



# HCAC 2023

## 7<sup>TH</sup> QUALITY HEALTH CARE CONFERENCE AND EXHIBITION

Nov 13<sup>th</sup>-15<sup>th</sup> 2023

Globalization Toward Quality & Patient Safety  
A Future Perspective

الجودة من منظور عالمي - تطلعات مستقبلية

**Smarter Improvement**  
**Developing skills for effective QI**

Helen Crisp  
Jan Mackereth-Hill



# Workshop Facilitators

- **Helen Crisp:** Researcher, trainer and editor with 30 years' QI experience, including accreditation programmes, evaluation and training. Editor of BMJ Open Quality, supporting write-up of improvement work to disseminate knowledge on quality & safety.
- **Jan Mackereth-Hill:** with over 30 years' experience of QI in healthcare; including accreditation, expert peer review, developing national standards and working as an expert team setting up a national agency.





## Overview of this morning's workshop:

- Aim of the workshop
- We will give an overview of a range of different QI methods and approaches
- Gain familiarity with those 'new to you'
- Consider which approach works for what type of improvement
- Start to explore how they can powerfully combine

# The challenges

- Quality improvement has made progress - but sometimes falls short
- Lots of tools to support improvement work - hard to choose the right one for the right moment.
- Engagement of staff and patients is critical for success of QI interventions
- Healthcare is complex!

# Workshop objectives



WE HOPE PARTICIPANTS WILL GAIN:



FAMILIARITY WITH DIFFERENT  
APPROACHES TO QUALITY  
IMPROVEMENT IN HEALTHCARE



ABILITY TO DECIDE WHICH  
APPROACH IS THE BEST FIT FOR  
WHAT TYPE OF IMPROVEMENT  
INITIATIVE



NEW IDEAS TO BOOST YOUR  
IMPROVEMENT PRACTICE

# Find out more

Downloadable free guide  
from the Health  
Foundation, UK

<https://www.health.org.uk/publications/quality-improvement-made-simple>



# On your tables

Each person to introduce yourself:

- Name
- Professional background/ organisation
- Your best experience of doing Quality Improvement work to date?

# Who's in the room?

Please raise your hand to show the healthcare sector you work in:

- Acute hospital
- Primary care/ Family doctor
- Elderly care
- Mental Health Sector
- External agency: Insurer, Accreditation, Ministry of Health
- Other



# Tapping into the experience here:

Raise your hand to show your level of Quality Improvement (QI) experience:

- I work full-time on QI
- I have led QI project(s)
- I have done the HCAC Quality Certification Program
- I have worked on QI projects
- No experience

# Familiarity with QI tools: 'dot' voting

- Use the stickers on your tables
- Add a sticker (any colour) in the appropriate column on the flip charts for particular methods, models and techniques to reflect your level of familiarity

**This tool/  
technique is  
new to me**

**Aware of this  
tool technique -  
but not used**

**Have been in  
involved in a  
project that  
used this**

**Confident user  
of this tool/  
technique**

# Why we need to be 'smarter' at QI



Too few Quality Improvement projects achieve lasting change



Questions asked about the burden of QI on an already busy workforce



Too much local reinvention, rather than applying what is known



Lack of high-quality reports on successful interventions

# Find out more

EDITORIAL

## Overcoming the 'self-limiting' nature of QI: can we improve the quality of patient care while caring for staff?

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In this month's edition, Mandel and Cady draw on organisational change theories to argue that quality improvement (QI), as currently deployed, is self-limiting.<sup>1</sup> In other words, if left untamed it will fail to produce valuable change and may have a raft of negative consequences, including stress, reduced engagement and burnout among healthcare staff. While acknowledging that some improvement methods (eg, appreciative inquiry, positive deviance) do address the emotional experience of staff as well as their performance, and focus on socio-behavioural (teamwork, cultures, etc) as well as process-technical design elements, Mandel and Cady call for these to be explicit elements of all healthcare QI initiatives.

We argue here that this article represents a theoretical framing for messages that ring loud throughout the QI and safety literature. These linked messages are (1) additive change means asking staff to do more and more, potentially creating safety clutter, and (2) improvement initiatives can have negative as well as positive

In 2019, Dixon-Woods coined the term 'lovely-baby syndrome' to highlight the strong belief in, but lack of robust evidence for, many improvement approaches and interventions.<sup>5</sup> Indeed, in a recent systematic review of 28 randomised controlled trials of QI methods,<sup>6</sup> the only two studies identified as having a low risk of bias were also those that demonstrated no effect on clinical processes or patient outcomes. Overall, less than half of studies demonstrated any significant improvement. Thus, the message that QI is not a panacea for improvement in complex healthcare systems is uncontested. What is more novel in what Mandel and Cady argue is that QI may sometimes, even frequently, have negative repercussions for staff well-being.

For example, in a recent edition of this journal, Catlow and colleagues<sup>7</sup> set out to understand the unintended consequences of one widely used improvement approach—audit and feedback. While the endoscopy audits they studied focused on outcome measures such as

BMJ Qual Saf: first published as 10.1136/bmjqs-2022-015272 on 2 September 2022. Downloaded from <http://qualitysafety.bmj.com/>

QUALITY IMPROVEMENT

## How to improve healthcare improvement—an essay by Mary Dixon-Woods

As improvement practice and research begin to come of age, **Mary Dixon-Woods** considers the key areas that need attention if we are to reap their benefits

**I**n the NHS, as in health systems worldwide, patients are exposed to risks of avoidable harm<sup>1</sup> and unwarranted variations in quality.<sup>2-4</sup> But too often, problems in the quality and safety of healthcare are merely described, even “admired,”<sup>5</sup> rather than fixed; the effort invested in collecting information (which is essential) is not matched by effort in making improvement. The National Confidential Enquiry into Patient Outcome and Death, for example, has raised many of the same concerns in report after report.<sup>6</sup> Catastrophic degradations of organisations and units have recurred throughout the history of the NHS, with depressingly similar features each time.<sup>7-9</sup>

More resources are clearly necessary to tackle many of these problems. There is no dispute about the preconditions for high quality safe care: funding, staff

evidence based practices intended to be done consistently) through to medicines reconciliation and clinical pathways.

QI has been advocated in healthcare for over 30 years<sup>13</sup>; policies emphasise the need for QI and QI practice is mandated for many healthcare professionals (including junior doctors). Yet the question, “Does quality improvement actually improve quality?” remains surprisingly difficult to answer.<sup>14</sup> The evidence for the benefits of QI is mixed<sup>14</sup> and generally of poor quality. It is important to resolve this unsatisfactory situation. That will require doing more to bring together the practice and the study of improvement, using research to improve improvement, and thinking beyond effectiveness when considering the study and practice of improvement.

rigorous evaluation.<sup>24</sup> For instance, a controlled study of a large, well resourced programme that supported a group of NHS hospitals to implement the IHI's Model for Improvement found no differences in the rate of improvement between participating and control organisations.<sup>25 26</sup> Specific interventions may, similarly, not survive the rigours of systematic testing. An example is a programme to reduce hospital admissions from nursing homes that showed promise in a small study in the US,<sup>27</sup> but a later randomised implementation trial found no effect on admissions or emergency department attendances.<sup>28</sup>

Some interventions are probably just not worth the effort and opportunity cost: having nurses wear “do not disturb” tabards during drug rounds, is one example.<sup>29</sup> And some QI efforts, paradoxically, may cause

BMJ: first published as 10.1136/bmj.15514 on 1 October 2019. Downloaded from <http://www.bmj.com/>

BMJ Quality & Safety, September 2022

<https://qualitysafety.bmj.com/content/qhc/31/12/857.full.pdf>

The BMJ October 2019

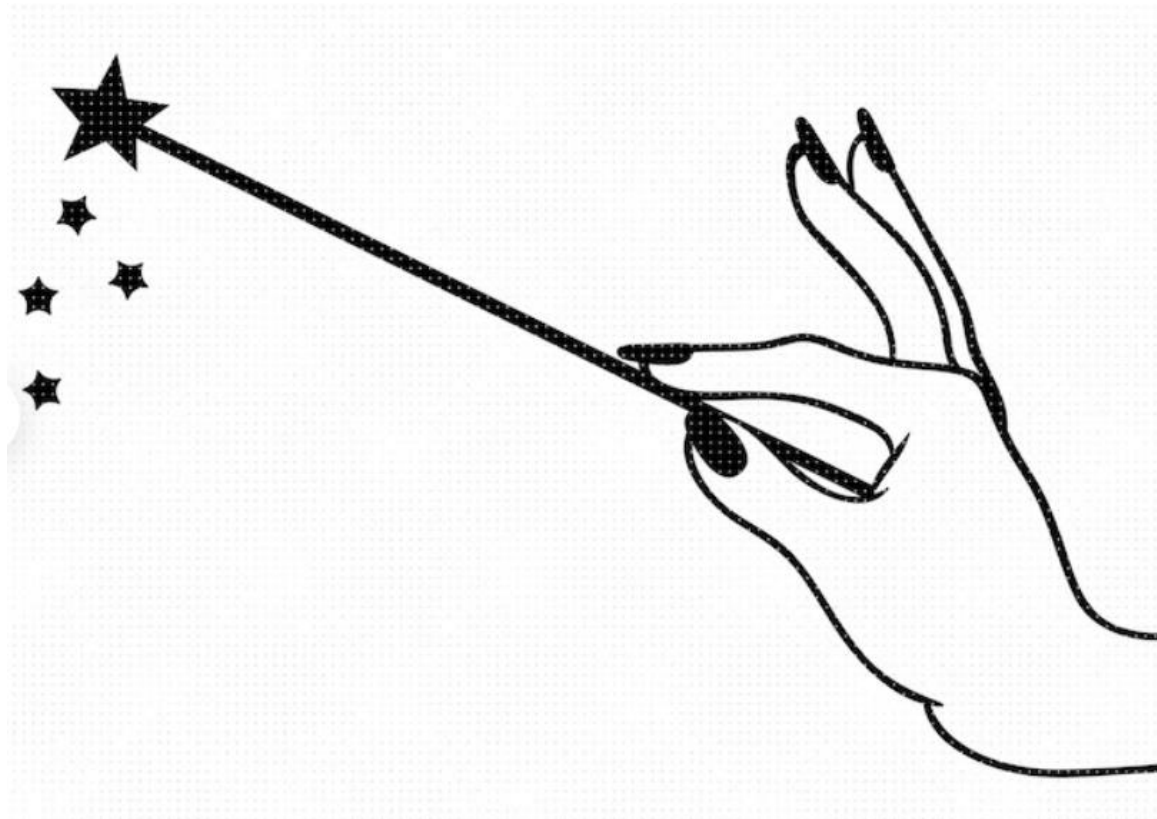
<https://www.bmj.com/content/367/bmj.l5514.long>



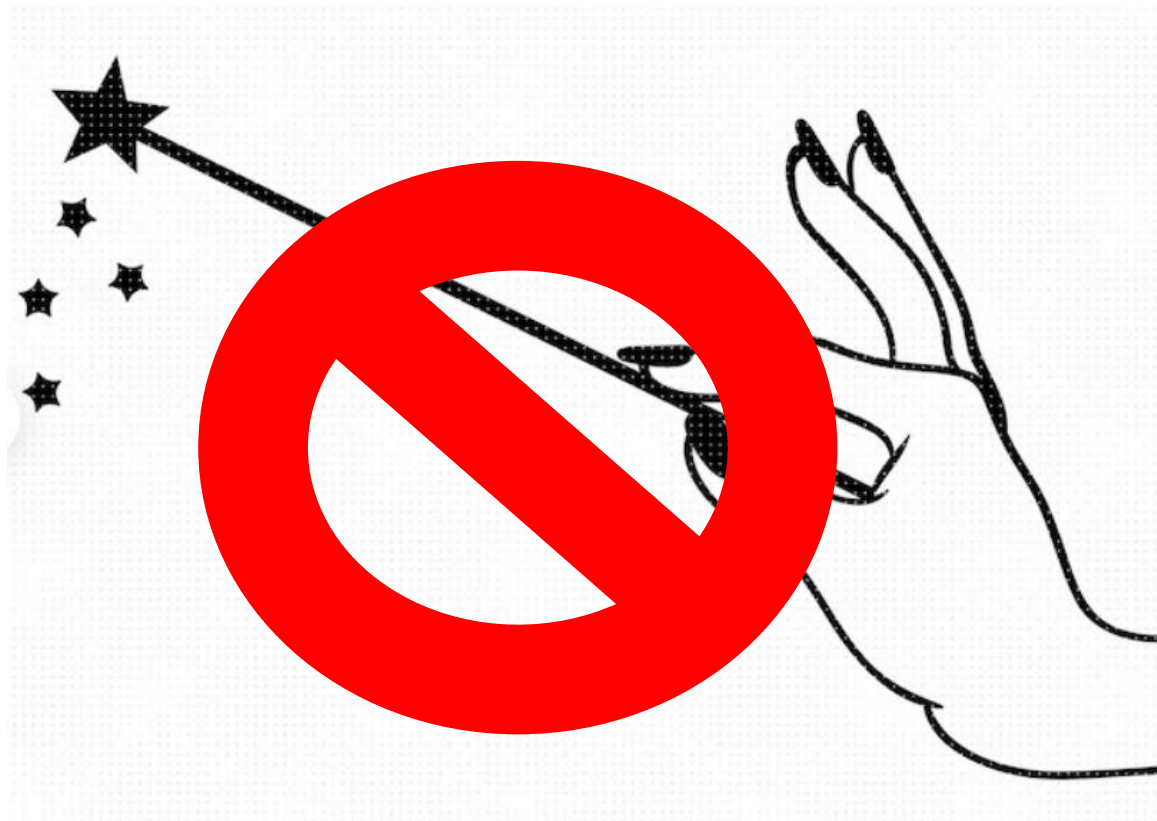
# Defining 'success'

- Something has changed
- How do we know a change is an improvement?
  - safer
  - more effective
  - more efficient
  - more accessible
  - more person-centred
- The change can be measured

# Healthcare quality improvement:



# Healthcare quality improvement:



No magic wands



# No magic wands = No quick fixes

- Improving quality is complex
- Progress comes in small steps not giant leaps forward
- It takes time to demonstrate impact
- Every QI effort faces obstacles and setbacks along the way
- Culture must develop to support continuous improvement



# What to improve?

May seem obvious - but many advantages to pause, and consider:

Every improvement project uses resources

Every project takes up staff time, energy and enthusiasm

***Spend it wisely!***

# Where to focus?

Issues recognised as a 'challenge' by the staff

Things that are important for patients

- experience of care
- clinical outcomes

Issues to align with known priorities

# Target agreed improvement issues

## Do staff agree there is quality issue?

“I don’t recognise that in my practice”

“The data are wrong”

“We’ve already changed the way we work”

“Our patients have not complained”



# Target areas where QI can make a difference

- Is the focus of change within your remit?
- What does the published evidence show?
- Are there examples of good practice to adopt?
- What issues have come up in patient feedback?



# Alignment with organisational priorities

- Can you point to a heading in the organisation's strategy document?
- Will your manager give this priority and support?
- Does it directly affect patients?



# Read & discuss before rushing to action

- Read QI reports on similar work
- Read up on theory of methods you might use
- Discuss background to the issue with the teams involved
- Consider how proposed changes may impact on patient pathways?





