

USING QI METHODOLOGY TO IMPROVE PATIENT OUTCOMES

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Aims and Objectives



Identification of a quality improvement aim within veterinary practice



Consideration of quality improvement methodology and the most appropriate framework for the identified improvement



Discussion of stakeholder impact and identification of improved outcomes



Justification for the planned approach to implement the improvement ideas including effective communication and engagement



Consideration of success and long term improvement, as well as awareness of future and ongoing improvements

Confidentiality will be maintained throughout this presentation

What is Quality Improvement?

'the combined and unceasing efforts of everyone...to make the changes that will lead to better patient outcomes (health), better system performance (care) and better professional development (learning)'

(Batalden & Davidoff, 2007)

- The NHS is 'organising itself around a single definition of quality' (National Quality Board, 2016).

- Keys aims:

- Care that is safe

- Care that is effective

- Care that provides a positive patient-centred experience

(Jones et al., 2021)

- There is recognition from the CQC: trusts that have undertaken QI are more likely to achieve the outstanding rating (Jones et al., 2019).

Alderwick et al. (2017) suggest ten focus areas for effective QI:

- Make quality improvement a leadership priority for boards.
- Share responsibility for quality improvement with leaders at all levels.
- Don't look for magic bullets or quick fixes.
- Develop the skills and capabilities for improvement.
- **Have a consistent and coherent approach to quality improvement.**
- **Use data effectively.**
- Focus on relationships and culture.
- Enable and support frontline staff to engage in quality improvement.
- Involve patients, service users and carers.
- Work as a system.

How to improve quality?

Focusing on points 5 & 6...

Early warning scoring systems can help to identify patients who are deteriorating at the earliest possible opportunity and implement the most appropriate care (RCP, 2017).



The RCP (2017) believes that the National Early Warning System (NEWS) will improve:

The assessment of acute illness severity

The detection of clinical deterioration

The initiation of a timely and competent clinical response



Although recommendations have been made in the veterinary sector (Brodbelt et al., 2008), no such system yet exists, and there is limited literature as to whether this type of approach would be beneficial (Ballantyne, 2018).

