Quality Improvement
Foundation Level Training
<table>
<thead>
<tr>
<th>Time</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:30</td>
<td>Welcome and Introductions</td>
</tr>
<tr>
<td>09:45</td>
<td>Healthcare Context</td>
</tr>
<tr>
<td>09:55</td>
<td>What is Improvement Science?</td>
</tr>
<tr>
<td>10:05</td>
<td>Improvement Methods</td>
</tr>
<tr>
<td></td>
<td>• The model for Improvement</td>
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<td></td>
<td>• PDSA cycles</td>
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<tr>
<td>11:00</td>
<td>Break</td>
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<tr>
<td>11:20</td>
<td>Improvement Tools and Techniques</td>
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<tr>
<td></td>
<td>• Using PDSA cycles</td>
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<td>• Driver diagrams</td>
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<td>13:00</td>
<td>LUNCH</td>
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<td>13:45</td>
<td>Process Mapping</td>
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<td></td>
<td>• The 5 Whys framework</td>
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<td>• Measurement for Improvement</td>
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<tr>
<td>14:25</td>
<td>Involving Others in Quality and Safety</td>
</tr>
<tr>
<td>15:30</td>
<td>LIFE QI Platform</td>
</tr>
<tr>
<td>16:00</td>
<td>Evaluation and Close</td>
</tr>
</tbody>
</table>
Welcome and Introductions

- Team introductions
- Fire, security and facilities
- Share slides and contacts
- Ground rules
- Format of the day
- Tweet #QIEastern
AHSNs are driven by two imperatives: improving health and generating economic growth in our regions

- 15 Academic Health Science Networks across England
- Licensed by NHS England
- Connect health and social care providers with researchers and industry to accelerate the spread of service and technology innovations
Our region

Cambridgeshire and Peterborough, Norfolk and Waveney, Suffolk and north east Essex, mid and south Essex, Hertfordshire and the eastern border of Bedfordshire

- 6.4 million people
- 46 NHS organisations
- 52 local authorities
- Life science business sector support
- Innovation, business and research centres across Cambridge, Stevenage, Chelmsford and Norwich
- Eastern collaboration for leadership in applied health research and care (CLAHRC) and Clinical Research Network
Key objectives

- Appreciate the context for Quality Improvement.
- Understand the principles of Improvement Science
- Understand the Model for Improvement (including PDSA).
- Learn some practical Improvement tools techniques
- Appreciate some principles of patient safety
- Understand the value of involving others
- Learn about the LIFE QI platform
Team Introductions

- Introduce yourself
- What you want to learn from today?
- If you have a QI project you are working on or would like to start working on
Healthcare Context
Quality in the NHS

This definition has been adopted throughout NHS England and was used as the basis of the NHS England Outcomes Framework.

- **Safety** – doing no harm to patients.
- **Experience of care** – this should be characterised by compassion, dignity and respect.
- **Effectiveness of care** – including preventing people from dying prematurely, enhancing quality of life, and helping people to recover following episodes of ill health.

Source: Department of Health 2008. High Quality Care For All, Lord Darzi
Six dimensions of Quality identified by the Institute of Medicine

- **Safety** – Avoiding harm to patients from care.
- **Timeliness** – Avoiding non-instrumental delays for patients and clinicians.
- **Effectiveness** – Aligning care with the best of clinical science.
- **Efficiency** – Reducing waste in all of its forms.
- **Equity** – Closing racial, ethnic, and other gaps in health status and care.
- **Patient-centerededness** – Customising care to the needs, resources, values, and background of each individual patient and carer.

Source: Crossing the Quality Chasm. A New Health System for the 21st Century. Committee on Quality of Health Care in America. Institute of Medicine 2001
What are the drivers for QI?

**Intrinsic Motivators**
- Connecting to shared purpose
- Engaging, mobilising, calling to action
- Motivational leadership

*Build energy and creativity*
What are the drivers for QI?

**Extrinsic Motivators**

- System drivers and incentives
- Payments by results
- Performance management
- Measurement for accountability

Create focus and momentum for delivery
What is the balance?