# Consult the evidence: Reports, guidelines, journals, web-sites

**BMJ Journals**

## BMJ Open Quality

search

Latest content

### BMJ QUALITY & SAFETY

Preventing infections associated with urinary catheters  
A framework for evaluating partnerships to improve hospital safety in developing countries



Welcome to BMJ Open Quality, an expanded and rebranded version of BMJ Quality Improvement Reports. The journal is dedicated to publishing high quality, peer reviewed healthcare improvement work. Articles covering original research, local, national and international studies, evidence based healthcare improvement and educational



www.ihl.org/resources/Pages/IHIWhitePapers/default.aspx

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**IHI White Papers**

IHI's Innovation Series white papers were developed to further our mission of improving the quality and value of health and health care. The ideas and findings in these white papers represent innovative work by organizations affiliated with IHI. White papers are designed to share with readers the problems IHI is working to address; the ideas, changes, and methods we are developing and testing to help organizations make breakthrough improvements; and early results where they exist.

**NEWEST IHI WHITE PAPERS**

Achieving Hospital-wide Patient Flow »

**FEATURED WHITE PAPERS**

- Achieving Health Equity: A Guide for Health Care Organizations »
- Sustaining Improvement »
- Comparing Lean and Quality Improvement »
- A Guide to Measuring the Triple Aim: Population Health, Experience of Care, and Per Capita Cost »
- IHI Global Trigger Tool for Measuring Adverse Events (Second Edition) »

# Benefits of using reported improvement studies

- Learn from other's experience
- Consider context – similarities/differences
- Not starting from scratch - many reports include:
  - Questionnaires used
  - Forms developed
  - Checklist elements
- Benchmark your results against reported findings





# Key messages:

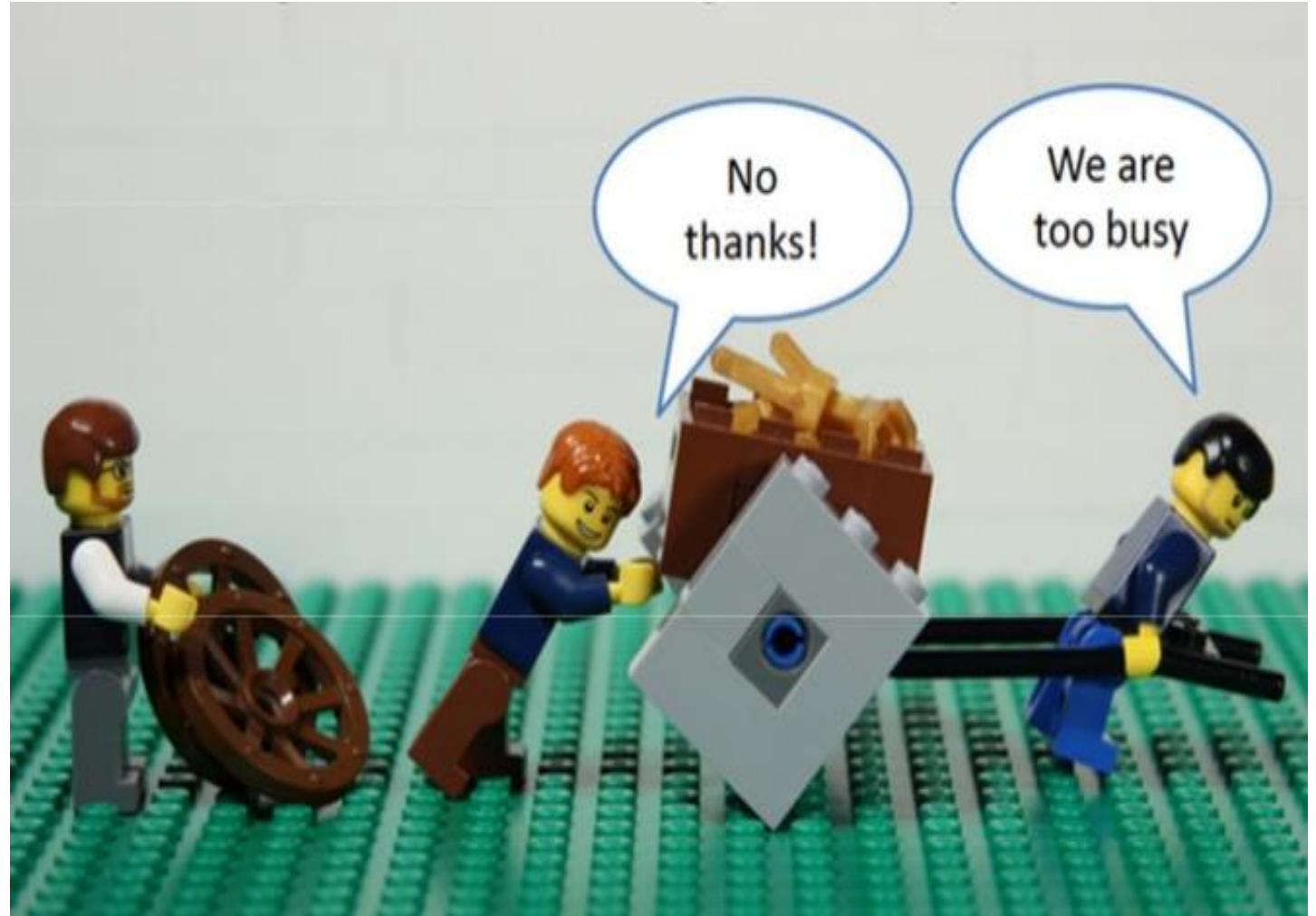
- ✓ Don't rush to solutions
- ✓ Look into the issue from different perspectives
  - Team discussion on the background to issues
- ✓ Consider patient flow - upstream and downstream



# Staff engagement

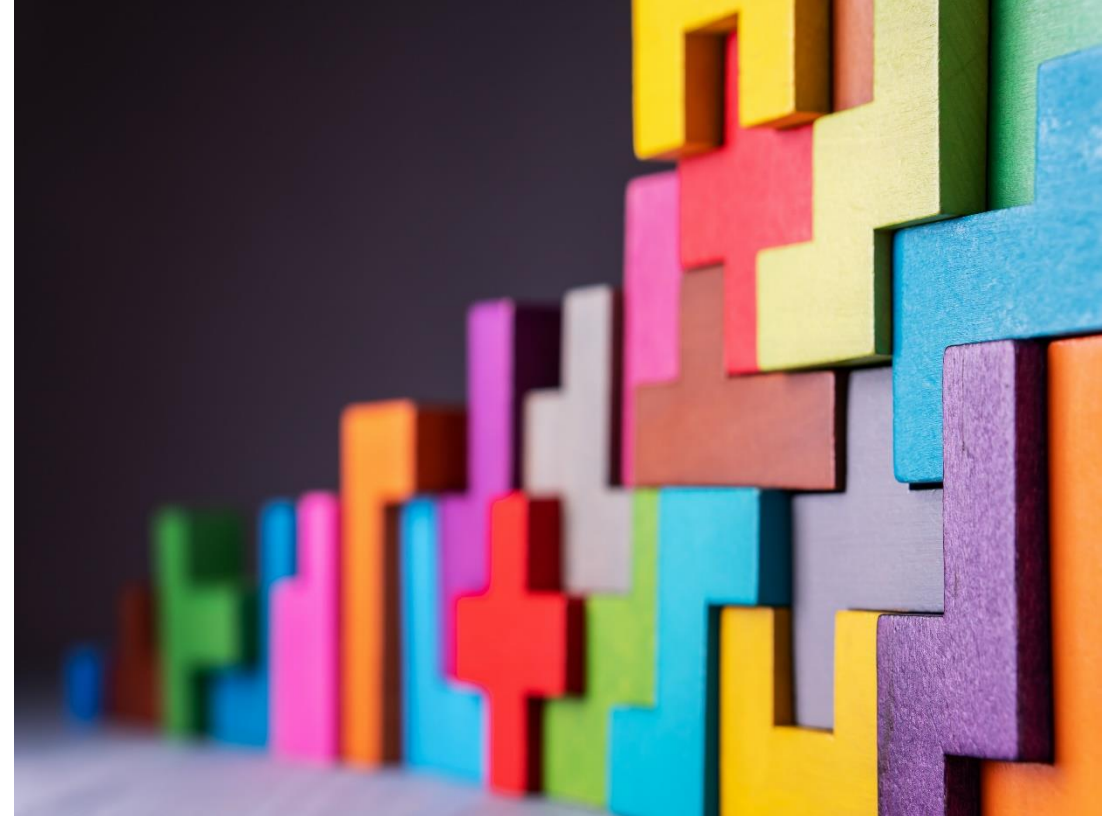
Expect resistance because:

- We're very busy – we can't stop to change course
- It's too much work to change things
- Change takes people out of their comfort zone



# Engaging staff to overcome resistance

- Emphasise the potential for improvement to help work run more smoothly
- Provide information on why the improvement is important
  - Link to patient care
- Share evaluation evidence that it's worked in other places
- Provide training on any changes to practice or processes



# Communication and training

- Team training is found to be most effective
- Doctors, nurses, physiotherapists, care assistants training together
- Try to involve patients/ service users
- Discuss what changes you're aiming to make
- Regular team meetings to discuss progress
- Plus: individual training as needed

# Importance of relationships

- Relationships between staff - team dynamics and cross-depts.
- Involve staff at every stage
  - Consultation on the issue
  - Development of the solution
  - Check how implementation is going
- Influence up, down and across



# Key message:

Improvement is as much about relationships as technical issues



# Introduction to QI Tools

# Accreditation

**Method:** A self-assessment and external peer review process used by health and social care organisations to accurately assess their level of performance in relation to established standards and to implement ways to continuously improve the health or social care system. *ISQua EEA*

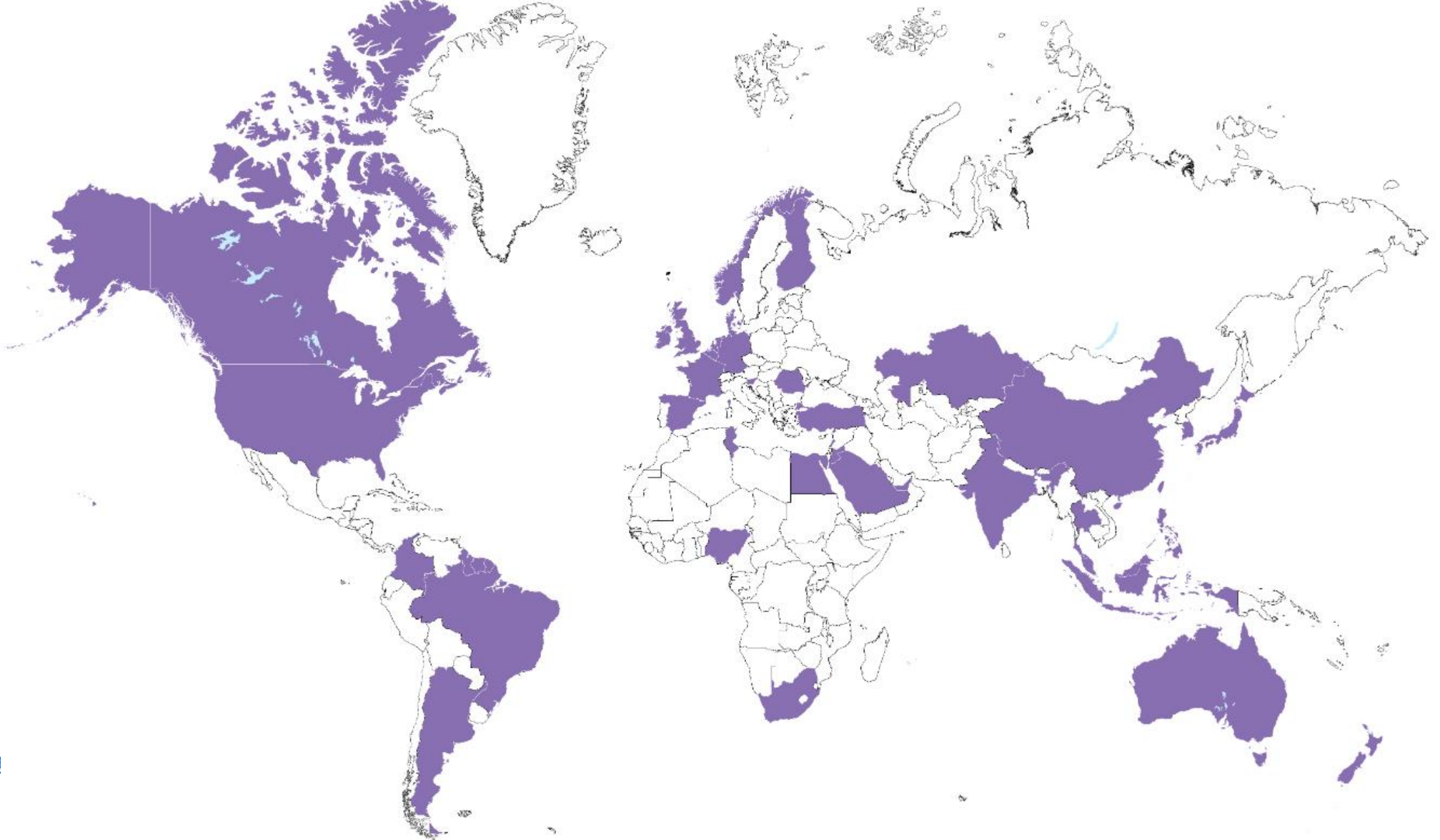
**Use:** Can be used for the whole organisation or for specialist services such as diagnostic imaging, laboratory services, telemedicine

**Aim:** of improving quality and processes

**Recognition:** of quality through an award



# Spread of accreditation November 2023



<https://ieea.ch/accreditation/programmes.html>

# Using Accreditation for QI

## Benefits

- Involves the whole organisation, or specific service
- Has a structured approach to follow
- Includes common goals
- Allows measurement
- Can show improvement

## What are the cons?

- Procedures which only the surveyors see, or sit on a shelf
- Management delegate to the quality manager, seen as their role and responsibility – no buy-in
- Only acted upon in the last few weeks before survey
- Fatigue, been through it before - no need to be engaged
- Surveyors don't 'dig deep' just look at what is in front of them

# How to use standards as an improvement tool

- Standards:
  - tend to be grouped into functions
  - generally cross-cut across an organisation
  - can be a good source for improvement ideas
- HCAC Hospital Standards:
  - 15 clusters,
  - 427 standards
  - cover the whole organisation

# Creating a management walkabout tool

- A walkabout or Gemba Walk tool looks at
  - Purpose
  - Process
  - People
- Creating a tool from a set of standards helps identify the process, the people and the methods used

# How to start

- Select a theme:
  - This could be safety, patient discharge or linked to an already identified area for improvement
  - A process that has multiple steps
- Consider
  - What documentation is available
  - Who to talk to
  - What to observe

# Management Walkabout – Patient Access

<b>Requirement</b>	
<b>Step 1</b>	<p><b>Read</b> the policies and procedures explain the reasonable adjustments that are made by the hospital to enable the vulnerable population's access the services provided. (PR.8, PR.8.1, ME 2)</p> <p><b>Guidance includes</b> Availability of specific access needs e.g. appropriate equipment (wheelchair, ramps), adapted examination tables, restroom facilities, toilets, parking, access a doctor or nurse or other health care specialists</p> <p><b>Check</b> Is the policy up to date? Is there evidence of review</p> <p><b>Prepare</b> Questions based on the policy that you want to discuss with staff and or patients</p>