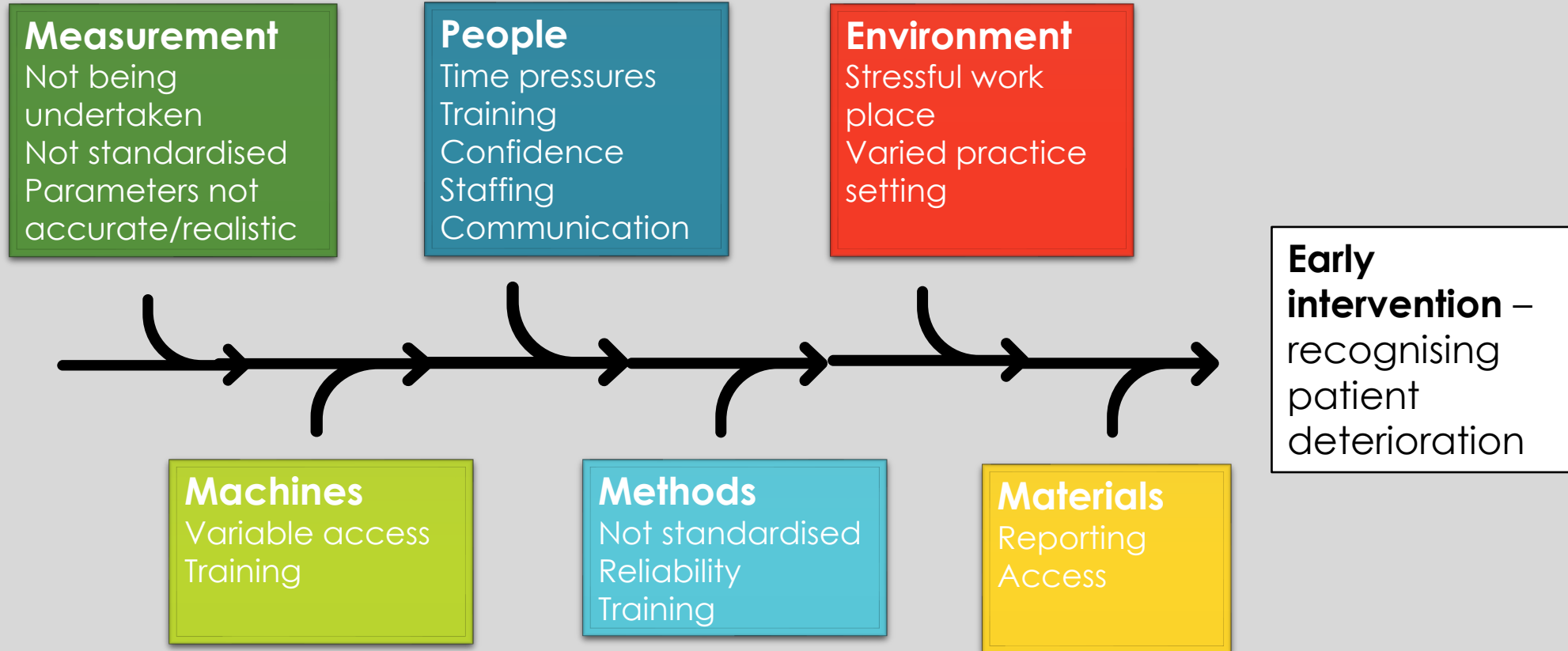


NEWS has provided a 'common language', which is spreading across the healthcare sector (Williams, 2022). It can help to identify patients most at risk and be a valuable tool (Maciver, 2021).