**Intrinsic Motivators**
- Connecting to shared purpose
- Engaging, mobilising, calling to action
- Motivational leadership

*Build energy and creativity*

**Extrinsic Motivators**
- System drivers and incentives
- Payments by results
- Performance management
- Measurement for accountability

*Create focus and momentum for delivery*
What is Improvement Science?
TOO BUSY TO IMPROVE?

Haven’t got time. We are busy delivering.

I’ve got an idea!

Chris Chan @ChrisChanAU  http://chrischan.com.au
Adapted from HakanForss@hakanforss
What is Quality Improvement Science?

There is no single definition, but it is generally understood to be:

- a systematic approach to improving health services based on iterative change, continuous testing and measurement, and empowerment of frontline teams.

- uses specific methodologies for improving care – enhancing patients’ safety, outcomes and experiences.

Based on definition provided by Dr John Øvretveit, in his report *Does improving quality save money?*
What is Quality Improvement Science?

- Applied science not pure science
- Application plus strong formal science
- Real time, time series data not snapshots
- Real world, not controlled
- Prospective not retrospective
- Small tests of change not whole scale change
- Predictions not hypotheses
W. Edward’s Deming’s System of Profound Knowledge draws your attention to four areas you need to consider when you make a change within a system:

- **Psychology of change**: How we can motivate and encourage people to make and sustain changes.

- **Appreciation of a system**: Understand the interdependencies and interrelationships of the whole system.

- **Understanding variation**: All systems exhibit variation, what is normal vs special cause.

- **How to make change happen**: QI methods, tools and techniques.
Making successful change involves;

- **Expert knowledge**, specific knowledge relevant to the problem in hand, and the context of change.

  Plus

- **Knowledge of how to make change happen**, improvement methodologies, systems thinking, variation, human factors, making and leading change.

Source: Institute for Healthcare Improvement
Elements which create the best improvement outcomes

- Building **leadership** will and commitment
- Freeing up **resources** for clinical quality improvement
- **Training** staff and building QI capability
- Establishing **indicators** and **data collection systems**

**Importantly** these elements need to be in place and **sustained** for a significant period of **time** to achieve measurable results

Role of Leaders
10 key lessons for NHS leaders. (The Kings Fund 2017)

• QI is leadership priority for boards
• Responsibility for QI with leaders at all levels
• Don’t look for magic bullets or quick wins
• Develop QI skills and capabilities
• Have a consistent and coherent approach to QI
• Use data effectively
• Focus on relationships and culture
• Enable and support frontline staff to engage in QI
• Involve patients, service users and carers
• Work as a system
Simple Approaches and Techniques

By the end of this section, you will:

• Appreciate Juran’s Trilogy
• Appreciate some of the most common improvement approaches
• Understand the Model for Improvement Model and PDSA cycle
• Develop a SMART aims statement
• Recognise three different types of measures
• Developed an idea for change
Juran’s Quality Trilogy
Three ways to enhance quality

Achieve better outcomes through a systematic change approach with strong leadership adaptive culture and people skilled in QI methodology.

Identify the needs of the population, create aims and metrics for outcomes and create a series of steps to achieve aims.

Ensuring high quality of care through inspecting, monitoring, accrediting regulating and include corrective responses.

Table discussion

• What is the balance in your system?
Improvement methods

The Model for Improvement
The QI approach

• There is no single QI methodology and set of tools that is recommended for work in health and care.

• However it is helpful at an organisational level if agreement can be reached by senior leaders about the strategic approach that will be taken across the organisation or wider community.

• This avoids confusion and ensures that everyone is talking a common language about improvement and that the chosen approach becomes embedded in the culture becoming ‘the way we do things around here’.
Most common approaches

**Model for Improvement**
An approach to continuous improvement where changes are tested in small iterative cycles.

**Six Sigma**
A process or product improvement approach that focuses on reducing what customers define as ‘defects’.

**Statistical process control**
Examines the difference between natural variation (common cause) and special cause variation; data collected over time to show whether a process is within control limits.

**Business process re-engineering**
Rethinking of how processes are designed, organisations set up around key processes rather than specialist functions.

**Lean**
A quality management system developed by the Japanese car manufacturer Toyota, focusing on value, flow and waste reduction.