# Management Walkabout – Patient Access

<b>Requirement</b>	
Step 2	<p><b>Observe:</b></p> <p>Start outside the hospital and follow the patient journey from parking to a clinic or ward on an upper floor. Take note of:</p> <ul style="list-style-type: none"> <li>i. Is there space in the car park for those with special needs?</li> <li>ii. Is there wheelchair access – ramps etc?</li> <li>iii. Check at main entrance that signage is in place and easily read.</li> </ul> <p>Consider: the height of the signage; colour scheme; size of writing</p> <p><b>Check</b> are patient needs being met (AC.1)</p>
Step 3	<p><b>Observe:</b></p> <ul style="list-style-type: none"> <li>a) the conditions of toilets and washing facilities, for cleanliness and availability of supplies.</li> <li>b) the availability of waiting area, equipped with adequate number of chairs.</li> <li>c) the availability of elevators, and ease of allocating them through the guidance of signage.</li> <li>d) the availability of parking areas.</li> <li>e) if wheelchairs and stretchers are available for those who require such services.</li> <li>f) If there are hand rails are available to support those with limited mobility.</li> </ul>

# Management Walkabout – Patient Access

<b>Requirement</b>	
<b>Step 4</b>	<p><b>How</b> is patient safety being addressed (ES.3, ES4.1, ES.5).</p> <p><b>Observe:</b></p> <ul style="list-style-type: none"><li>a) Are the safe exits during fire incidents or other emergencies clearly signposted and kept clear.</li><li>b) Are there warning signs for wet floors during cleaning.</li><li>c) Are no smoking signs visible and there are no people smoking</li></ul> <p><b>Ask:</b></p> <p>Staff what they would do if they needed to evacuate immobile patients (ES.4.1)</p>



# An example of how the tool can look

	<b>Requirement</b>	<b>FM</b>	<b>M</b>	<b>PM</b>	<b>NM</b>	<b>Comments/Actions</b>
Step 1	<p><b>Read</b> the policies and procedures explain the reasonable adjustments that are made by the hospital to enable the vulnerable population’s access the services provided. (PR.8, PR.8.1, ME 2)</p> <p><b>Guidance includes</b></p> <p>Availability of specific access needs e.g. appropriate equipment (wheelchair, ramps), adapted examination tables, restroom facilities, toilets, parking, access a doctor or nurse or other health care specialists</p> <p><b>Check</b></p> <p>Is the policy up to date?</p> <p>Is there evidence of review</p> <p><b>Prepare</b></p> <p>Questions based on the policy that you want to discuss with staff and or patients.</p>					

# Exercise – table groups

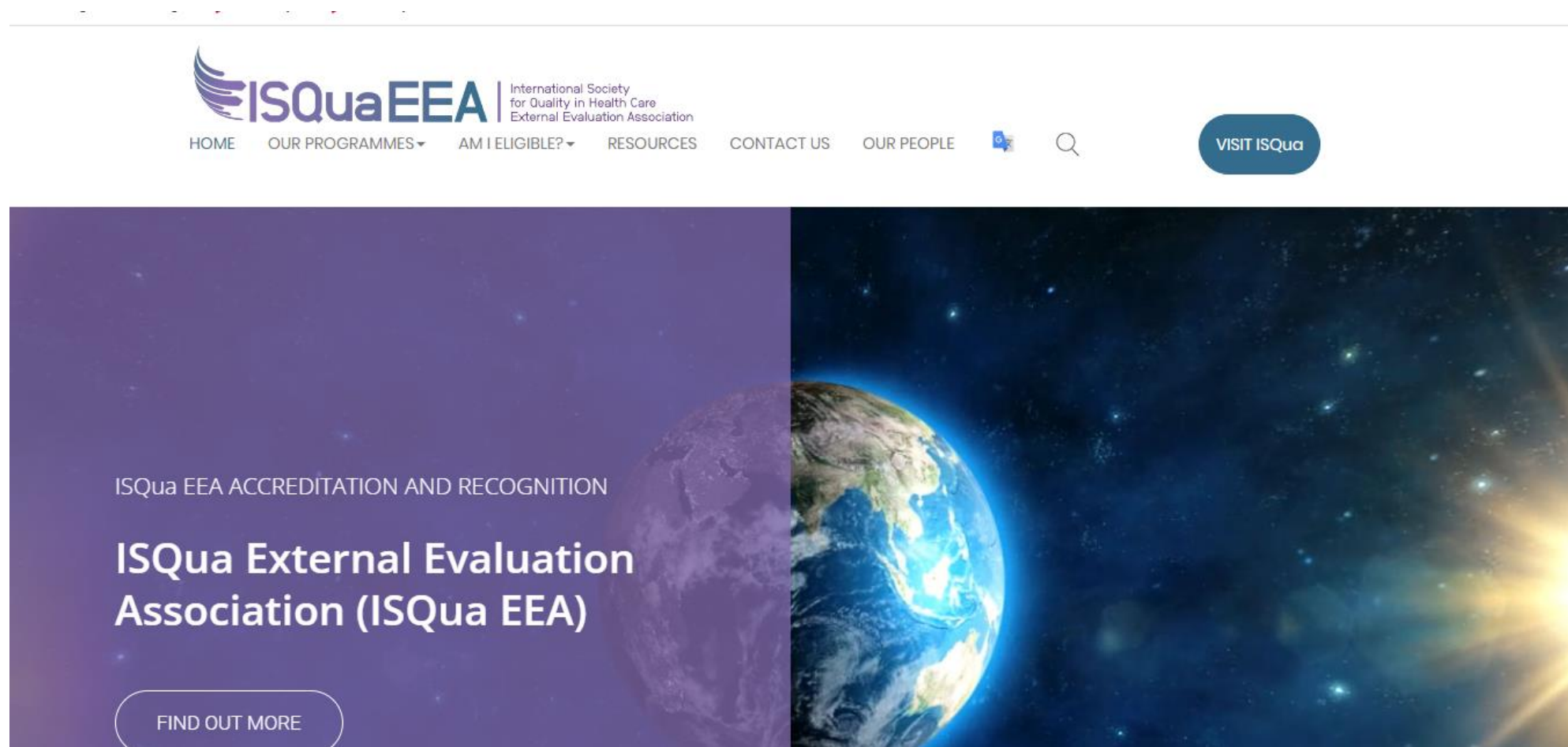
Based on the previous information, create your checklist of:

1. Questions to ask patients
2. Questions to ask staff
3. Any other areas for observation

# In summary

- Using the standards as a guide allows for the cross-cutting of standards
- Involving management allows them to observe practice with fresh eyes
- Can be used for many themes

# Find out more



# Understanding the problem

# Fishbone diagram

Also called: cause-and-effect diagram, Ishikawa diagram

Created by university professor Kaoru Ishikawa in the 1960s as a quality control tool

A visual way to explore causes and effects

**Use:** To identify possible causes of the problem issue that has been identified

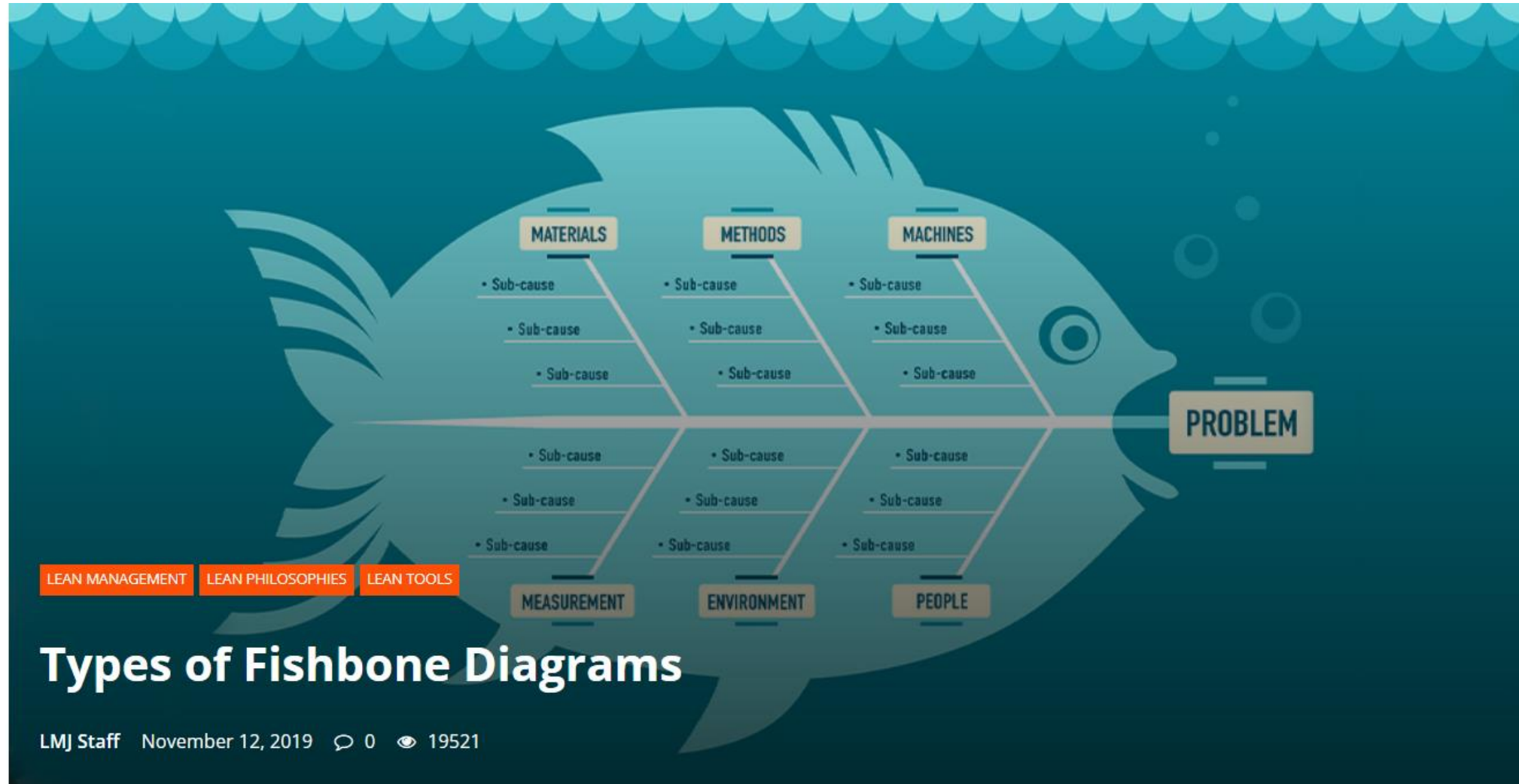
**How to:** Identify your problem statement

List out the possible causes – Identify the main categories

Then add contributing factors for each category

**Helpful to:** Sort and categorise improvement ideas

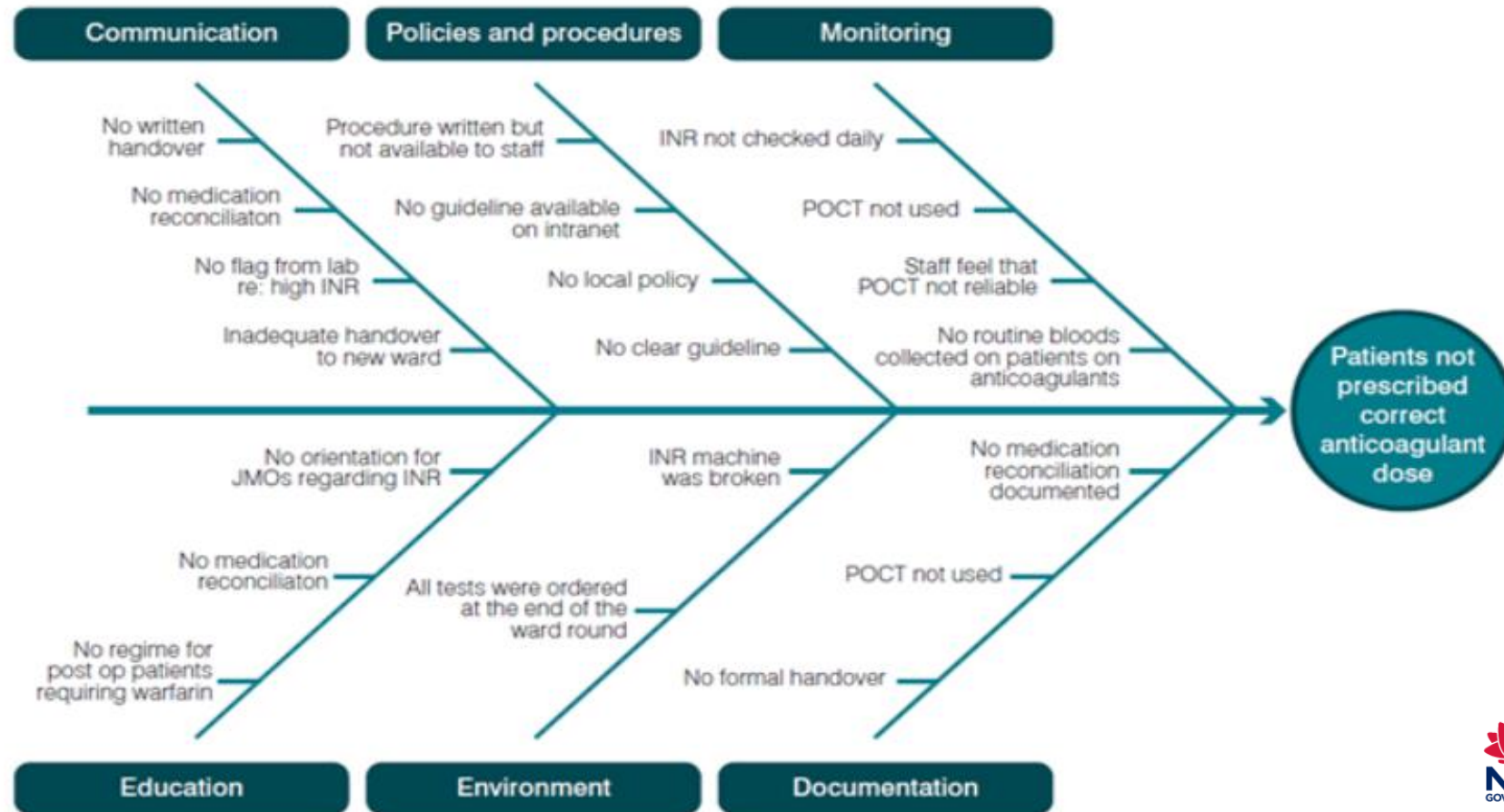
# Structure: Fishbone Diagram





# Example: Healthcare QI Fishbone Diagram

Reasons why patients are not on a standardised anticoagulation pathway



INR – International Normalised Ratio  
POCT – Point of care testing

<https://www.cec.health.nsw.gov.au/CEC-Academy/quality-improvement-tools/cause-and-effect-diagrams>

# Why use this method?

- Simple to use – does not need a lot of training or ‘equipment’
- It’s visual – easy to present to a project group and enable people to see causes and effects behind the problem or issue to ‘improve’
- Helps to think through multiple areas/issues that cause the problem

What are the cons?