Rationale

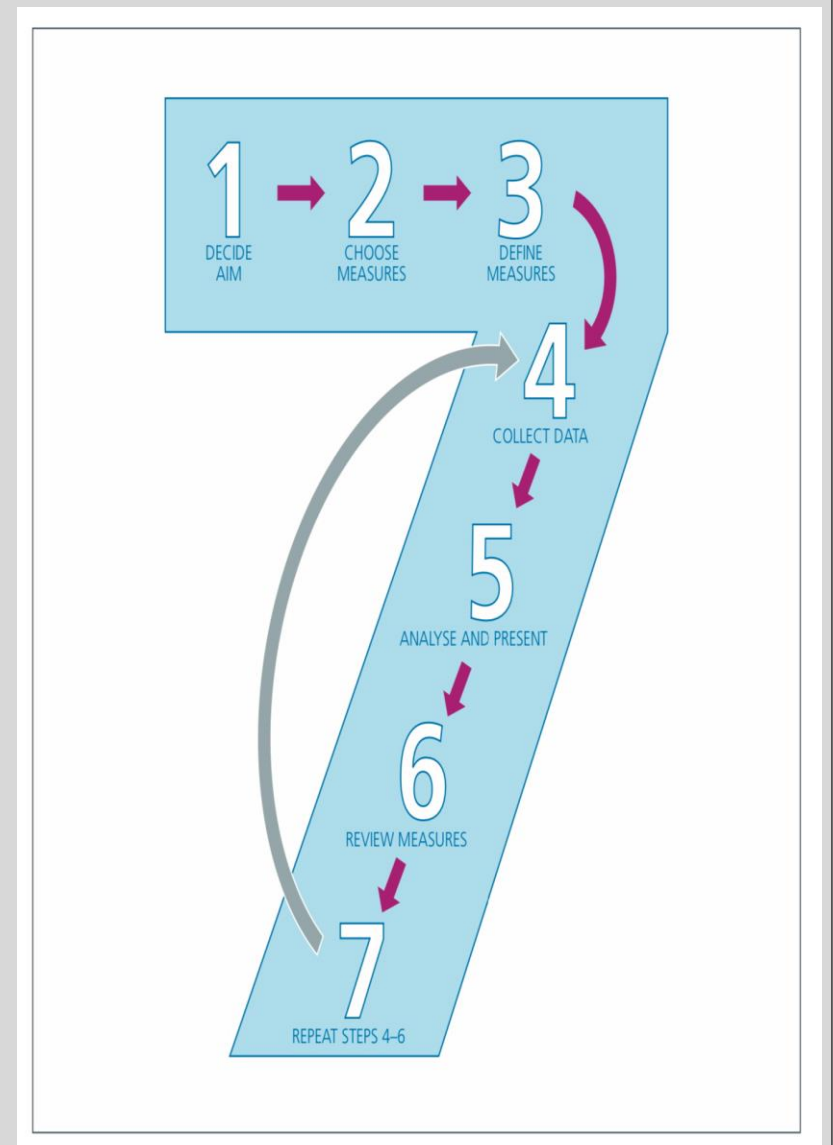


Cause and effect (NHS England and NHS Improvement, n.d.)



The Seven Steps Framework

- Healthcare specific improvement framework
 1. Patient focused SMART aims
 2. Identify measures
 3. Plan measurement activities
 4. Data generation
 5. Data analysis
 6. Data review
 7. Repeat with continuing improvements
 - Enhanced PDSA process



NHS England and NHS
Improvement (n.d.)