**Total quality management (TQM)**
Also known as continuous quality improvement. Emphasises the need for leadership and management involvement to understand work processes.
The QI approach

They all have the following in common:

• The concept of a cycle of improvement which involves problem definition and diagnosis, testing of change ideas, data collection and analysis, implementation and evaluation

• A set of tools and techniques that support individuals to implement the improvements

• A recognition of the importance of engaging stakeholders, including service users and carers

• A recognition of the importance of culture and the need for clinical and managerial leadership.
The Model for Improvement asks key questions

Q1: Understanding the problem. Knowing what you're trying to do - clear and desirable aims and objectives.

Q2: Measurement for improvement
   - process
   - outcomes
   - balance

Q3: What have others done? What hunches do we have? What can we learn as we go along?

Source: Institute for Healthcare Improvement
Aim statements

Q1. What are we trying to accomplish?

• Think SMART: be specific for who, by when, by how much.

• Make sure you can clearly articulate what you want to achieve.

• Make this real: talk to hearts and minds, patient stories to engage, creating social movement.

• Charles Goodhart states: "When a measure becomes a target, it ceases to be a good measure." (Charles Albert Eric Goodhart, is a British economist.)
### Aims statements: the good, the bad and the ugly

<table>
<thead>
<tr>
<th>Aim statement</th>
<th>Good</th>
<th>Bad</th>
<th>Ugly</th>
</tr>
</thead>
<tbody>
<tr>
<td>We aim to improve patient safety by reducing needless harm</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>By April 2017 we will reduce the incidence of pressures ulcers in the critical care unit by 50%</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Message from Director of Operations: Our patient satisfaction scores are in the bottom 10% of the NHS. We need to get the scores above the 50th percentile by the end of Q2 of 2017</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>We will reduce the number of falls on our medical wards by 75% over the next year. Our first goal is a 25% reduction in three months by spreading and adapting the good work done on U ward.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We need to improve the effectiveness and reliability of home visit assessments and reduce admissions to hospital. The board agrees so we will work on these issues next year</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Source: Dr Bob Lloyd. Institute for Healthcare Improvement.
Top tips for developing your aim

• It must be specific and measurable. It cannot simply be ‘to improve’ or ‘to reduce’.

• The aim should be meaningful to patients, service users and their families.

• When developing your aim, involve service users to ensure you hear and understand the patient voice.

• Data can be used to better understand what the big quality issues are, and may help to define a suitable aim.

• The aim should be achievable, relevant to your organisation’s goals and service users needs, and have a clear timeframe for completion.
Table work: Developing an Aim Statement
Measurement helps us to answer the second question in the model for improvement - how will we know that a change is an improvement?

- Understand the current performance (baseline).
- How much variation is in our process
- Ensure changes are making the improvement.
- Whether there have been unintended consequences of the change
- Keeping track of a few simple measures lets an improvement team know how they’re performing against the aim set and whether they need to “adapt, adopt or discard”.
## Types of Measures

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome</td>
<td>Impact on a patient and show the result of improvement work</td>
<td>Sepsis mortality rates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rate of MRSA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of falls</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Survey of staff confidence using SBAR</td>
</tr>
<tr>
<td>Process</td>
<td>How systems and processes work to deliver the outcomes</td>
<td>% patients with NEWS calculated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% hand hygiene compliance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of training sessions delivered</td>
</tr>
<tr>
<td>Balancing</td>
<td>Unexpected/Unintended impacts elsewhere in the system (can be positive or</td>
<td>999 call outs from a residential home</td>
</tr>
<tr>
<td></td>
<td>negative)</td>
<td>Staff sickness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff turnover</td>
</tr>
</tbody>
</table>

Source: Adapted from Institute for Healthcare Improvement
Key things to remember when starting to measure

• Seek usefulness, not perfection.
• Measure the minimum.
• Remember the goal is improvement and not a new measurement system.
• Aim to make measurement part of the daily routine.
What changes can we make?

Q3. What changes can we make that will result in an improvement?