- It is very dependent on knowledge in the group
- May not stimulate looking beyond what seems ‘obvious’
- People are making assumptions about the causes

# Further reading and examples

- NHS England online library of QI tools: <https://www.england.nhs.uk/wp-content/uploads/2021/12/qsir-cause-and-effect-fishbone.pdf>
- Guide showing how to build each stage of the diagram, East London NHSFT <https://qi.elft.nhs.uk/resource/cause-and-effect-diagram-fish-bone/>
- How to Diagnose Solutions to a Quality of Care Problem, *Clin J Am soc Nephrol* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4858489/>

# Pareto Analysis

Also known as the Pareto Principle and  
'the 80/20 rule'

What is it?

- Analysis to categorize issues to identify which processes have the most effect on quality
- A small number of processes will have the largest contribution to poor quality.
- The 80/20 rule or Pareto principle, states that 80% of the effects/outcomes in a system are related to 20% of the causes

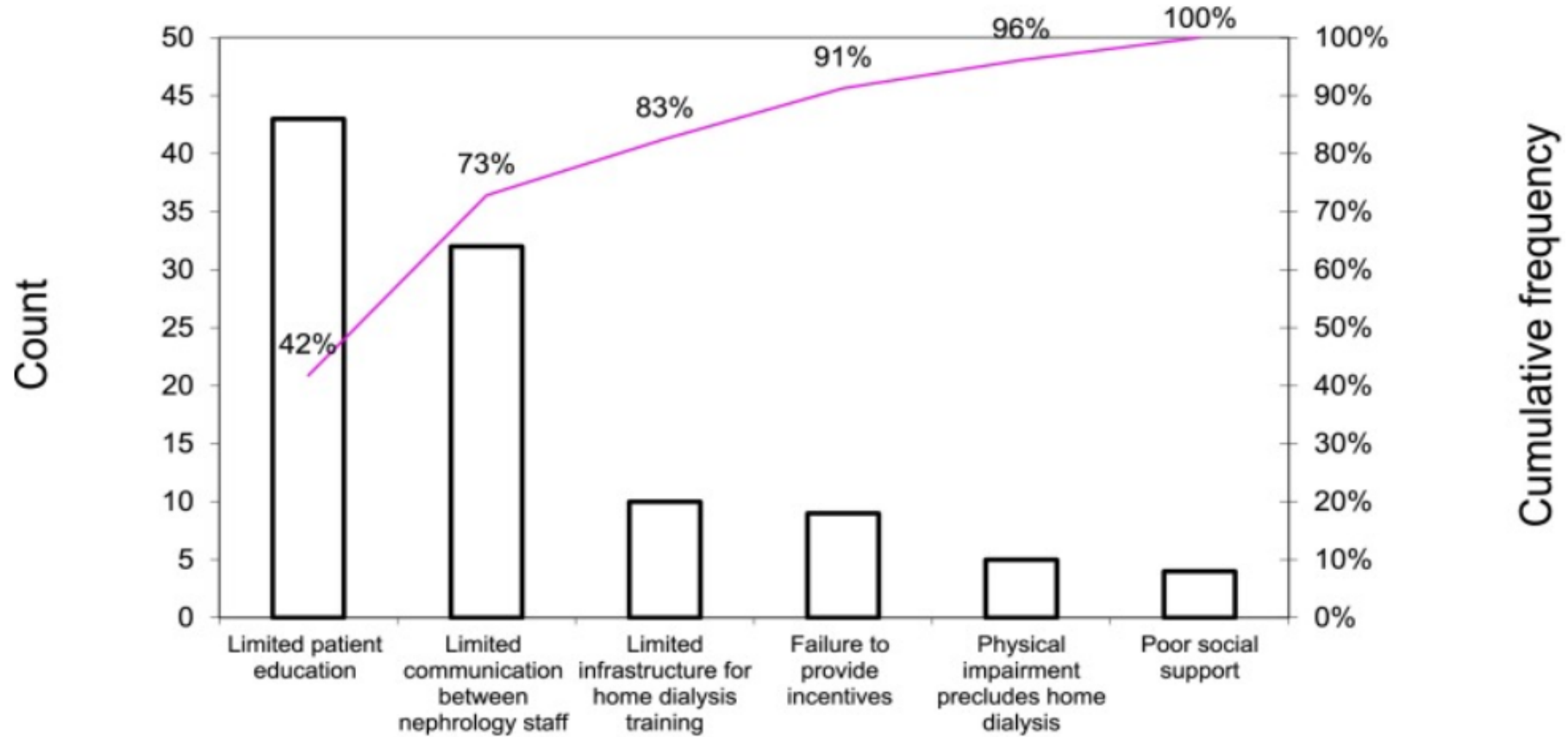
# When to use it

- Pareto analysis is useful when there seem to be many processes contributing to a quality of care issue
- It is crucial to be able to direct improvement effort where it will have the greatest positive effect

## What to do

- Develop a Fish Bone diagram to determine the potential causes for the issue
- List the issues and develop a data collection tool to determine how often each issue is occurring
- Collect data by observations, clinic audits, interviews of patients and staff, and chart audits
- Document 50 – 100 occurrences of similar or different causes
- Rank them by how often a particular cause has been noted, in order of the most frequent to the least frequent
- Frequency and cumulative frequency of each presumed cause is calculated.
- Chart this with the most prevalent causes on the left and the least prevalent causes on the right.

# Pareto diagram of the issues around improving home dialysis rates



How to Diagnose Solutions to a Quality of Care Problem

Clin J Am Soc Nephrol. 2016 May 6; 11(5): 901–907

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4858489/?report=printable>

# Why is it helpful?

- Pareto analysis helps to identify the short list of causes that have most impact on quality
- Change ideas can then be developed to address these common causes

## Find out more:

How to Diagnose Solutions to a Quality of Care Problem

Clin J Am Soc Nephrol. 2016 May 6; 11(5): 901–907

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4858489/?report=printable>



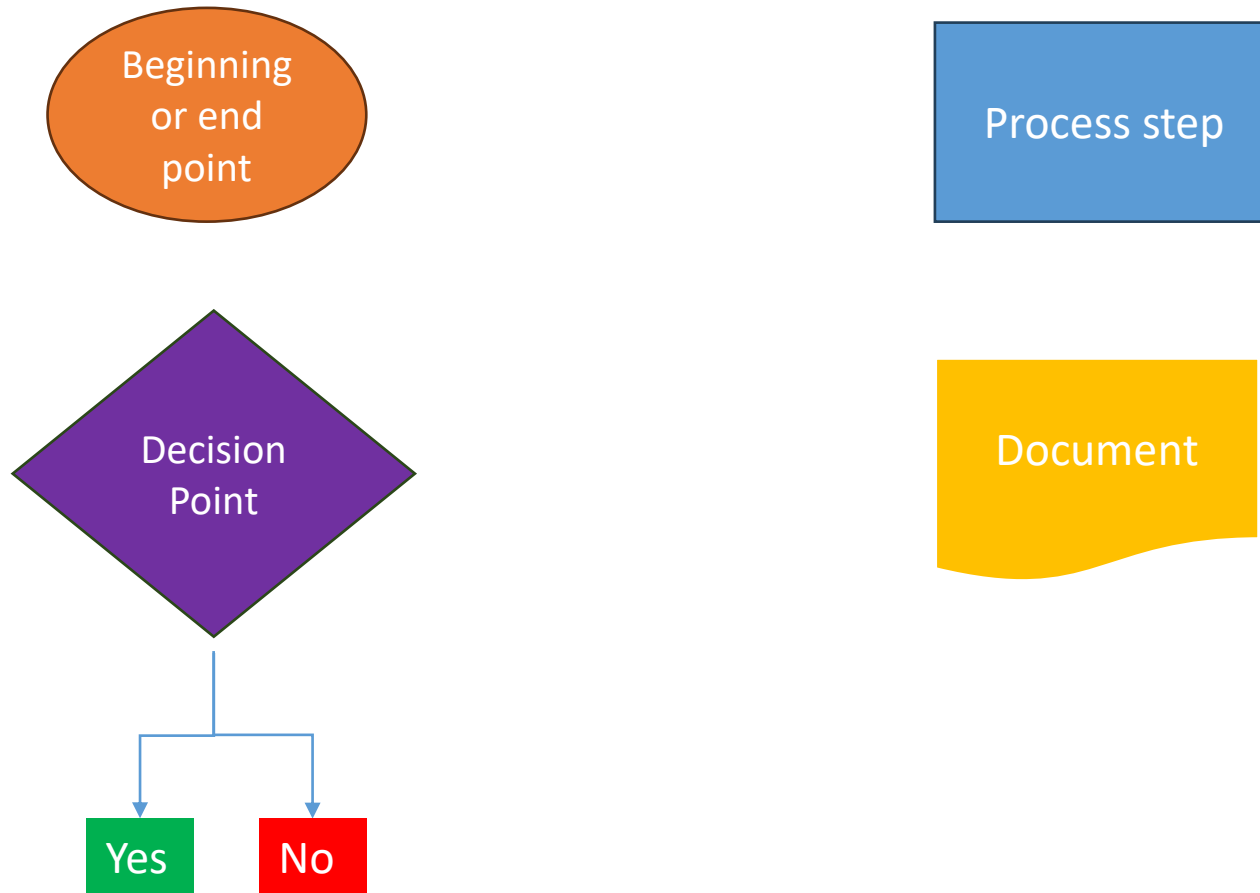
# Process Mapping

- Illustrates the current state of processes
- Highlights gaps or other issues
- Shows where the blockages are
- Re-map to design an efficient processes
- **Use:**
  - To look at systems - helps understand processes and links between services
- **How to:**
  - Identify your area for improvement, eg patient's journey, x-ray examination
  - Identify the steps
  - Map the process
- **Helpful to:** Understand the process and interactions, identify unnecessary steps and areas for redesign

# Example

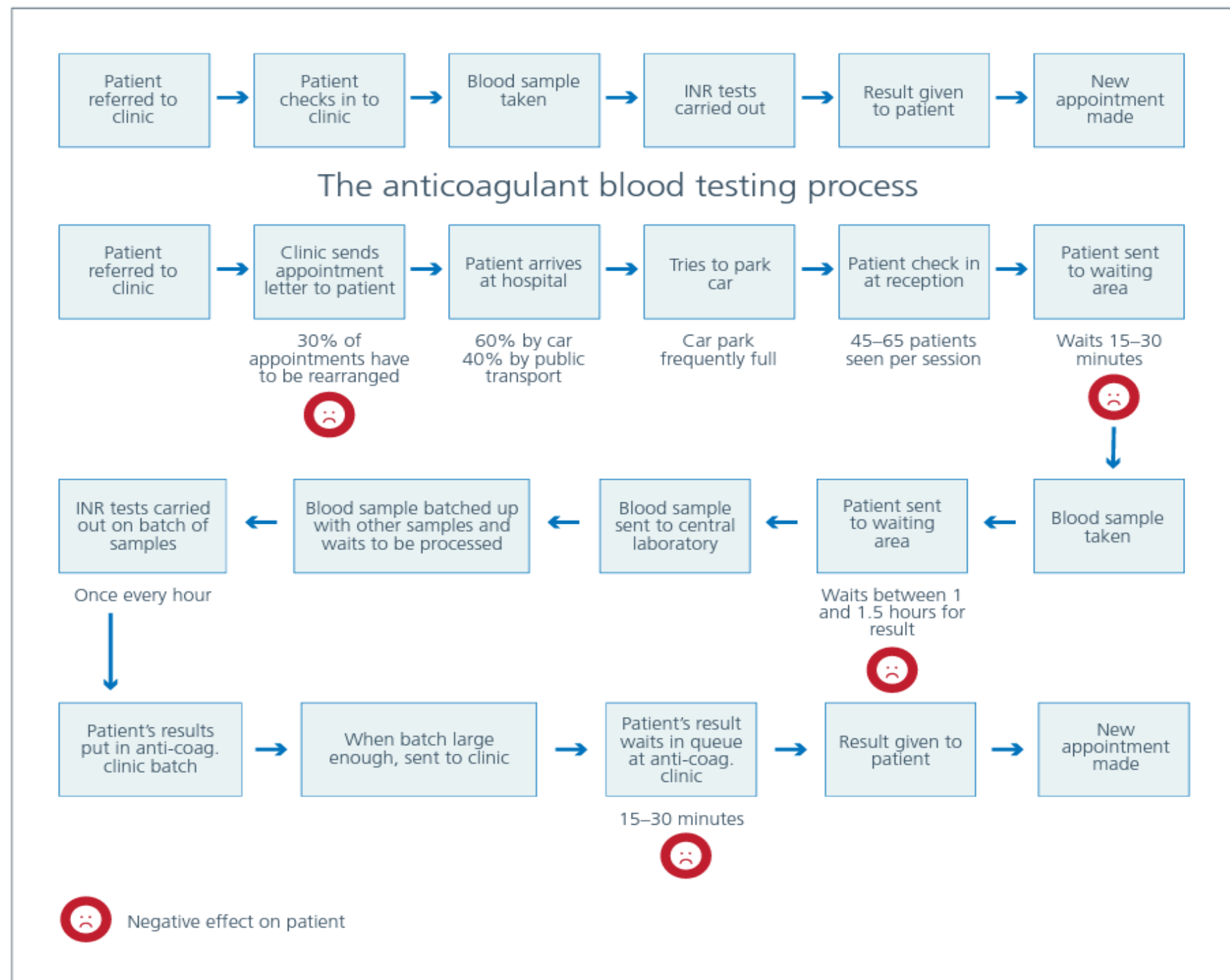


# Process Map Shapes



# Example of a process map with added detail

<https://www.england.nhs.uk/wp-content/uploads/2021/12/qsir-conventional-process-mapping.pdf>



# Why use this method?

## Benefits:

- Simple exercise that is easy to do
- Visual
- Uses a team approach in a complex process
- Low cost

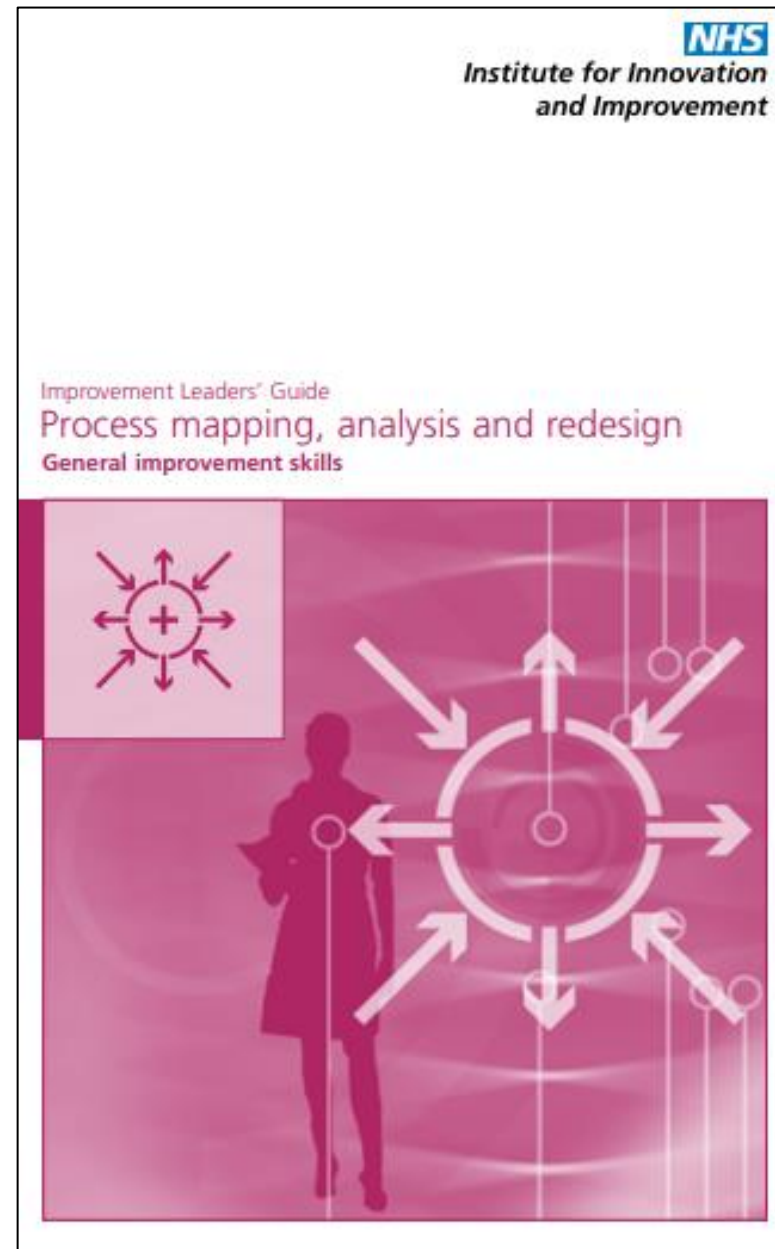
## What are the cons?

