Quality Improvement

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Talk summary

• Why QI
• Whistlestop tour of QI theory
• RCP QI Programme
What is Quality Improvement?

‘The use of methods and tools to continuously improve quality of care and outcomes for patients’

A basic principle of QI is:

*If you can't measure it, you can't improve it.*
Why QI methodology?

“It’s just so inefficient”
“It’s such a waste of time and resource”
“Nothing ever changes”
“I don’t know where to start”
“We tried that ten years ago and it didn’t work.”

• Structured Framework for sustainable change
• Really improve care for patients
• Make life easier for staff
The historic NHS way...
QI Methodology – understanding variation

Observation chart for the National Early Warning Score (NEWS2)

<table>
<thead>
<tr>
<th>NEWS key</th>
<th>FULL NAME</th>
<th>DATE OF BIRTH</th>
<th>DATE OF ADMISSION</th>
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<tr>
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**A+B**

- **Respirations**: Breaths/min
  - ≥25
  - 21–24
  - 18–20
  - 15–17
  - 12–14
  - 9–11
  - <8

- **SpO₂ Scale 1**: Oxygen saturation (%)
  - ≥96
  - 94–95
  - 92–93
  - ≤91

- **SpO₂ Scale 2**: Oxygen saturation (%)
  - ≥97% on O₂
  - 95–96% on O₂
  - 93–94% on O₂
  - ≥93% on N₂O
  - 88–92
  - 86–87
  - 84–85
  - ≤83%

**Air or oxygen?**

- A=Air
- O₂ L/min
- Device

*ONLY use Scale 2 under the direction of a qualified clinician*
Mean time to first antibiotic (hrs) in suspected sepsis

- Sepsis Pathway introduced
- Extensive staff engagement
- Acute sepsis team

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Use of run charts to track changes

Figure 2  Summary statistics versus time-ordered data. (Each unit has the same 24 data values ordered differently over time.)

Perla R. BMJ Qual Saf 2011; 20: 46-51
Deming's System of Profound Knowledge

Psychology

Systems

Variation

Theory

Rogers' Innovation Adoption Curve

Prediction from SPC

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Quality Improvement
Deming's System of Profound Knowledge
Appreciation of systems

‘A system is a network of interdependent components which work together to try and accomplish a common aim’

‘Systems must be managed’
Deming's System of Profound Knowledge

Psychology

Systems

Variation

Theory

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Psychology

What motivates people?
- Autonomy
- Mastery
- Purpose

What drives behaviour?
- Knowledge
- Confidence
- Personality type

How do people respond to change?
Deming's System of Profound Knowledge
Theory of knowledge – how do we know what we know?

**Setting Aims**
The aim should be time-specific and measurable; it should also define the specific population of patients or other system that will be affected.

**Establishing Measures**
Teams use quantitative measures to determine if a specific change actually leads to an improvement.

**Selecting Changes**
Ideas for change may come from those who work in the system or from the experience of others who have successfully improved.

**Testing Changes**
The Plan-Do-Study-Act (PDSA) cycle is shorthand for testing a change in the real work setting — by planning it, trying it, observing the results, and acting on what is learned. This is the scientific method adapted for action-oriented learning.
Improving asthma care in ED

% of patients with an acute asthma exacerbation having PEF measured

- Staff survey
- ED went electronic
- ED physically moved buildings

New pathway development
The value of failed tests

“I did not fail one thousand times; I found one thousand ways how not to make a light bulb”

Thomas Eddison, creator of the lightbulb
Royal College of Physicians Quality Improvement Programme (RCPQI)

### Building capacity
Equip the healthcare workforce with skills and expertise to continuously improve services

### Breakthrough collaboratives
6-9 month, topic specific, quality improvement course for clinicians and their teams

### Virtual hub
Connecting people, best practice, tools and evidence

### Leadership for improvement
Develop medical leaders who can influence and embed a culture of quality and continuous improvement

### Research and development
Develop, adapt, design new improvement methods and knowledge

### Bespoke support
Provide expert assessment and support in tackling particular organisational and service challenges

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<th>RCP QI Faculty</th>
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**Aims** to make quality improvement easily accessible to all doctors and support physicians in developing and providing safe, timely, evidence-based, efficient and patient-centred care to achieve the RCP’s strategic aim of improving quality

Delivered through 6 work streams, supported by a faculty of quality improvement experts
CQC Quality Improvement in Hospital Trusts

FIGURE 1: COMMON ELEMENTS OF QI

- Systems view
- Strategic intent for QI
- Patients at the centre of QI
- Building QI skills at all levels
- Leadership for QI
- Building a QI culture at all levels
Thank you

“Without data you’re just another person with an opinion”

- W. Edwards Deming

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https://www.rcplondon.ac.uk/projects/outputs/rcpqi-rcp-quality-improvement-resources

@RCP_QI
(see pinned tweet)