- All changes do not lead to improvement. All improvement requires change.
- We know what we want to improve
- Change ideas are the possible how’s….
- Think differently – innovation and creativity.
- What is the known best practice?
## Change Concepts

### Ten Main Change Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove waste</td>
<td>Manage time</td>
</tr>
<tr>
<td>Improve work flow</td>
<td>Manage variation</td>
</tr>
<tr>
<td>Optimise inventory</td>
<td>Design systems to avoid mistakes</td>
</tr>
<tr>
<td>Change the work environment</td>
<td>Improve the product or service</td>
</tr>
<tr>
<td>Enhance the customer relationship</td>
<td></td>
</tr>
</tbody>
</table>

Source: The Improvement Guide 2nd ed.
Change Concepts

- Improve work flow
  - Reduce number of Hand-overs in process
  - Bring steps in a process close together
  - Find and remove process bottle necks and delays
  - Adjust to cope with peaks in demand.
Creative thinking

• No idea is too big, too small or out of the question
• Do not judge or criticise others ideas
• Listen to others ideas and build on them

1. Silent period – think about improvements to the process and write on a post it

2. Interactive period – shout out other ideas that come to mind!
Multi voting

- Review all the ideas & merge similar ideas
- Vote for 1/3 ideas, use selection criteria, e.g.
  - Ideas that can be started fast
  - The change is reasonably low cost
  - The effort is small compared to the impact
  - The idea can be tested without getting ‘permission’ from others’

- Count the votes
- Test the top change ideas using PDSA
Running a PDSA cycle is a way of testing a change.

In most improvement projects, teams will test several different changes, and each change may go through several PDSA cycles as you continue to learn.

Keep a file of all PDSA cycles for all the changes your team tests.

The Life QI Platform (www.life.seedata.com) is a useful tool for planning and documenting a test of change.

Source: Institute for Healthcare Improvement
PDSA: Step one - plan

• Plan the test, including a plan for collecting data

• State the question you want to answer and make a prediction about what you think will happen

• Develop a plan to test the change (who? what? when? where?)

• Identify what data you will need to collect
PDSA: Step two - do

- Carry out the test
- Document problems and unexpected observations
- Collect and begin to analyse the data
PDSA: Step three: study

- Analyse the results and compare them to your predictions
- Complete, as a team, if possible, your analysis of the data
- Compare the data to your prediction
- Summarise and reflect on what you learned
• Based on what you learned from the test, make a plan for your next step

• Adapt (make modifications and run another test)

• Adopt (test the change on a larger scale), or abandon (don’t do another test on this change idea)

• Prepare a plan for the next PDSA.
Cycles of Tests Build Confidence

Always start with a specific aim - What are we trying to accomplish?
• How will know if this is an improvement? – Data.
• Small tests of change over a short time
• Debrief frequently
• Communicate results
• Repeated Cycles
• When we meet our aim? – sustain and hold the gains

Changes that will result in improvement

Proposals, theories, hunches, intuition
Tips for successful PDSAs

- **DO** reflect regularly on your aim and how you will know a change is an improvement
- **DO** keep it small. Small PDSAs are easier to implement and results are quickly evident
- **DO** create PDSA cycles that can be completed in a short timeframe, fast results are good for morale and encourage a positive attitude toward change
- **DO** use a team approach. Have your team define who is doing what, where, and when
- **DO** follow each PDSA cycle with another, creating a continuous improvement process. Learn as you go
- **DO** spread good results. Give credit where due and encourage others to make the change
- **DO** empower staff to conduct their own PDSAs
Keeping a record of PDSAs

• DO use a worksheet to plan your PDSAs.

• DO keep written accounts of all PDSAs.

• www.life.seedata.co.uk
Improvement Tools and techniques

Using PDSA cycles: Meet Mr Potato Head
Interactive exercise using TrueSimple-PDSA game (30 mins)

- Groups n4-8 in each.
- 1 Mr Potato Head per group.
- 1 PDSA tracker, 1 run chart time, 1 run chart accuracy score, per group.
- Access to timer (Smartphone).
- Pre-designate group roles: tester, documenter, timer, inspector.

