning happens not through the codification & communication of evidence (e.g. EBM or incident reports), but through clinicians working together in the form of iteration and the shared experience
- From 'dissemination' to 'co-design'
 - Improvement happens best when knowledge creation (research) and knowledge use (practice) work together

What is the evidence?

- Quality Improvement Collaboratives (QICs) have potential but limited evidence of impact (Schouten et al):
 - Some significant case studies of change, especially in care processes
 - Less evidence of improvement in patient outcomes
 - Focus & setting is often complex leading to variable & modest outcomes
- Success factors: (Brandrud et al 2011)
 - Continuous and reliable information
 - Stakeholder engagement & effective leadership
 - An infrastructure that supports teamwork, learning and improvement
- Duckers et al (2009) study of 18 QICs found that some hospitals are better at providing support for local participation in collaborative approaches

Challenges for collaboration

- Choosing the right focus
 - A shared problem that is amenable to change (not wicked problems?)
- The community defines the objectives, with measurable targets
 - Manage competing expectations and be realistic
- Define roles and expectations
 - Collaboratives involve diverse experts to address different aspects of change
- Facilitate mutual learning, not teaching
 - Support knowledge sharing and the spread of know-how
- Motivate and empower
 - Maintain a sense of purpose
- Sustain and spread improvement
 - Embed learning and collaboration across the wider system

Patient Safety Collaboratives

- Key principles:
 - Local engagement through structured QI
 - Build system-wide capacity for QI
 - Regional spread of improvement
 - Networking between partners & stakeholders
 - National sharing & learning
- Align National Topics & Local Priorities
- Approach:
 - Select 'clinical safety' topics for whole pathway improvement
 - Spread best practice locally
 - Spread practice between PSCs

...be encouraged to build upon existing initiatives or instigate new areas of work...

...to be innovative about the methods they use to drive improvement...

...take a practice approach...employing a range of quality improvement tools...

Collaborative or Collaboratives

- PSCs are not the same as Breakthrough Collaboratives or other QICs!
- The PSCs do not themselves undertake the collaboration or improvement work, rather they facilitate and enable collaboration within their region:
 - Help identify topics
 - Bring together & build inter-disciplinary teams
 - Provide QI expertise
 - Spread learning & improvement
- PSCs might be seen as a **meta-collaborative** or **collaboratives-collaborative**
- PSCs might be seen as regional knowledge brokers and opportunity shapers?

The Collaborative Umbrella



Beyond the Collaborative model!!!

- 1. Forums for learning & adaptation **beyond the clinical micro-system**
 - Patient safety is a 'system' problem change at the micro-level important, but we need wider systemic learning
 - Patient Safety Collaboratives can take the system-learning perspective meta-reviews!

2. Learning from 'what works'

- Most care is good and improvement does happen, so we need to look at what works rather than just negative cases
- Celebrate success and counter the 'blame culture'

3. Social movements for change

- Create a space for radical thinking based upon local concerns
- Challenge establish conventions or interests

2. Why evaluate and evidence

- Only when there is evidence that a safety intervention works, an understanding of how it worked, and how it was made to work can lessons be spread
- PSCs play a key role in this process:
 - Building local capacity for improvement teams to evaluate their own work
 - Providing relevant data on processes and outcomes
 - Designing & organising complex evaluation
 - Conduct comparative case evaluations
 - Synthesizing evidence to inform best practice
 - Spreading learning

What do we mean by evaluation?

- Determining 'whether', 'how' and 'why' an intervention, program or policy works
- Different types of evaluation:
 - Summative (did it work)
 - Formative (on-going feedback to improve how it works)
 - Internal (developmental, but not always easy to see the big picture)
 - External (enhanced independence, but always as developmental)
- Key questions:
 - What are the assumptions behind the intervention?
 - How was the intervention designed & implemented?
 - How did the intervention function or operation ?
 - What did the intervention do?

What do we expect to work?