- Need space
- Need all team members involved
- Have to consider how to capture the information for future use

# Find out more

## NHS Guide to process mapping

<https://www.england.nhs.uk/improvement-hub/wp-content/uploads/sites/44/2017/11/ILG-1.2-Process-Mapping-Analysis-and-Redesign.pdf>



# Driver Diagrams

A driver diagram is a visual display of a team’s theory of what “drives,” or contributes to, the achievement of a project aim. This clear picture of a team’s shared view is a useful tool for communicating to a range of stakeholders where a team is testing and working.

A driver diagram shows the relationship between the overall aim of the project, the primary drivers (sometimes called “key drivers”) that contribute directly to achieving the aim, the secondary drivers that are components of the primary drivers, and specific change ideas to test for each secondary driver.

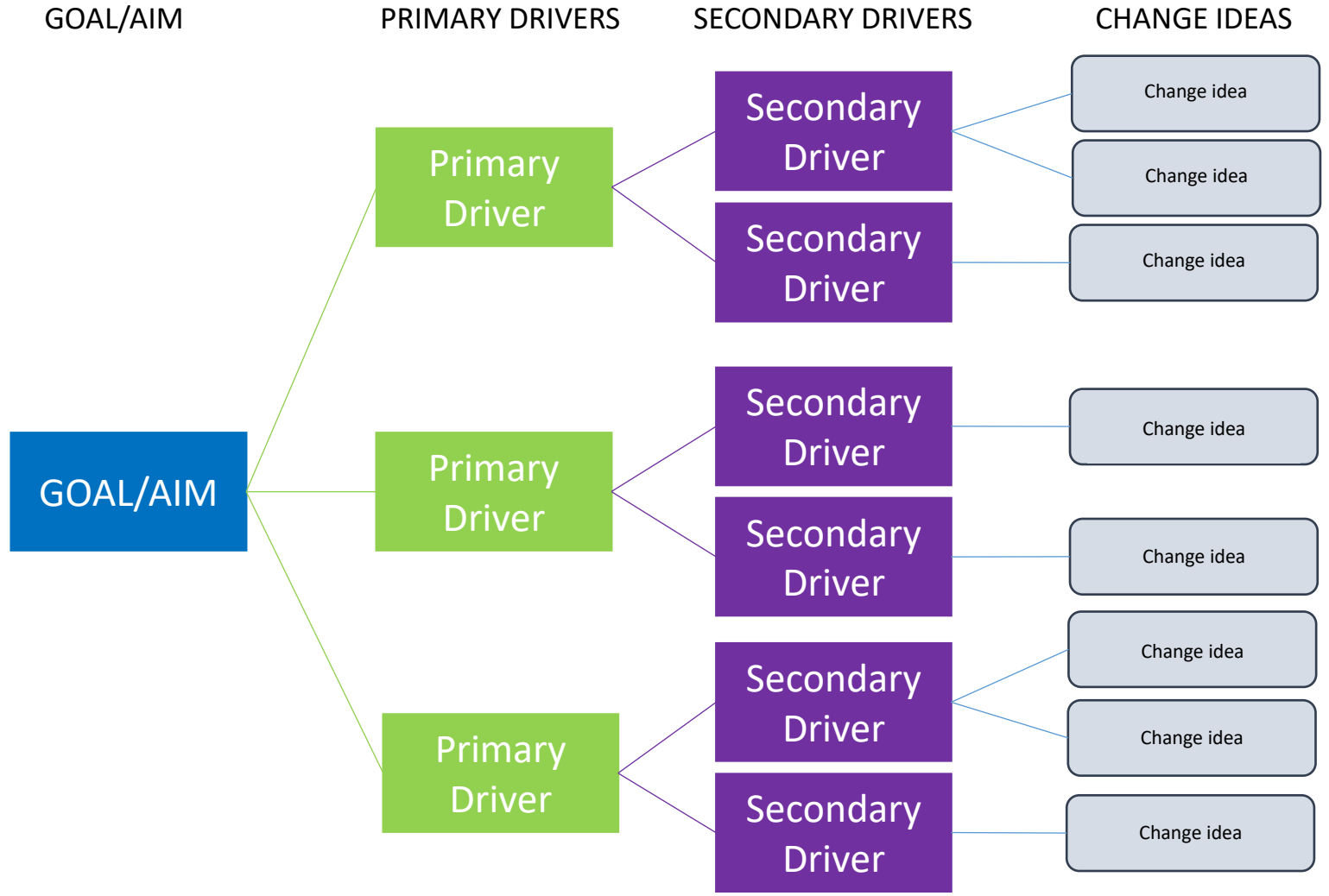
[Driver Diagram | IHI - Institute for Healthcare Improvement](#)



# Driver Diagram Definitions:

- A Driver Diagram (also know as ‘tree diagram’) is a planning tool that visualizes the hierarchy of tasks and subtasks needed to complete an objective. It is used to help plan improvement project activities. It is a visual display of the ‘theory of change’ and helps to organize theories and ideas when planning an improvement effort. A Driver Diagram is made up of:
  - **Goal/Aim:** what is the problem you are addressing or what are you trying to achieve.
  - **Primary Drivers:** aim to drive the improvement of the main goal, may include major processes, operating rules, or structures that will contribute to moving towards the aim
  - **Secondary Drivers:** elements or portions of the Primary Drivers. The secondary drivers are requirements that impact primary drivers, and therefore reach project aim.
  - **Change ideas:** Actionable ideas to test to meet or to action the Secondary Drivers.
    - Note: measures can be indicated on the DD as it becomes more mature.

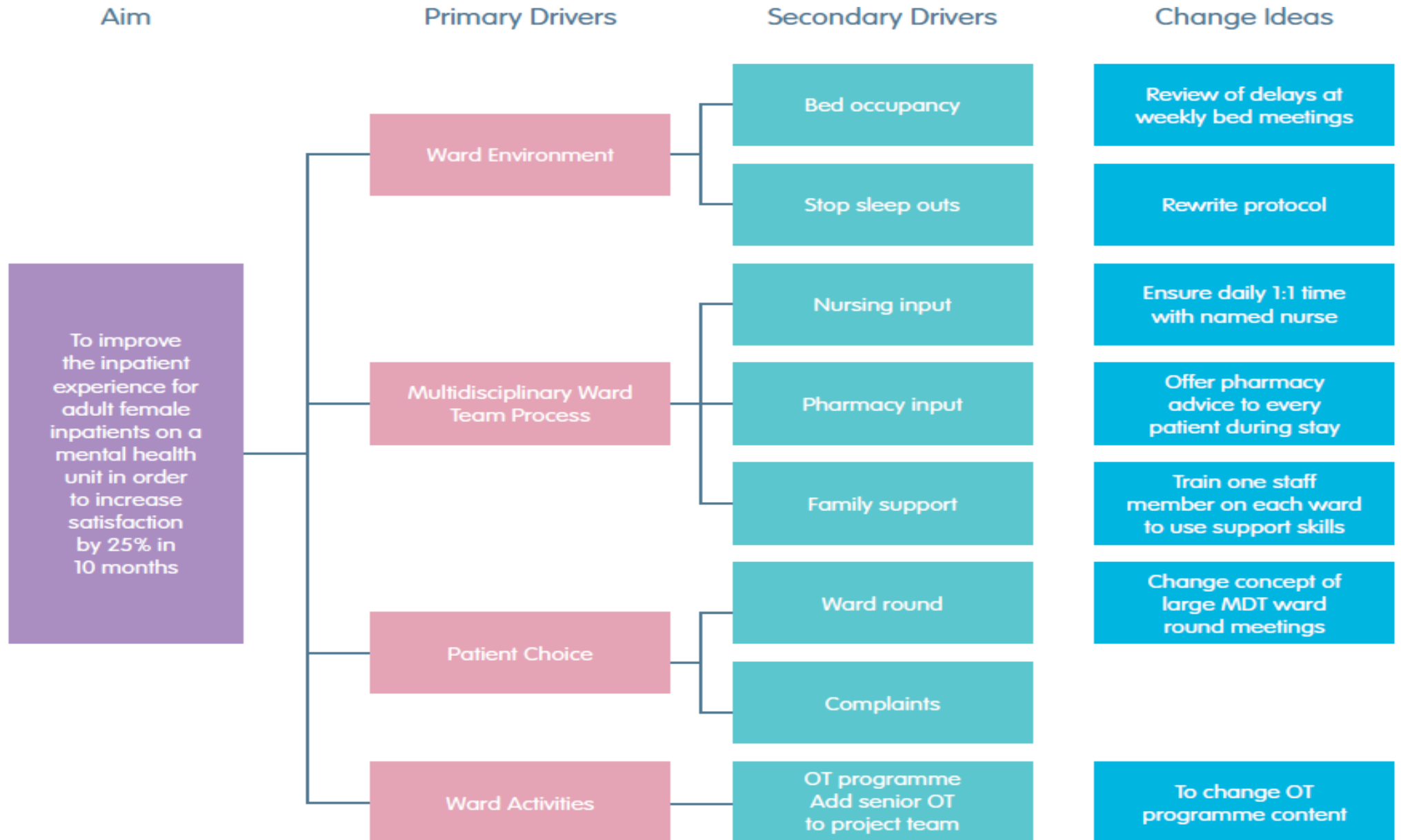
# Driver Diagram Template



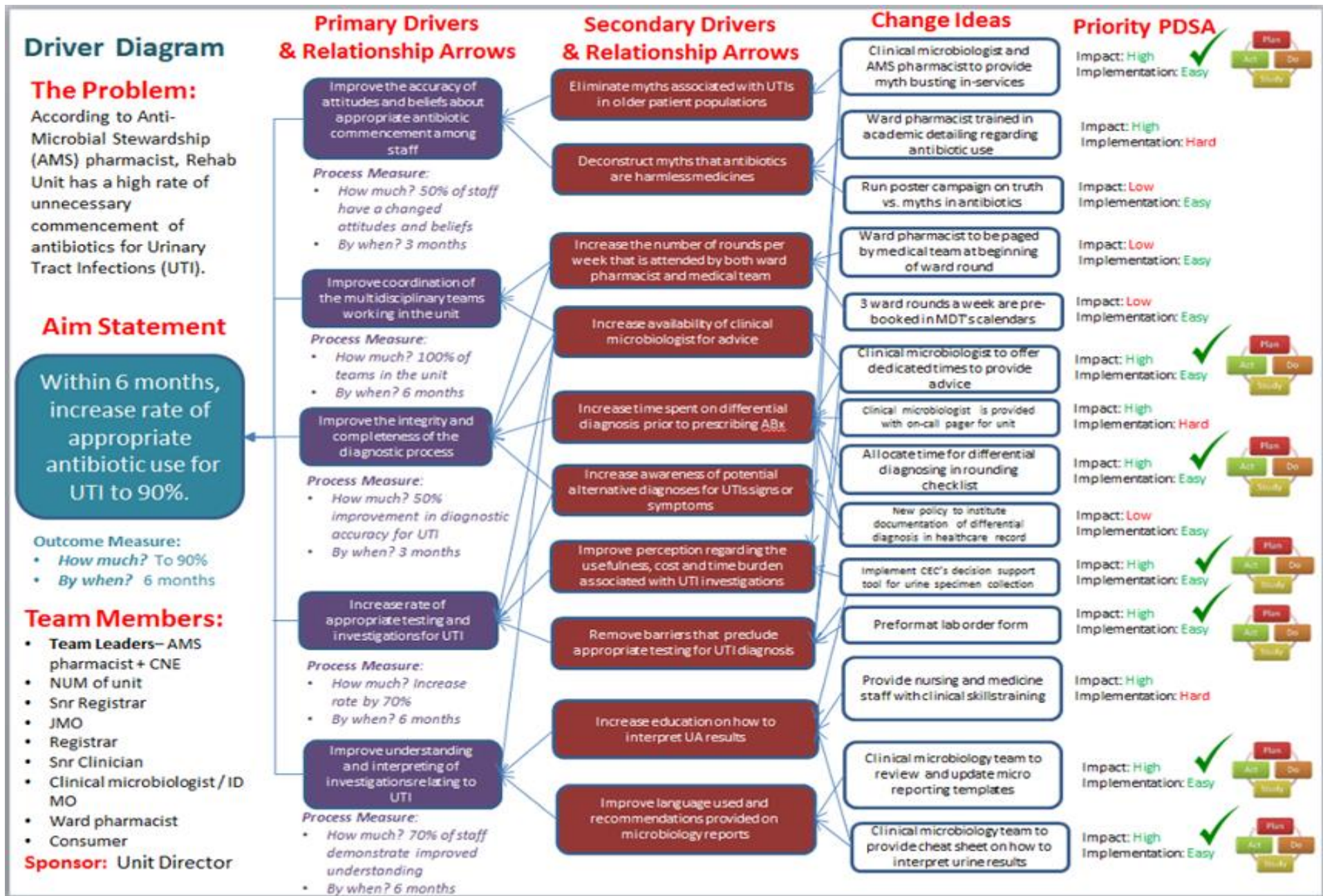
# Example of an affinity diagram



# Example of a completed Driver Diagram



Source  
[Driver diagrams - Clinical Excellence Commission \(nsw.gov.au\)](#)





# Why use this method?

- Simple to use – provides a clear insight on the relation of outcomes and interventions
- Provides understanding of cause effect relations
- Exemplifies the theory of change for projects and programs
- It is a good way to engage project's participants
- Provides local and adapted context to interventions

# What are the cons?

- As every qualitative tool is subject to variation in its use
- Need use to template to construct the driver diagram
- Could become too large and complicated

# Further reading

- <https://www.cec.health.nsw.gov.au/CEC-Academy/quality-improvement-tools/driver-diagrams>
- <https://qi.eft.nhs.uk/resource/driver-diagrams/>
- <https://www.england.nhs.uk/wp-content/uploads/2022/01/qsir-driver-diagrams.pdf>
- You Tube videos from NHS Improving Quality:
  - Driver Diagrams Lesson 1 of 3 – Introducing Driver Diagrams  
<https://www.youtube.com/watch?v=2mBpJlzzYI8>
  - Driver Diagrams Lesson 2 of 3 - Reasons to use driver diagrams  
<https://www.youtube.com/watch?v=xXRym4aFLa4>
  - Driver Diagrams Lesson 3 of 3 - How to develop a driver diagram  
<https://www.youtube.com/watch?v=BhY-rw9ejDk>



# Exercise

- Using the paper and Post-it Notes provided create a Driver Diagram for a **quality issue you want to work on in your organisation.**
- Or, use this scenario:
  - **A number of patients have complained about access to the facility stating that car parking and wheelchair access is not suitable**
- Your Driver Diagram should include:
  - Your aim statement
  - Primary Drivers
  - Secondary Drivers
  - Change ideas

# Feedback from Exercise

Was it clear which were primary drivers?