Copyright © 2014 TrueSimple, LLC
1. Place Mr Potato Head in front of tester. NO-ONE TOUCH.
2. Team to predict “what supports rapid and accurate assembly”- test one theory, document this in PDSA tracker.
3. Team to predict score
4. Conduct test. Time starts as soon as the tester touches the Mr Potato and stop when the tester say “time”.
5. During the test capture observations on the PDSA form.
6. One test only then stop.
7. Record outcomes time (minutes and seconds) and accuracy rating (1 - One or more pieces not on; 2 - All pieces on but one out of place 3 - All pieces on and positioned correctly).
8. Evaluate - change your idea, abandon or adopt?
9. Complete 4 rounds of PDSA.
Standard for Mr Potato Head

Accuracy Score Operational definition

3 – All pieces on Sam and positioned correctly

2 – All pieces on Sam, but one or more is out of place

1 – One or more pieces are not on Sam
Debrief and feedback

What did you learn?
Improvement tools and techniques.

Logic models: Driver Diagrams
A driver diagram is a powerful tool that helps to portray an improvement goal in a logical set of enabling tasks.

It captures an entire change programme in a single diagram.

Q1) What are we trying to accomplish?
Q2) Provides a measurement framework for monitoring progress.
Q3) What changes can we make that will result in an improvement?

Demonstrates the links between causes (changes) and effect (outcome).

Driver diagrams display your logic in a visual way; they do not guarantee that your logic is correct.
Component parts of a driver diagram

**The aim** - specific, measurable, timebound (how much, by when?).

**Primary drivers** - The larger, overarching factors that will affect your goal. These should be broad and do not need to be specific or measurable.

**Secondary drivers** - specific to the primary driver, areas that you will need to plan changes for, process changes, hunches.

**Change ideas** - These are the important changes that will go into your project plan, these are the specific and quantifiable ideas for change that you will test and measure through PDSA cycles.
Driver diagram and measurement framework

Aim

Outcome measures: How much? by when?

Effect

Outcome measures: How much? by when?

Primary Driver

Outcome measures: How much? by when?

Secondary Driver

Secondary Driver

Secondary Driver

Change Idea

Change Idea

Change Idea

Process measures: How much? by when?

Cause
Tips and tricks

• Creating a driver diagram with a team helps ensure that everyone understands your goal and how they can contribute towards achieving it.

• Driver diagrams are a ‘live’ tool. They will change over time as you make changes to your system.

• Driver diagrams will vary from place to place - there is no ‘right’ version as your local context will be different from other parts of the country.

• If you can make your drivers measurable you have created a measurement framework for determining progress towards your overall goal.
10 steps to follow

• Step 1: Gather people with the right knowledge and expertise together.
• Step 2: Develop your aim.
• Step 3: Identify primary drivers.
• Step 4: Generate change ideas.
• Step 5: Group ideas into themes (secondary drivers).
• Step 6: Build driver diagram.
• Step 7: Prioritise activity.
• Step 8: Build in measures.
• Step 9: Start to make changes (Model for Improvement).
• Step 10: Revisit.
Reasons to use driver diagrams

1. Engage people in developing a strategy.
2. Represent complex strategy visually.
3. Deconstruct complex problems.
4. Generate more and better change ideas.
5. Avoid silver bullet thinking.
6. Avoid blind spot thinking.
7. Identify priorities for action.
8. Measure progress.
9. Survive failure and the unexpected.

For every complex problem there is an answer that is clear, simple, and wrong.

H. L. Mencken
Example: Losing Weight

½ stone weight loss by Feb 2018

Calories in

Calories out
Creating change ideas

½ stone weight loss by Feb 2018

- Reduce snacks
- Swap lunch for fruit
- No wine 4 nights a week
- Smaller plate
- Never > 2 glasses
- Gym 2x per week
- Download app
- Run with friend
Example: Losing weight

Aim: ½ stone weight loss by Feb 2018

Primary Driver:
- Calories in
- Calories out

Secondary Driver:
- Eat less
- Drink less alcohol
- Count Calories
- More exercise

Change Ideas:
- Smaller plate
- Swap lunch for fruit
- Reduce snacks
- No wine for 4 nights/week
- Never >2 glasses
- Download app
- Gym 2 x per week
- Run with Friend
Exercise: Create a driver diagram

On your table, thinking about a QI project of your own.