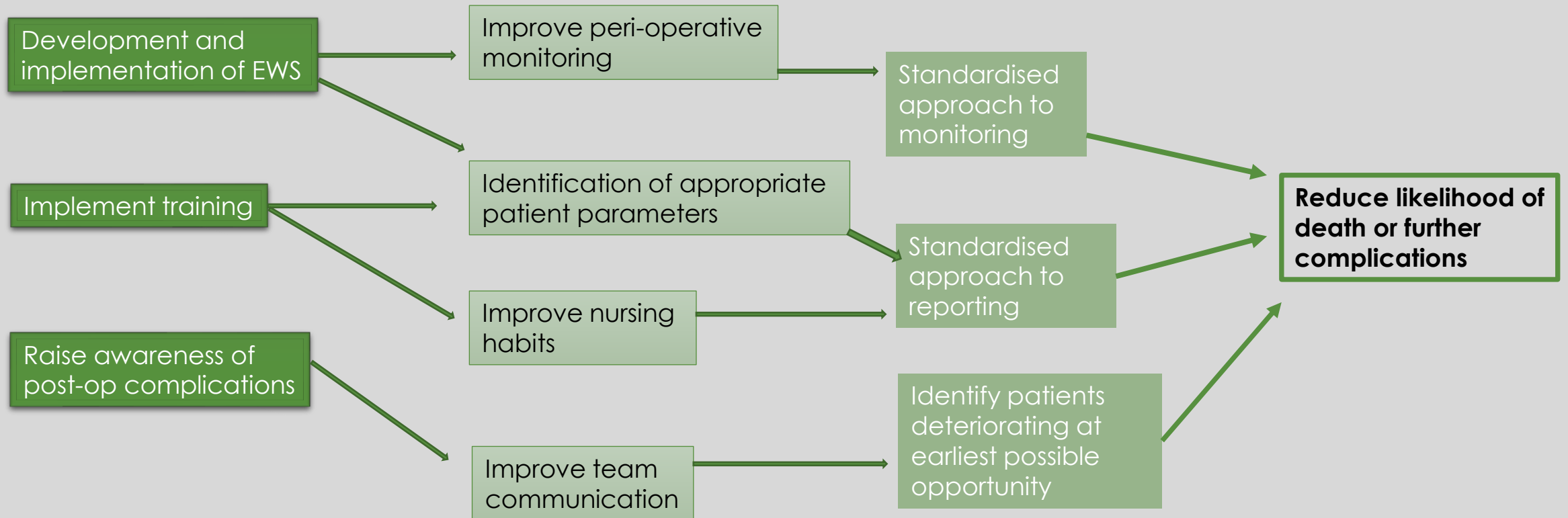
1. SMART Aim

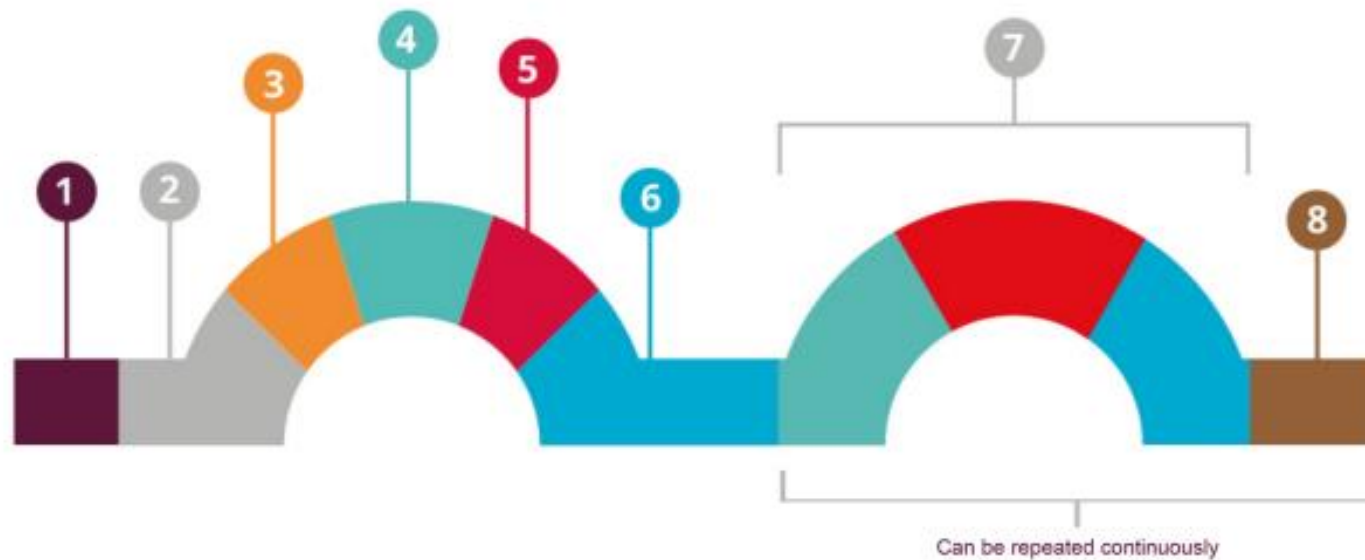
- Early Intervention process for veterinary patients
- Standardising assessment parameters for dogs and cats in the hospital setting
- Recently developed by Belinda Andrews-Jones RVN – awaiting publication
- References a similar approach to NEWS and the subsequent NEWS2 from the human healthcare sector, as developed by the Royal College of Physicians (RCP, 2017).
- Outcomes should be measured over a specific period.

BELINDA ANDREWS-JONES EARLY INTERVENTION SHEET			
Contact a veterinary clinician for early intervention if a patient triggers one red or two yellow scores at any time			
This sheet is to be used in conjunction with the patients kennel sheet. Observations should be recorded on the patients notes. The aim of this early warning system is to identify those patients at risk of deterioration. This should lead to prompt treatment. A single observation in the yellow zone requires observations to be continued every 30 minutes and reviewed as necessary. If 2 observations are plotted in the yellow box or 1 red, this should trigger contact with the veterinary clinician. If a patient has 'normal' parameters out side of these ranges then the veterinary clinician should clearly document this and what parameters are acceptable for the individual patient.			
Routine Monitoring and Triage			
DOG		CAT	
Respiratory Rate (bpm)	>40 30-40 11 - 29 0-10	Respiratory Rate (bpm)	>40 30-40 11 - 29 0-10
Respiratory Effort	Increased Normal Very shallow	Respiratory Effort	Increased Normal Very shallow
Pulse rate (bpm)	200 180 160 150 140 130 120 110 100 90 80 70 60 50 40	Pulse rate (bpm)	240 230 220 210 200 190 180 170 160 150 140
Pulse Quality	Hyperdynamic Normal Weak Absent	Pulse Quality	Hyperdynamic Normal Weak Absent
Temperature	39 °C or above 37.5 - °C 37- 37.5 °C below 37 °C	Temperature	39°C or above 37.5- 38.9 °C 37- 37.5 °C below 37°C
Mentation	Bright/alert Obtunded* Stuporus* Coma	Mentation	Bright/Alert Obtunded * Stuporus * Coma
Demeanour	☺ ☹ ☹	Demeanour	☺ ☹ ☹
Total yellow score		Total yellow score	
Total red score		Total red score	
* Obtunded = Dull /lethargic *Stuporus= is defined as decreased consciousness, but responsive to strong stimuli			
Further Monitoring			
* Doppler- Systolic Blood Pressure	230 220 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60	* Doppler- Systolic Blood Pressure	230 220 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60
Urine Output	>4ml/kg/hr > 1.5 ml/kg/hr 1-1.5ml/kg/hr <1ml/kg/hr	Urine Output	>4ml/kg/hr > 1.5 ml/kg/hr 1-1.5ml/kg/hr <1ml/kg/hr
Oxygen Saturation	95% - 100% 90% - 94% 90% or below	Oxygen Saturation	95% - 100% 90% - 94% 90% or below
*The accuracy of blood pressure measurement can be affected by device, used especially in low body weight & hypotensive patients-Doppler may be preferred			