Which were secondary drivers?

Were you able to consider the drivers before leaping to change ideas?

Did you get stuck on 1 or 2 ideas?

Or were you able to generate many ideas?

# Implementing Change Ideas

# How to start

- Step 1: Decide on the process to improve
- Step 2: Form the team
- Step 3: Develop a 'SMART' aim statement eg,
  - ❖ All medication will be available 30 minutes before discharge on Ward 7 by 1/12/2
- Step 4: Carry out a literature review
- Step 5: Process map the current process
  - ❖ Include where to collect data
- Step 6: Brainstorm the problem to create drivers and change ideas
- Step 7: Draft a project plan and regularly review with the team

# Setting aims

- It is vital to set a clear and focused aim to *maintain* and *measure* progress
- The aim should:
  - Describe the system to be improved
  - Describe the population
  - Be measurable
  - Be realistic about resources and context
  - Be time specific



# Exercise: Set a SMART aim

Choose a quality improvement project that you want to start

Set the SMART aim:

- Specific                      What?
- Measurable                What data to measure?
- Attainable                 Don't be over-ambitious
- Relevant                     Where / for whom is this happening?
- Time-Bound                By when?

***If you don't have a current project, think about an aim to reduce medication errors***

# Project planning

## Benefits:

- Clarity for all team members
- Sets out what is to be done, by when and who is responsible
- Enables progress to be tracked
- Allows resources to be re-allocated as needed

## What can go wrong?

- Not reviewing in the plan - actions are missed
- Not updating the plan as things change
- Following the plan regardless of changing context

# A simple project plan template

Project Plan						
General Hospital			Project Name			
Project details:			Project Manager: Location/Department: Deliverable: Scope: Start Date: End Date:			
Activities / Tasks						
Number	Activity / Task Name	Resources Assigned	Start Date	End Date	Notes	Status



***The benefit is in the planning & monitoring – not just following the plan***



# A project plan in use

	Action by CQI evaluation team		Action by Others
	Action by Lewisham Team		Contingency action
<b>Status</b>			
In-progress, Completed, Overdue, Not started/ Omitted			

Week beginning	Activity	Who Lead/ Others	Status	Notes
25 July	1. Introductory meeting with Lewisham Care Partners	FK, DH, HC, DA, LC	Completed	
	2. Plan next round of meetings	DH	Completed	
01 August	3. Crisp QI Evaluation Team Meeting	HC, DA, LC	Completed	
	4. Briefing meeting with / [redacted] – Include who to interview	DH, AL, HC, DA, LC	Completed	
	5. Agree contract arrangements	Colin, HC	Not started	Colin may still be on holiday
	6. Discovery meeting with Frailty Project Team members – Include who they advise us to interview among wider stakeholders	DH, FK, HC, DA, LC		
	7. LCP to send any supporting documentation, forms, questionnaires being used etc to CQI team	DH	In-progress	
	8. Team to review documentation	DA, LC, HC	In-progress	Have not received all on list
	9. Work up schedule of qualitative interviews: Team availability, agree with LCP which stakeholders to interview  Draft email to stakeholders	HC	In-progress	Check – has 2 <sup>nd</sup> Nurse started?
08 August	10. Develop Theory of Change	HC, LC, DA	Overdue	Need info from TLPCN

# The IHI Model for Improvement

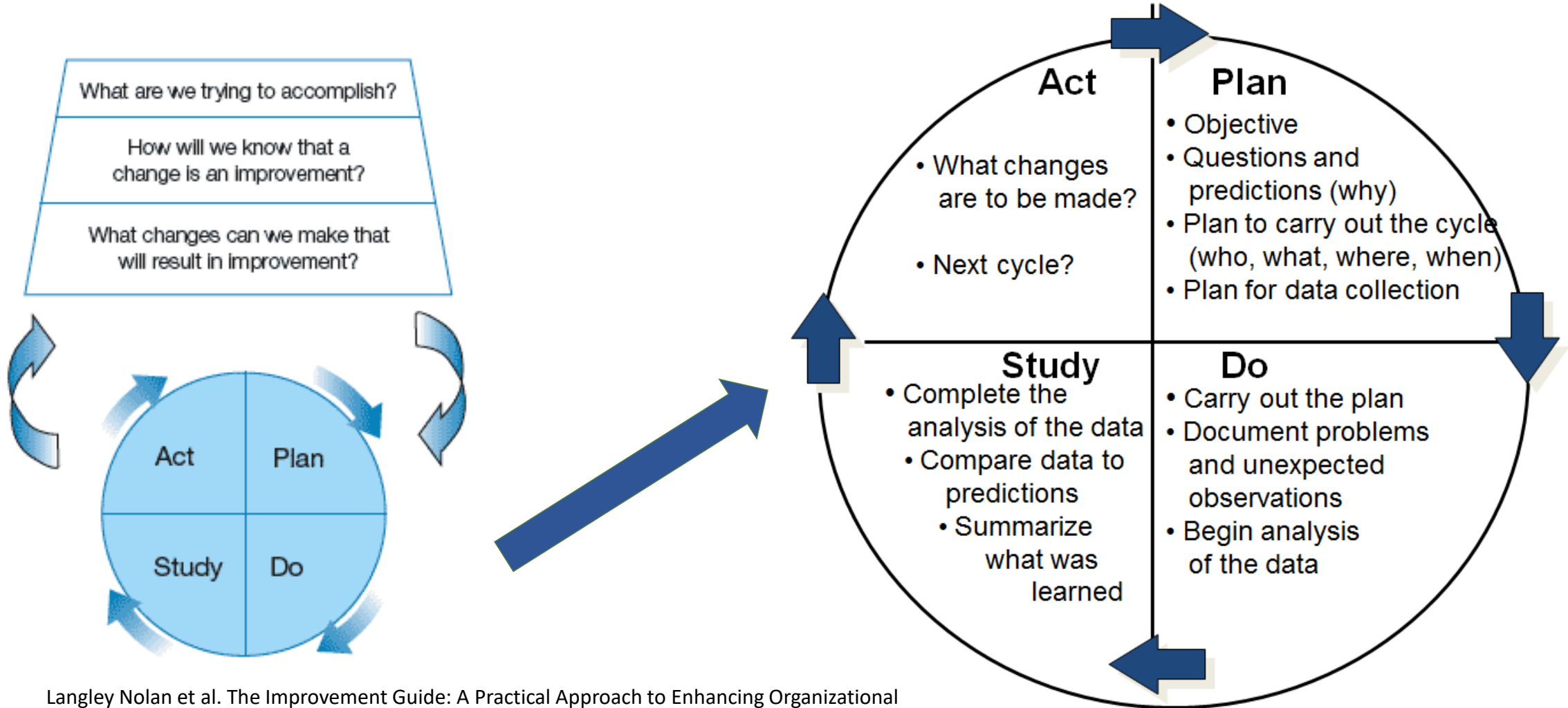
- Core approach used for small scale improvement
- At its heart is the PDSA cycle
- Use the PDSA cycle to make small tests of change

## Model for Improvement

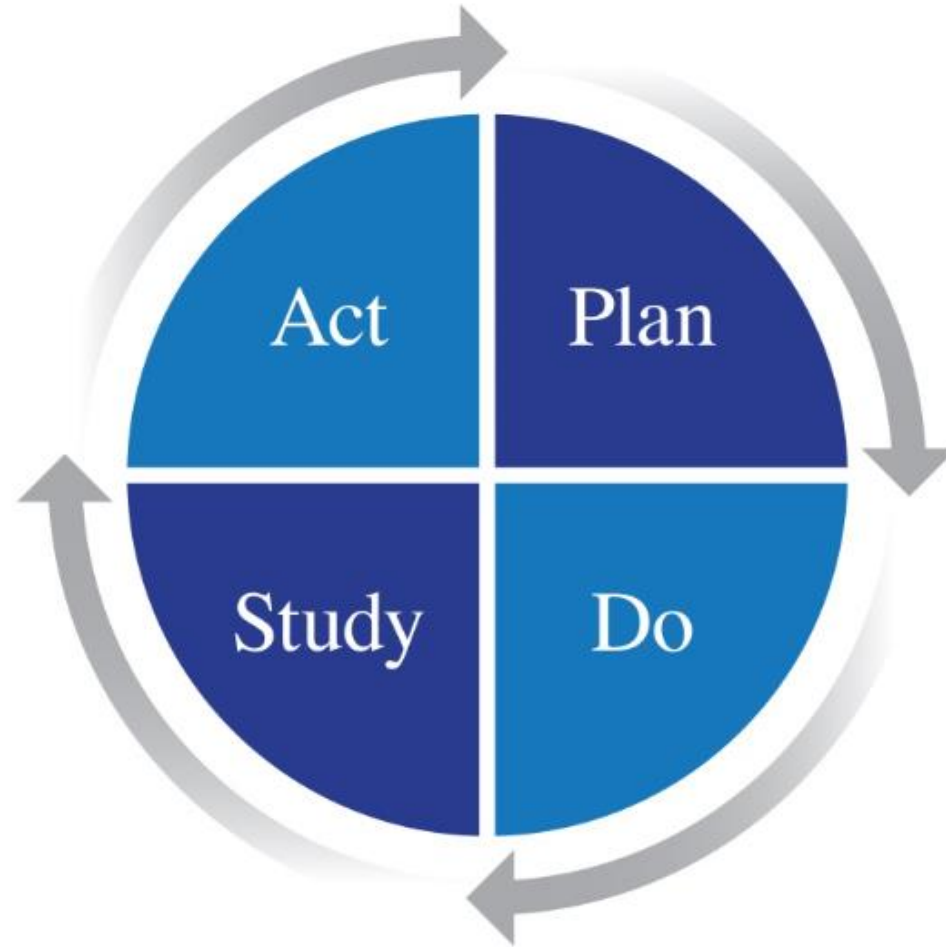


The core QI approach used at project level:

# The model for Improvement & PDSA Cycles



# The deceptive simplicity of the PDSA Cycle



# PDSA: Simple in theory – difficult in practice



Hard to get people together for the  
'Plan' stage



Used retrospectively, rather than with  
fidelity in real time



Attempts to tackle process improvement  
reveal more complex organisational  
issues



No measurement of how the new  
system works

# The missing 'S' step

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PDSAs are often carried out with too little attention to the 'Study' stage

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Data for measures are not recorded or not available

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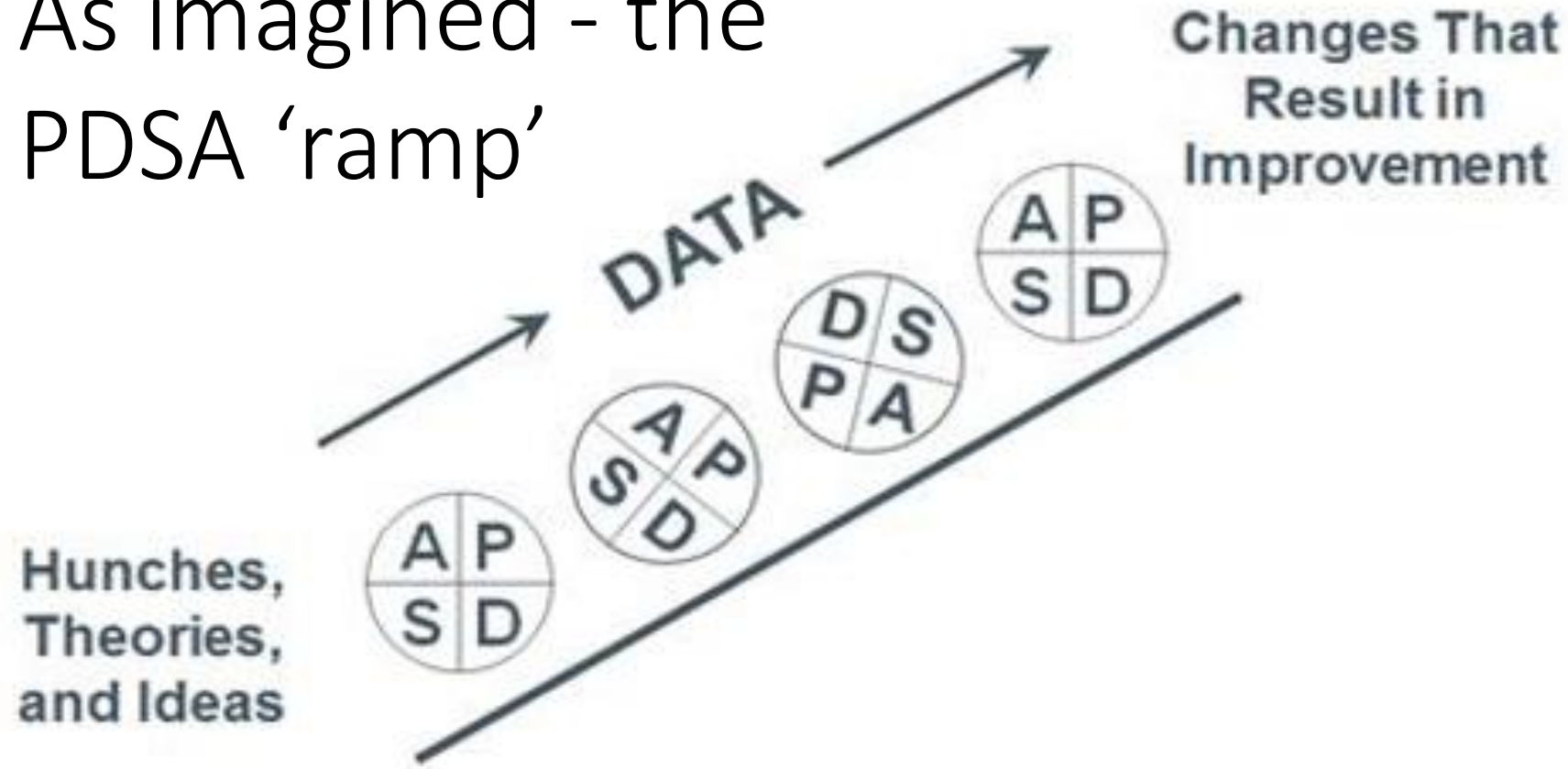
'PDSA –Light' some 'planning and doing' but no consistent 'study' or response to data studied in future 'act' steps