- Improvement interventions all have an assumed model or 'theory of change'
 - Doing **x** and **y** will improve **z** (too often, this is implicit or unclear!!!)
- An early evaluation task is to determine (or co-design) the programme theory
 - What do partners believe will happen
 - Map out the chain of **cause-and-effect**
 - Identify relevant **contextual** factors
- A theory of change provides the basis of a robust evaluation
 - Identify relevant measures
 - Asses an intervention on its own (expected) merits

Designing quality improvement initiatives: the action effect method, a structured approach to identifying and articulating programme theory

Julie E Reed, Christopher McNicholas, Thomas Woodcock, Laurel Issen, Derek Bell



Assumptions: Optional

Goal(s): Optional

INPUTS	ACTIVITIES	OUTPUTS*	SHORT TERM OUTCOMES*	MEDIUM TERM OUTCOMES*	LONG TERM OUTCOMES*
In order to accomplish our goals will need the following resources	Accomplishing the following activities will result in the following measurable deliverables	Accomplishing these activities will result in the following evidence of progress	We expect the following measurable changes within the life of the grant	We expect the following measurable changes within the next one to three years	We expect the following impacts/trends within the next three to seven years or more

*Be sure to indicate how each of these will be measured.

Determining 'what' works

- Measurement is key to evidencing and demonstrating change & 'cause and effect'
- Measures should be guided by the theory of change
- Measures should be reliable & consistent

	Measurement for Research	Measurement for Learning & Improvement	
Purpose	To discover new knowledge	To bring new knowledge into daily practice	
Tests	A large "blind" test	Many sequential, observable tests	
Biases	Control for as many biases as possible	Stabilize the biases from test to test	
Data	Gather as much data as possible	Gather "just enough" data for learning	
Duration	Can take long periods of time	"Small tests " accelerate improvement	

Understanding 'why' & 'how' it works

- Understanding Design & Development
 - What evidence and theory influenced design
 - What system and local factors shaped design
- Implementation
 - How was the intervention introduced, embedded and adapted into practice
 - What support or training was needed
- Organisation & Operation
 - Resource profiles, pre-existing structures and process, staffing and teams
 - Leadership, culture, experience
- Experiences and implications
 - How do different people perceived, make sense of and react to change
 - What are the different norms, values and beliefs that influence and are influenced by change

Things to bear in mind

- Many safety interventions are 'complex'
 - They involve multiple interacting people, components or procedures
 - They interact with their complex environment in various and unpredictable ways
- The importance of 'context'
 - The messy world of health and social care can significantly condition and influence change
 - Context is not something to label or ignore, but needs thorough understanding
- The persistence of 'culture' & 'power'
 - Culture eats strategy for breakfast cultures are difficult to understand & change
 - Cultures are often resistant to change
 - Vested interests will often block or hinder change

3. The future: research and practice

- A growing international research agenda
- The UK Patient Safety Research Portfolio
 - Theoretical and methodological developments
 - Exploratory studies of safety/risk producing settings
 - Evaluations of safety-enhancing interventions
- The recent NIHR safety research
 - Organisational safety (board governance and improvement strategies)
 - Between care processes (admission, handover, discharge)
 - Patient & user involvement (open disclosure, patients with learning disabilities)



What does research tell us?

- There have been some significant advances in patient safety, it remains a 'wicked' problem
 - There is no magic bullet!
- Difficult to important safety improvements with consideration of 'context'
 - Healthcare is not like aviation or manufacturing!
- Robust evidence is essential, but so too is appreciation of culture and politics
 - The best interventions will still face active resistance from vested interests!



Future directions for research

- We don't fully appreciate the **financial implications** of safety
 - How much does it cost to repair or compensate for unsafe care?
- We need to look **outside of the hospital** settings
 - More research is needed in care homes, primary care, community hospitals, in the patient's own home
- Safety might be seen as a relational property of a 'complex system'
 - Need to understand the inter-dependencies between (vertical and horizontal) activities
- We need to **re-couple research & practice**
 - Evidence and improvement needs to be co-produced to ensure it makes a meaningful and lasting differences

Evaluating & Researching PSCs

- There is a huge opportunity to evaluate local safety interventions, as a basis of evidencing & spreading good practice
- There is an equal need to evaluate how PSCs identify and spread good practice, as a basis of developing the PSC model
- There is a need to evaluate the underlying theory of change underpinning PSCs themselves, to determine whether they are the catalysts for change as anticipated

Concluding remarks

- 1. Collaboratives are powerful vehicles for learning and improvement, and we might consider new possibilities or approaches for how they celebrate and spread safety
- 2. Safety interventions need a robust evidence base before they can be championed, and this might be more inclusive of multiple evidence sources and perspectives
- 3. Research can guide safety improvement, and might be more closely aligned with the needs of service leaders and change agents