2. Identify measures

- Driver diagrams can help to identify what is cause, and what is effect (NHS England and NHS Improvement, n.d)





- 1 Choose a topic
- 2 Select criteria
- 3 Set a target

- 4 Collect data
- 5 Analyse the data
- 6 Implement change

- 7 Reaudit (repeat steps 4, 5, 6)
- 8 Review and reflect

The Veterinary Clinical Audit Cycle by RCVS Knowledge. Available from www.rcvsknowledge.org
 Developed by the Royal College of General Practitioners www.rcgp.org.uk/qi-ready

3. Plan measurement activity

Clinical audits can provide the data to drive improvements, providing consideration of outcomes against a set of specific standards (Foy et al., 2020).

Veterinary specific audit advice and guidance is available via RCVS Knowledge (RCVS Knowledge, 2021).

4. Data generation

- Consideration of all data from one, or a group of practices, or data samples from a wider range of practices
- Restrospective data collection, in order to reduce burden during busy shifts.
- Training and standardisation of the veterinary team required, for effective implementation.

Measure name:	
Why is it important? (Provides justification and any links to organisation strategy)	
Who owns this measure? (Person responsible for making it happen)	
Measure definition	What is the definition? (Spell it out very clearly in words)
	What data items do you need?
	What is the calculation?
	Which patient groups are to be covered? Do you need to stratify? (For example, are there differences by shift, time of day, day of week, severity, etc)
Goal setting	What is the numeric goal you are setting yourselves?
	Who is responsible for setting this?
	When will it be achieved by?

(NHS England and NHS Improvement, n.d.)

Collect	Is the data available? (Currently available/available with minor changes/prospective collection needed)
	Who is responsible for data collection?
	What is the process of collection?
Analyse Calculate measure and present results	What is the process for presenting results? Eg create run chart or bar chart in Excel
	Who is responsible for the analysis?
	How often is the analysis completed?
Review	Where will decisions be made based on results?
	Who is responsible for taking action?

Template from
Seven Steps to
measurement for
improvement

(NHS England and NHS
Improvement, n.d.)