---

Documentation see as quality assurance, rather than integral to the method

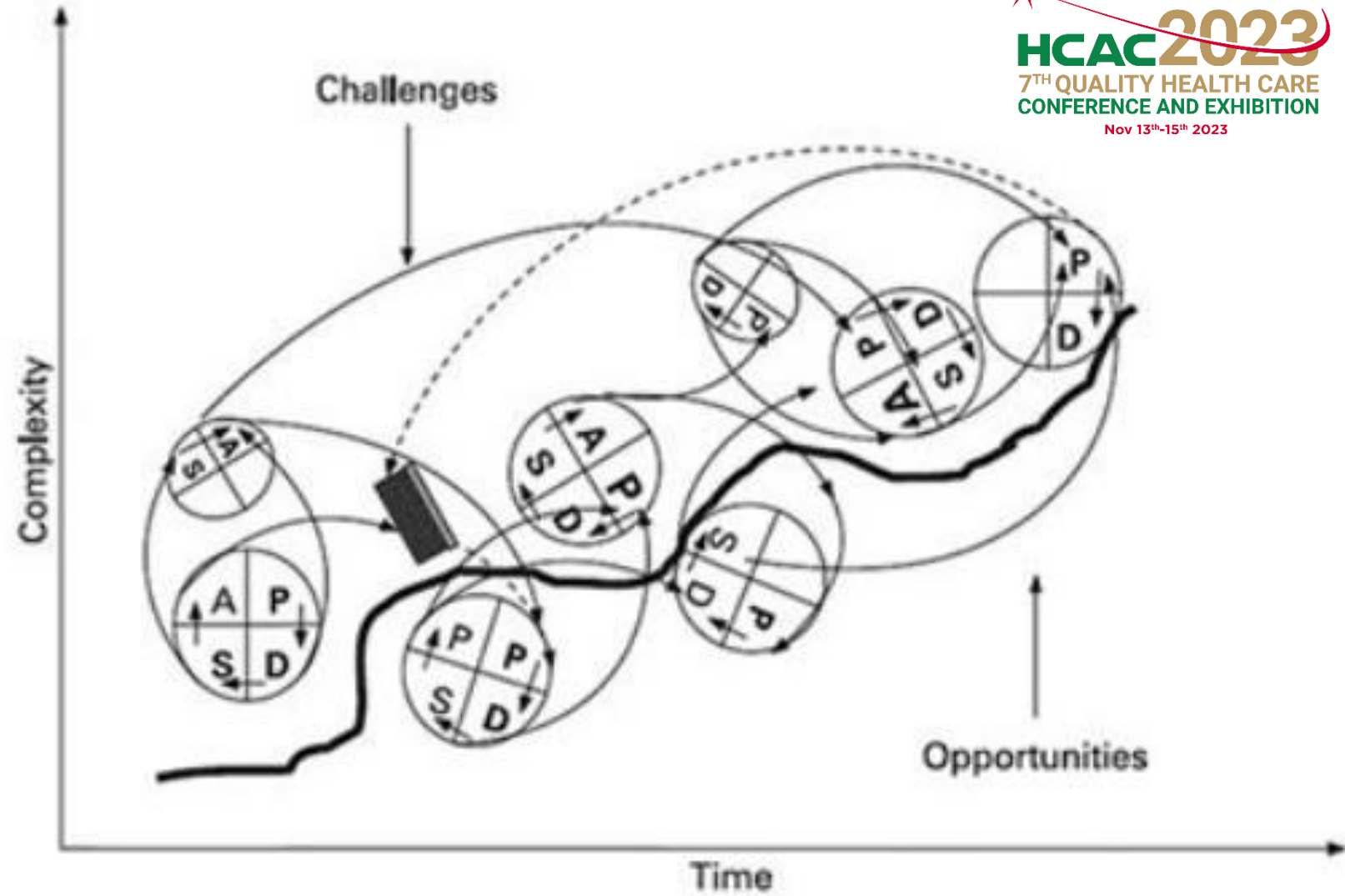






# As imagined - the PDSA 'ramp'



Langley, G., Moen, R., Nolan, K., Norman, C., & Provost, L. (2009). *The improvement guide: A practical approach to enhancing organizational performance* (2nd ed., p.103). San Francisco, CA: Jossey-Bass.

# The reality: PDSA in practice



P = Plan	D = Do	 = Barrier	 = Direct flow of impact
S = Study	A = Act	 = Lingering background impact	 = Feedback or feedback loops
Different sizes of letters and cycles and bold letters = denotes differences in importance/impact			

Find out more:

BMJ Quality & Safety  
Dec 2015

<https://qualitysafety.bmj.com/content/25/3/147>



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THE PROBLEM WITH...

## The problem with Plan-Do-Study-Act cycles

Julie E Reed,<sup>1</sup> Alan J Card<sup>2,3</sup>

### 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,<sup>1</sup> lean,<sup>2</sup> six sigma<sup>3</sup> and total quality management.<sup>4</sup>

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,<sup>5</sup> the complexity of its use in practice<sup>5,6</sup> and as to the appropriateness of the PDSA method to address the significant challenges of healthcare improvement.<sup>7</sup>

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

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 adaptation 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,

# When it's not PDSA

- Descriptor 'PDSA' often used when in reality a phased improvement plan is put into place:
  - **'PDSA 1' Design a new system for care assessments**
  - **'PDSA 2' Train staff on the system**
  - **'PDSA 3' Audit the completed assessments and care plans**
- Each phase is described but there is no link between what was learned in the last test of change and the next test

Find out more:

BMJ Quality & Safety  
October 2018

[https://qualitysafety.bmj.com  
content/28/5/356](https://qualitysafety.bmj.com/content/28/5/356)



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

Chris McNicholas,<sup>1,2</sup> Laura Lennox,<sup>1</sup> Thomas Woodcock,<sup>1</sup> Derek Bell,<sup>1</sup> Julie E Reed<sup>1</sup>

► 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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### 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

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.<sup>1,2</sup>

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<sup>3</sup> and barriers are encountered in its use.<sup>4–6</sup> 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).<sup>3</sup> Measuring fidelity of the PDSA cycles demonstrates whether the method has been used as intended, which in turn can inform assess-

# Measurement

Is your change resulting in  
improvement?



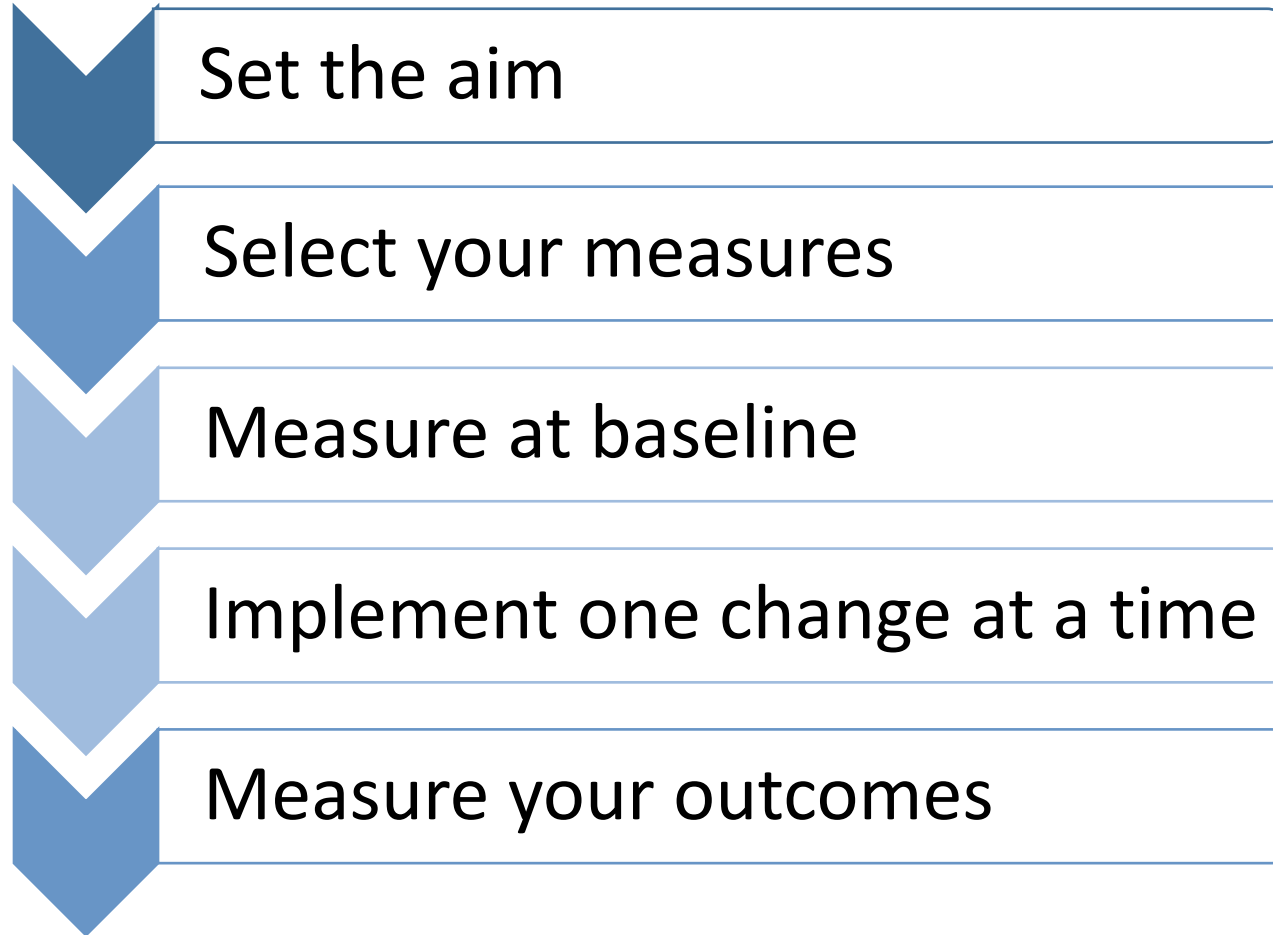
# Importance of measurement

- Vital to demonstrate ‘success’
  - Especially baseline data
- Many improvement interventions don’t consider measures early enough
- Measurement not executed effectively:
  - Problems with data definitions
  - Problems with data collection
  - Lack of analytic capacity





# Improvement Journey



# Measurement: types of data

## Qualitative

- Words
- e.g. interviews; focus groups
- Exploratory: how & why?
- What matters to people?  
What are their experiences?
- Used independently or with quantitative data
- Look for themes

## Quantitative

- Numbers -> charts, tables, statistics
- e.g. surveys; routine data
- Hypothesis testing: Does x improve when we change y?
- Degree of confidence
- How big is the change?

# Pros and cons

## Qualitative

- + Opportunities to clarify, ask follow-up questions
- + Depth and detail. Responders' own words can be powerful
- *Time consuming*
- *Difficult to reach a representative sample*

## Quantitative

- + Statistical tests
- + More responders
- + Easier to generalise findings
- *Takes time to design and test measurement tools*
- *No opportunity to clarify*

# Charting quantitative data

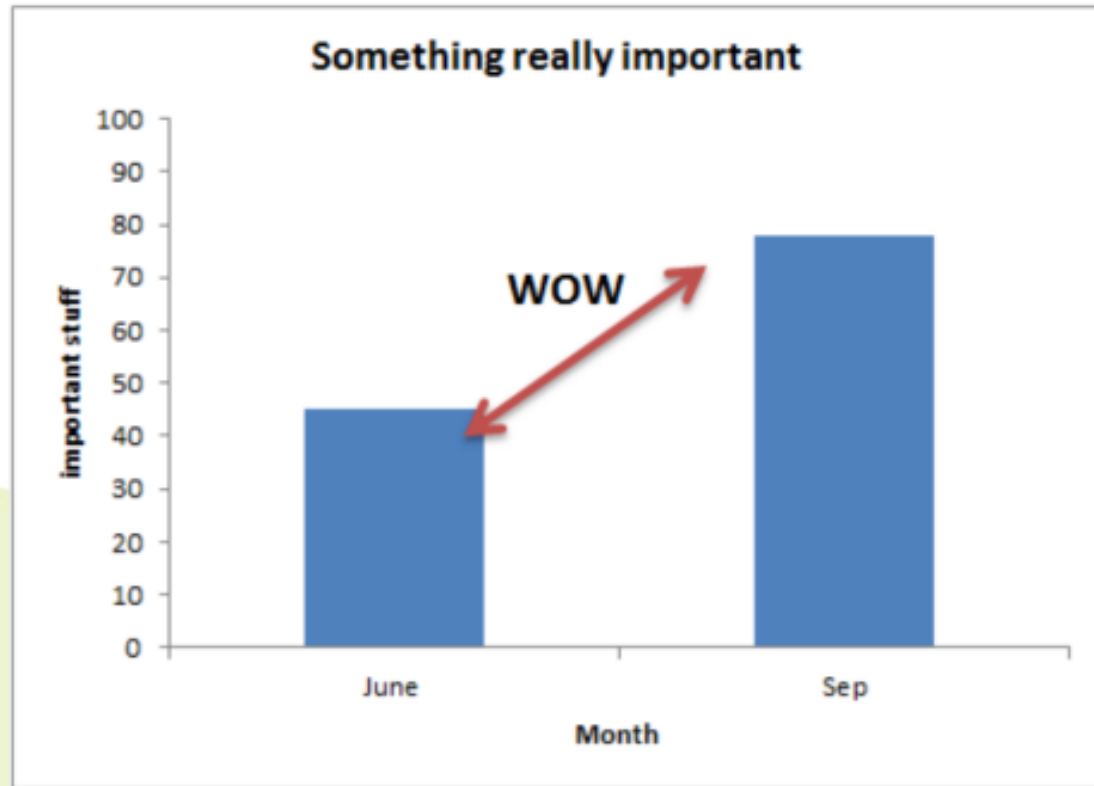
A recommended tool to present quantitative measures over of time is the Statistical Process Control (SPC) chart

- SPC charts enable the measurement of the impact of a change
- SPC charts should be used to provide a baseline measure
- Comparing the measure over the period a change is introduced to the baseline will help to assess if change is sustainable



# Data over time and variation

In an improvement project, we're interested in change over time. So, we must display our data over time.

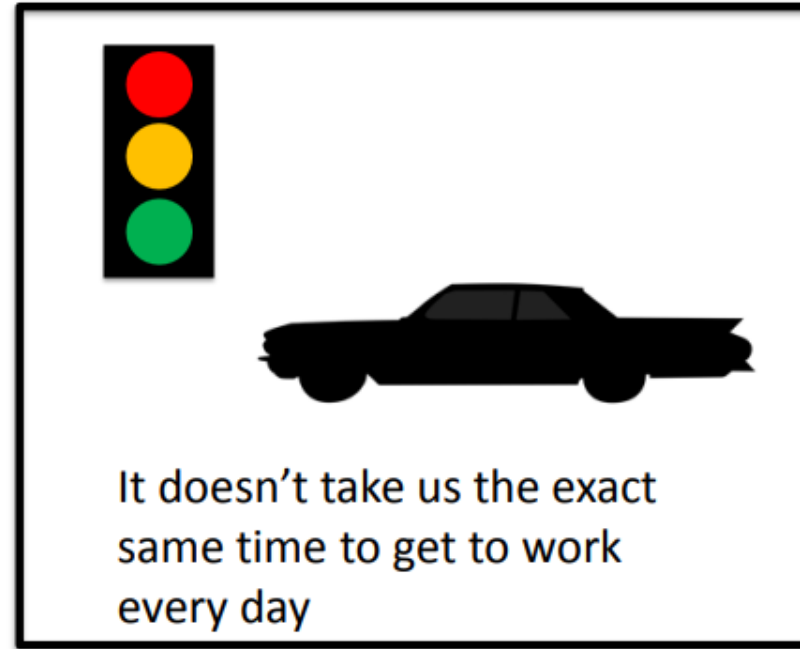


Before and after analysis like this isn't sufficient.