• Start to create a driver diagram and choose measures.

• Using post it notes, write down your own change ideas (one idea on one note).

• Using the aim, primary drivers and change ideas - make a driver diagram.

• Complete the driver diagram to link aims with measures.

You have 15 minutes.
Driver diagram: Life platform
Reflections

- What did you learn about the process?
Improvement tools and techniques

Process mapping
“If you can’t describe your work as a process, you don’t know what you are doing”

W Edwards Deming
What is process mapping?

- A way of describing work as a set of individual tasks or steps.
- The intention is to make the whole process clear so that you can identify where changes will add value.

A familiar example – the cash point machine

1. Insert Card
2. Enter PIN
3. Request Cash
4. Collect Cash
5. Retrieve Card
6. End
There are only three symbols used in process mapping:

- An oval to mark the start or the end of the process.
- A rectangle to mark a task or process step.
- A diamond to mark a decision point.
Urgent blood test in A/E

Source: Process mapping a simple guide. Dr Mike Bell.
Choose a process and map it, e.g.

- Urgent blood test in A/E
- Outpatient chest X ray
- Requesting a walking frame for a patient about to go home
- Repeat prescription for patient at home with a LTC
- Removal of stitches at home

**DO** Keep it high level and simple.
Step by step guide

- Think carefully about the start and end point of the pathway, pathways and processes may cross several organisational boundaries
- Gather all involved in the pathway or representatives from each team
- You need lots of time and plenty of space
- Use rolls of paper (brown paper, wall paper or similar) pathways are often longer than you think
- Use post it notes, so that you can move things around as ideas develop and change
- Involve patients to test that staff perceptions are the same as patient perceptions
- Once you have an agreed process map, add the timings for each task and between steps in weeks/days/hours
- Note the steps which add value and are important
- Highlight the duplications and steps which are slow or wasteful
Using your process map for improvement

- Involve patients to test that staff perceptions are the same as patient perceptions.
- Add the timings for each task and between steps in weeks/days/hours.
- Note the steps which add value and are important.
- Highlight the steps which are slow, wasteful, duplications, require unnecessary travel etc.

What is ‘value’ in your process?

Is it value for the patient?
Improvement tools and techniques

Five Whys
5 Whys: Getting to the Root of a Problem Quickly

What is it?

• Simple brain storming tool
• Helps to drill down into a problem
• Helps to move beyond the obvious (sometimes wrong) assumptions.
• Gets to the root problem

When to use it

• Once you have recognised a problem (using process mapping or other techniques
• Do not use on its own
• To help teams gain real insight into the problem/process
# The 5 whys framework

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residents are complaining that their food is cold at mealtimes</td>
<td>We need more staff on duty to serve food</td>
</tr>
</tbody>
</table>

- Start asking *WHY* in relation to a problem
- Be inquisitive and don’t make assumptions
- Ask as many *WHYs* as you need to get to insight into the real issues
- 5 *Whys* are typical but you may need to ask more
- You will know you have reached the last *Why* as it does not seem logical to ask another
### Problem: Residents are complaining that their food is cold at meal times.

<table>
<thead>
<tr>
<th>WHY</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Because we have 80 residents and only 20 minutes to serve food</td>
</tr>
<tr>
<td>2</td>
<td>Because we have to wait for the meals to be dished up before we can serve them</td>
</tr>
<tr>
<td>3</td>
<td>Because there is only one person dishing up and three serving</td>
</tr>
<tr>
<td>4</td>
<td>Because food has to be served up by kitchen staff/ dieticians</td>
</tr>
<tr>
<td>5</td>
<td>Because that’s the standard policy</td>
</tr>
</tbody>
</table>
5 Why's template

- Problem
- Why?
- Why?
- Why?
- Why?
- Why?
- Why?
- Root cause
- How to change?
Table work

- Return to your process map from earlier
- Ask the 5 Whys
- Feedback from tables
Improvement tools and techniques

Measurement for Improvement
Measurement can show us:

- How well our current process is performing
- If we have delivered an objective
- How much variation is in our process
- Whether a small test change is going in the correct direction
- Whether the changes have resulted in an improvement
- Whether there have been unintended consequences of the change
- Whether a change has been sustained
## The three faces of measurement