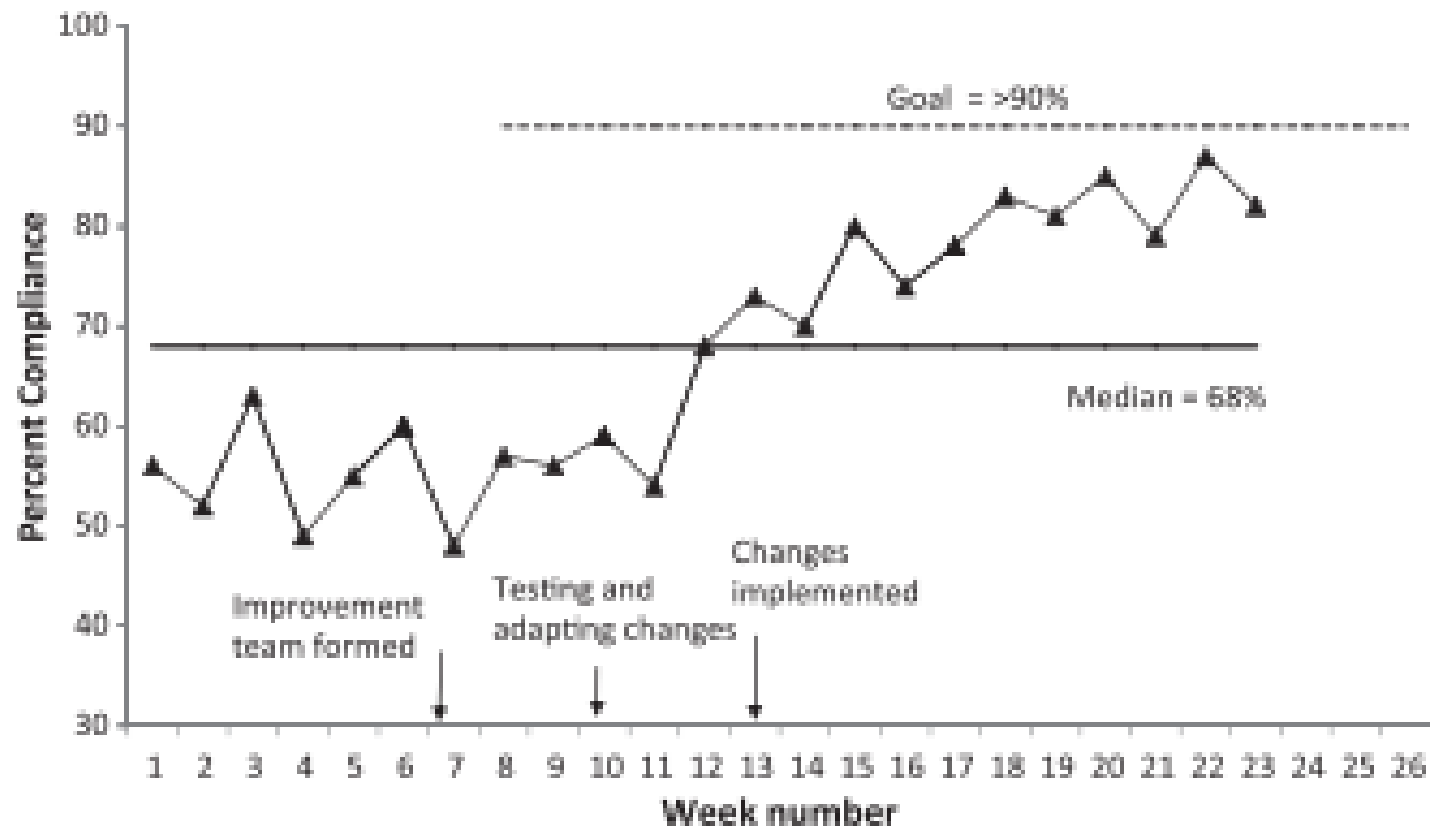


Figure 1 Example of a run chart demonstrating compliance with a standard procedure.

5. Data analysis

Run charts can help to identify the reasoning behind variation within improvement activity outcomes (NHS England and NHS Improvement, n.d.)

Specifically, run charts can identify special variation, outside of the normal range, and causes can be considered across a period of time (Perla et al. 2011):