We need more granular detail.

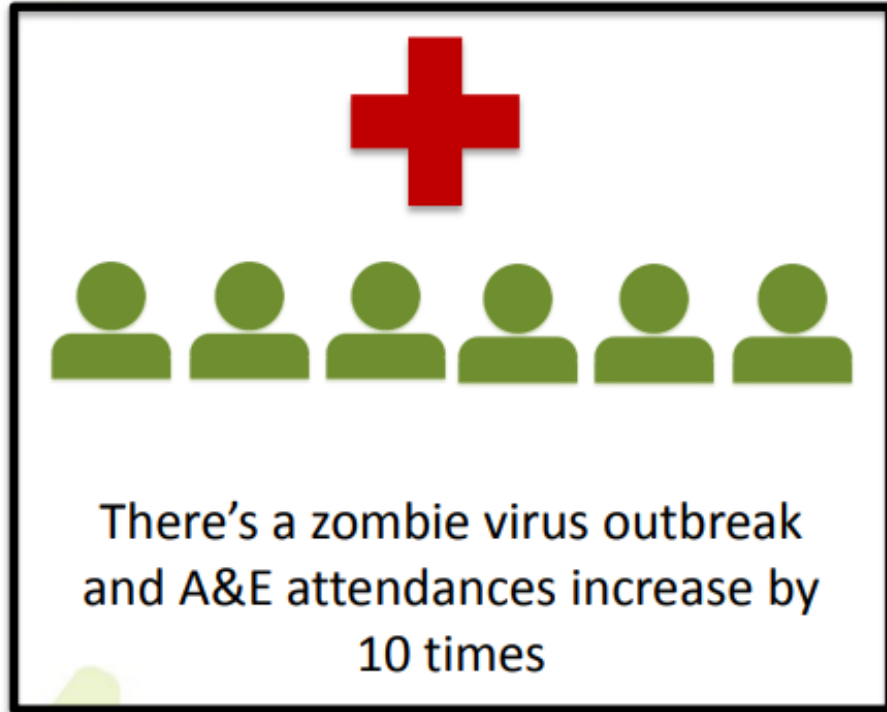
Comparing 2 numbers, one is always likely to be higher or lower than the other. **This doesn't always mean the project has led to improvement**

# Understanding variation



We would expect some up and down movement (variation) in the data. This is the normal, natural variation inherent within the process.

# Special cause variation – what if



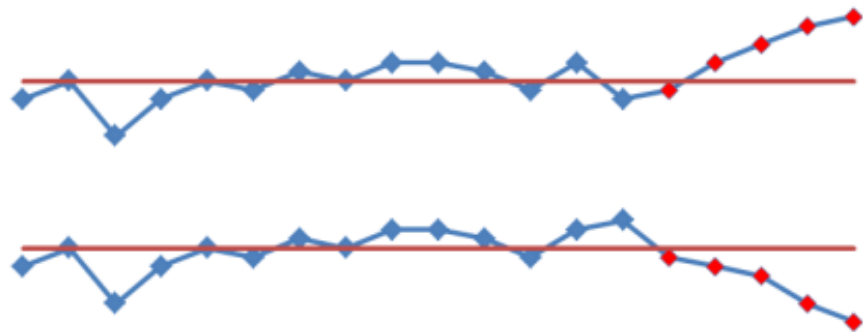
The variation is caused by something external, not normally part of the process

# Monitoring variation

Has the improvement project resulted in **change**?

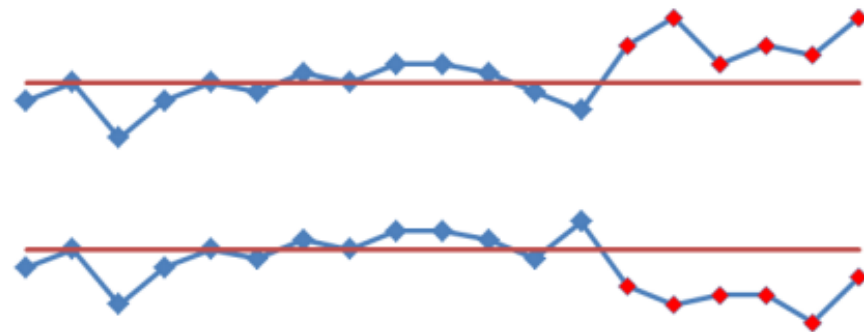
It is essential to monitor the measures data for variation to know this

Trend – 5+ points increasing or decreasing



AQuA  
Advancing Quality Alliance

Shift – 6+ points in a row above or below the median



AQuA  
Advancing Quality Alliance

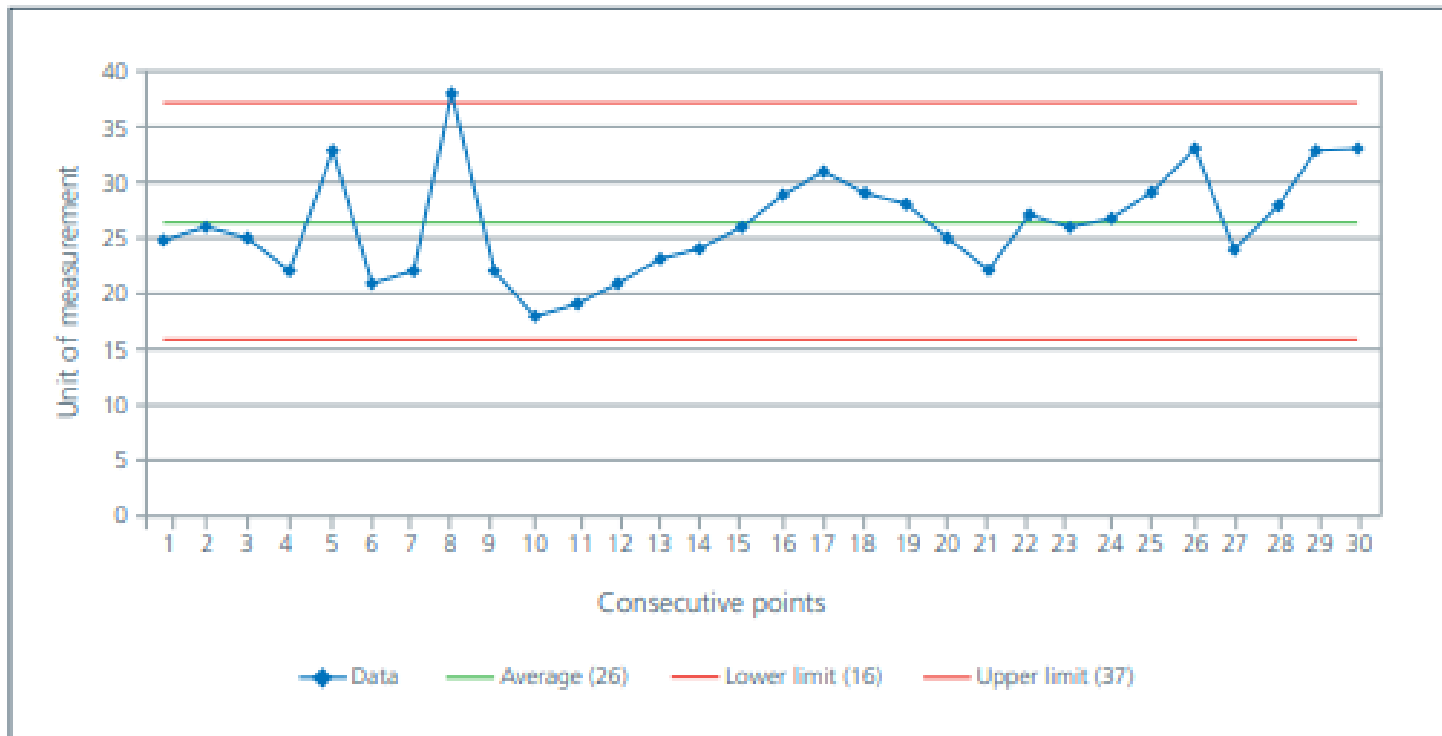
Patterns that indicate likely special cause



# Statistical Process Control (SPC) charts

The plotted data points alone would be a run chart – showing how the value measured has changed over a period of time

The refinement of the SPC chart is to add the horizontal lines related to statistical analysis of the data



Upper control limit (red line)

The mean value for the data points (green line)

The lower control limit (red line)

# SPC Analysis

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The analysis of the SPC chart tells us about the variation for the measure studied

---

Is it 'special cause variation'?

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Or, is it merely 'natural variation', which any system will display?


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SPC charts test if improvement work is having the desired impact

# Find out more

BMJ Quality & Safety open access


<https://qualitysafety.bmj.com/content/30/2/106>



Online library of Quality, Service Improvement and Redesign tools

## Statistical process control

NHS England and NHS Improvement



<https://www.england.nhs.uk/wp-content/uploads/2022/02/qsir-statistical-process-control.pdf>

## ORIGINAL RESEARCH



OPEN ACCESS

## A mixed-methods study of challenges experienced by clinical teams in measuring improvement

Thomas Woodcock,<sup>1</sup> Elisa G Liberati,<sup>2</sup> Mary Dixon-Woods<sup>2</sup>

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### ABSTRACT

**Objective** Measurement is an indispensable element of most quality improvement (QI) projects, but it is undertaken to variable standards. We aimed to characterise challenges faced by clinical teams in undertaking measurement in the context of a safety QI programme that encouraged local selection of measures.

**Methods** Drawing on an independent evaluation of a multisite improvement programme (Safer Clinical Systems), we combined a qualitative study of participating teams' experiences and perceptions of measurement with expert review of measurement plans and analysis of data collected for the programme. Multidisciplinary teams of frontline clinicians at nine UK NHS sites took part across the two phases of the programme between 2011 and 2016.

**Results** Developing and implementing a measurement plan against which to assess their improvement goals was an arduous task for participating sites. The operational definitions of the measures that they selected were often imprecise or missed important details. Some measures used by the teams were not logically linked to the improvement actions they implemented. Regardless of the specific type of data used (routinely collected or selected ex novo), the burdensome nature of data collection was underestimated. Problems also emerged in identifying and using suitable analytical approaches.

**Conclusion** Measurement is a highly technical task

data or insufficient data points; insufficient baseline periods; poorly chosen, unclear or changing sampling strategies; poorly annotated data; failure to verify data entry; and poorly chosen or executed analytic strategies.<sup>7,8</sup> Benn and colleagues<sup>9</sup> found many of these problems when teams sought to implement data collection and analysis systems in local settings as part of a large-scale quality improvement programme. Similarly, a study of a national system for surveillance of healthcare-associated infections<sup>10</sup> found variability in how well intensive care units designed their data collection systems and in how they interpreted data.

Failure to produce reliable data about improvement and to interpret it correctly is an important challenge for quality improvement, limiting the inferences that can be made about the success or otherwise of improvement interventions, as well as eroding confidence in the evidence base for improvement.<sup>11</sup>

# The trouble with projects

- ‘Apart’ from day-to-day work of the service
- Time limited – the ‘evaporation effect’
- Staff can ignore it “Nothing to do with me”
- May promise too much - leading to disillusionment
- Project teams – on to the next thing



# Getting the best from a project

- Use the project to focus to get something done that might otherwise not happen
- Use your measurement results to make a business case for continuation:
  - Improved process
  - Cost saving
  - Greater user satisfaction quality
- Plan for integration from the outset
- Get the bureaucracy in place:
  - Protocols
  - revised job descriptions
  - Referral route etc
- Don't promise quick results

# Demonstrate progress with data and monitoring

Can be very challenging:

- Central data not available for local monitoring purposes
- Incomplete data
- Manual collection too time consuming
- No expertise on the team to analyse data



# Demonstrate progress with data and monitoring

Can be very challenging:

- Central data not available for local monitoring purposes
- Incomplete data
- Manual collection too time consuming
- No expertise on the team to analyse data
- Find out how existing data systems can be used
- Be clear why data are needed & long term patient benefit
- Training for staff and don't skimp on administrative support
- Get expert help early to design the measures and to plan data analysis

# The trouble with tools and models

*“There is tendency to simplify complex problems to fit models and diagrams  
-And then we aim to solve the simplified version”*

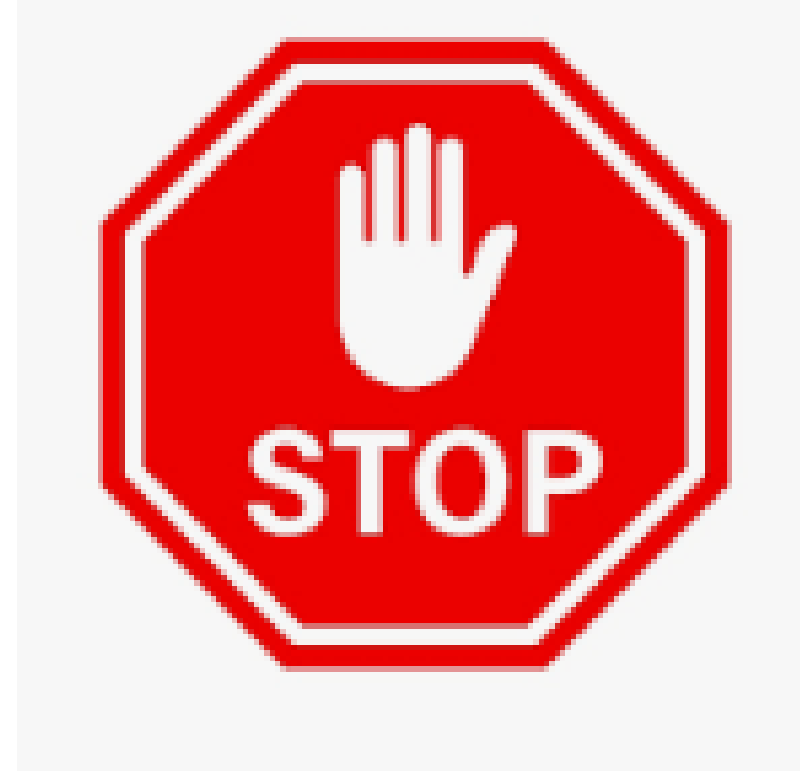
Professor Michael Batty,  
University College London, 2001



# Stopping a project

Not every project achieves desired results

- Monitor against your plan
- Assess the risks
- Review the resources
- Team decision



***People are often reluctant to stop – be bold!***

# Q & A



Questions and Reflections



THANK YOU



# Rating the workshop



Use your 'dot votes' as you leave:

- How the workshop has met expectations?
- The extent to which you have gained new information?
- How likely to put into practice?