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Improvement</th>
<th>Accountability</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aim</strong></td>
<td>Improvement of care (How?)</td>
<td>Comparison, choice, reassurance, spur for change</td>
<td>New knowledge (what?)</td>
</tr>
<tr>
<td><strong>Methods: Test observability</strong></td>
<td>Test are observable</td>
<td>No test, merely evaluate current performance</td>
<td>Test blinded or controlled tests</td>
</tr>
<tr>
<td><strong>Bias</strong></td>
<td>Accept consistent bias</td>
<td>Measure and adjust to reduce bias</td>
<td>Design to eliminate bias</td>
</tr>
<tr>
<td><strong>Sample size</strong></td>
<td>‘Just enough’ data, small sequential samples</td>
<td>Obtain 100% of available, relevant data</td>
<td>‘Just in case’ data</td>
</tr>
<tr>
<td><strong>Flexibility of hypothesis</strong></td>
<td>Hypothesis flexible, change as learning takes place</td>
<td>No hypothesis</td>
<td>Fixed hypothesis</td>
</tr>
<tr>
<td><strong>Testing strategy</strong></td>
<td>Sequential tests</td>
<td>No tests</td>
<td>One large test</td>
</tr>
<tr>
<td><strong>Determining if change is an improvement</strong></td>
<td>Run charts or Statistical Process Control charts</td>
<td>No change of focus</td>
<td>Hypothesis, statistical tests, (t-test,F-test, chi square), p-values</td>
</tr>
<tr>
<td><strong>Confidentiality of data</strong></td>
<td>Data only used by those involved in improvement</td>
<td>Data available for public consumption and review</td>
<td>Research subjects’ identities protected</td>
</tr>
</tbody>
</table>

Model for Improvement & 7 Steps to Measurement

Model for Improvement

- Aims
  - What are we trying to accomplish?
  - How will we know that a change is an improvement?
  - What change can we make that will result in improvement?

- Measures

- Interventions

Source: Institute for Healthcare Improvement
Step 1. Decide your aim

1 Decide aim

- **Specific**
- **Measurable**
- **Achievable**
- **Realistic**
- **Time-bound**

Can you write your aim in a sentence?

- A worthwhile topic
- Outcome focused
- Measurable
- Specific population
- Clear timelines
- Succinct but clear

Source: Adapted from 2nd Ed The Improvement Guide Langley et al.
Step 2. Choose measures

1 Decide aim

2 Choose measures

3 Define measures

4 Collect data

5 Analyse & present

6 Review measures

7 Repeat steps 4-6

Source: Adapted from 2nd Ed The Improvement Guide Langley et al.
Step 3. Define measures

1. Decide aim
2. Choose measures
3. Define measures

An operational definition is a description, in quantifiable terms, of what to measure and the steps to follow to measure it consistently.

4. Collect data
5. Analyse & present
6. Review measures
7. Repeat steps 4-6

Source: Adapted from 2nd Ed The Improvement Guide Langley et al.
Step 4. Collect data

- What – all people/patients, a portion or a sample?
- Who – collects the data?
- When – is it collected real time or retrospective?
- Where – is it collected?
- How – is it obtained computer system or audit?

Source: Adapted from 2nd Ed The Improvement Guide Langley et al.
Step 5. Analyse and present

1 Decide aim

2 Choose measures

3 Define measures

4 Collect data

5 Analyse & present

6 Review measures

7 Repeat steps 4-6

‘The type of presentation you use has a crucial effect on how you and others react to data’

Source: Adapted from 2nd Ed The Improvement Guide Langley et al.
“Data should always be presented in such a way that preserves the evidence in the data…”

Walter Shewhart
Common errors of presentation and analysis

Something very important!