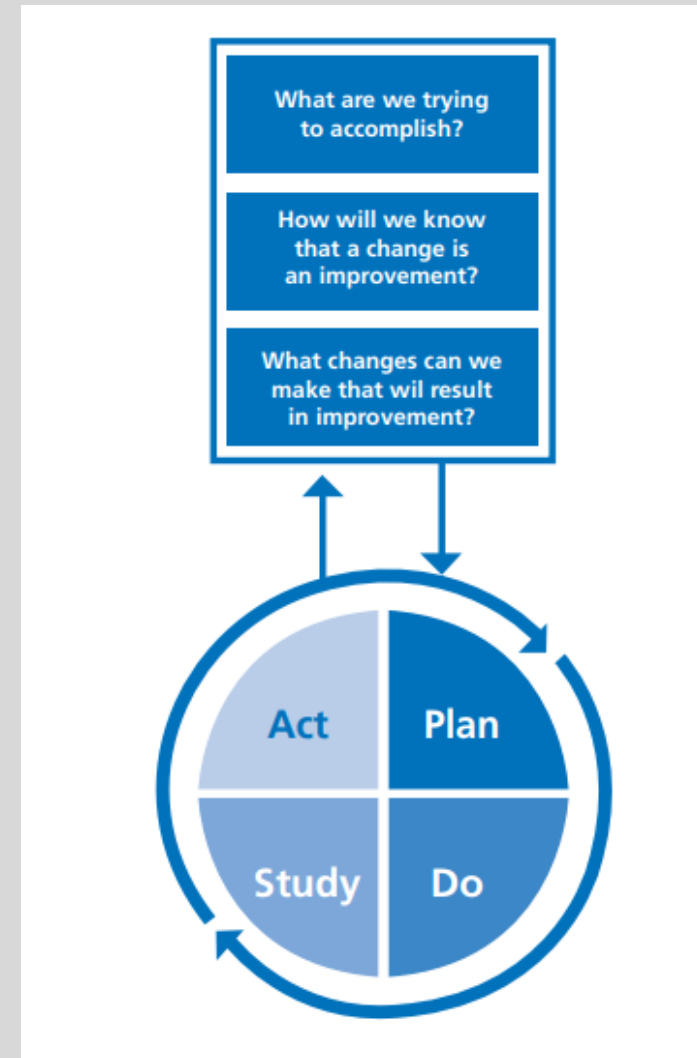
6. Data review

- The review of the data should include consideration of the structure, process and outcomes (Donabedian, 2005).
- Measurement should also include balancing measures – ensuring all consequences are considered (Toma et al., 2018).
- The outcomes must also be effectively communicated to promote the improvement and embed the principles (The Heath Foundation, 2015a).

Stakeholders – by name if known. (In the department, organisation, partner organisations, wider community, service users?)	Purpose of communication (Engage, <u>Sustain</u> interest, Celebrate and share? What do you want them to do?)	Key messages to be communicated (To do this, what do they need to know? Which questions should be answered?)	Timing of communication (Stages of project, specific times, frequency)	How are you going to communicate? (eg. routine report, flyer, newsletter, poster, case study, social media, video, blog)	Who is responsible? (Who will do the communicating? What do they need to know?)

7. Repeat

- According to The Health Foundation (2021), best practice for evaluation of improvement projects includes:
 - A collaborative approach
 - A well planned, formative and ongoing approach
 - Flexibility, with the ability to make amendments in an ongoing way
- The Seven Steps Framework therefore promotes an ongoing and enhanced PDSA process (NHS England and NHS Improvement, n.d.) , which would be the underpinning approach for the entire improvement activity.



Engagement and Empowerment

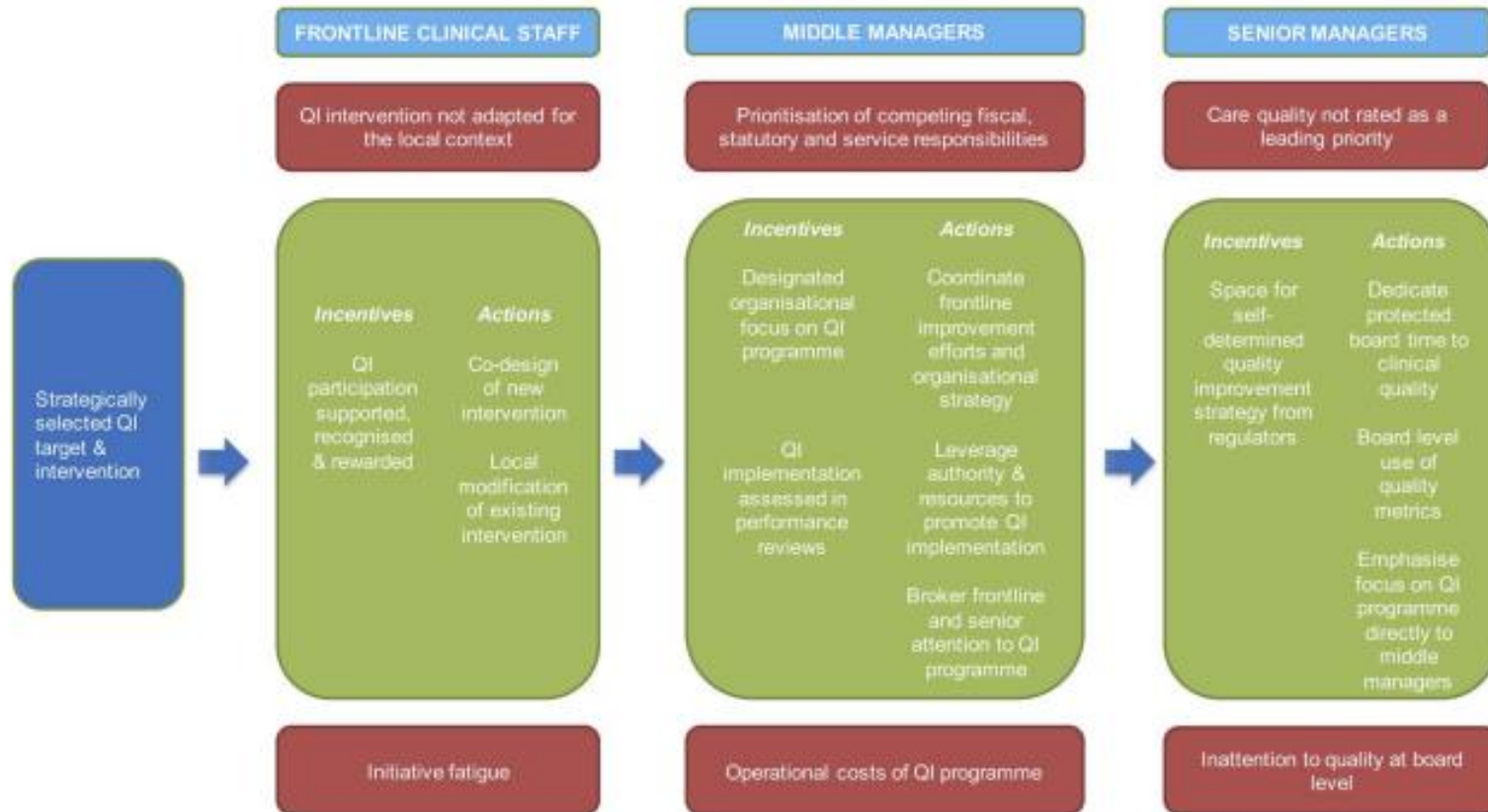
Staff must be engaged in order for QI to succeed (Dixon-Woods et al., 2012), in a sustainable and ongoing way (Graban, 2012).



Goldman (2014) describes seven rules for engaging clinicians and promoting the value of QI activities, the final, and potentially most important being:



‘Highlight the academic case for quality improvement’ - with a clear rationale, whilst appealing to a clinician’s desire to improve outcomes, may increase support.



Pannick et al's (2015) 'model of alignment'

Facilitators and Barriers

'Barriers are evident at the design, delivery and dissemination stages' (The Health Foundation, 2015c).

It is accepted that effective leadership is required to facilitate real and actual change from QI activities (Bagnall, 2012; The Health Foundation, 2015c; Lachman et al., 2014).

Evidence for success

- Effective evaluation can help to determine the success (or not!) of the QI intervention (The Health Foundation, 2015b).



Halligan and Zecevic's (2011) suggested model for an ongoing evaluation of QI interventions.

'...the NHS needs a considered, resourced and driven agenda of capability-building in order to deliver continuous improvement.'
(Berwick, 2013)

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THANK YOU