Last month

This month
How we assess performance: RAG ratings

<table>
<thead>
<tr>
<th>Specialty Health Programme</th>
<th>September 11</th>
<th>October 11</th>
<th>November 11</th>
<th>December 11</th>
<th>January 12</th>
<th>February 12</th>
<th>March 12</th>
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<th>June 12</th>
<th>July 12</th>
<th>August 12</th>
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<tbody>
<tr>
<td>Nursing Adult Diploma</td>
<td>75%</td>
<td>68%</td>
<td>55%</td>
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<td>Nursing Child Diploma</td>
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<td>Nursing Learning Disabilities</td>
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</table>

Why has performance deteriorated so badly. What decision are you going to make?
Presenting and analysing data for Improvement.
Questions you may be asked

• Why are you showing me this?
• What was the sample size?
• Over what period was the data collected?
• Is this all of the data? (what did you leave out?)
• If a target is shown, how was it established?
• How was the data collected?
• Who collected the data?
• Did you encounter any problems gathering the data?
• If the data is aggregated, have you got the real data anywhere?
• What conclusions have you drawn? How?
• What do we need to do next?
In summary, measurement for improvement is:

- Different from research, audit or assurance - uses data over time
- Accepts real world messiness and multiple simultaneous tests (PDSAs)
- Run charts are simple, effective and powerful
- SPC charts help identify unacceptable variation
- Make sure the measurement fits your purpose: improvement
- Focus on a vital few key measures (3 or 4) more is not better
- If possible integrate measurement routinely into care delivery or use existing measures as a proxy
- Must make your data transparent and honest. Use numerator and denominator. 5/5 or 5/10
- Keep it visible
Involving others in Quality and Safety Improvement

Putting patients at the heart of quality improvement and safety
Learning objectives

• Understand the most common reasons why change projects fail.
• Understand the importance of engagement.
• Understand why the human dimensions of change are important.
• Have a better understanding of why people resist change and ways to respond to resistance.
Putting patients at the heart of quality improvement and safety

• Is crucial for us as “improvers”.

• Can help deliver safer, more effective care.

• Can help innovate new ways of working.

• Can help health professionals move from ‘fixers’ to ‘facilitators’.

• Can help everyone to think more creatively about how to achieve ‘wellbeing’ in order to prevent ill health.
What does engagement mean to you?

- Discuss your experience of engaging stakeholders in your improvement efforts.
  - What worked well?
  - What could you do differently?
Patients are fundamental to our work and we should work with them when improving.

What can seem like an excellent technical outcome from a health professional's point of view is not always perceived as excellent experience by the patient.
Experienced-based co-design

Designing services *for* patients

Designing services *with* patients
An Always Event is a clear, action-oriented, and pervasive practice or set of behaviors that:

- Provides a foundation for partnering with patients and their families;
- Ensures optimal patient experience and improved outcomes; and
- Serves as a unifying force for all that demonstrates an ongoing commitment to person- and family-centered care.

IHI's Always Event Toolkit [http://www.ihi.org]
Human Dimensions of Change
People matter

• Tools are only 20% of quality improvement

• 80% is about encouraging people and putting systems in to help us change our mindset and see quality improvement as an integral part of our job.

Ref: Marjorie Godfrey (The Dartmouth Institute).
What are the human dimensions of change?

• The reactions of different people to different situations, particularly when confronted by organisational change.

• Understanding the different ways people react to different situations can help improve communication and ensure the success of improvement projects.

• Many change projects fail, and the most commonly cited reason is neglect of the human dimensions of change.
Why are the human dimensions important?

• Strong emotions, such as fear, anger, hopelessness and frustration, which can derail your improvement initiative.
• People become defensive – they might deny there is a problem, over emphasise the benefits of the present working practice or blame others within the organisation.
• Constant complaining, questioning and scepticism.
• An increase in absenteeism, sickness and people leaving the organisation combined with a fall in morale and job satisfaction.
• People don’t match ‘words with deeds’; they do not do what they say they are going to do.
• Conflict seems to spiral out of control.
You may be really enthusiastic about improvement, but others may not share your enthusiasm.

Source: 1962 Rodgers E. Diffusion of Innovations
Table work:

• Work in pairs

• Describe an area in your life where you are a ‘laggard’. Something that most other people have/do, but not you!

• Explain your reason to your partner
“A round man cannot be expected to fit into a square hole right away. He must have time to modify his shape”. Mark Twain

Transition is the psychological process people go through to come to terms with the new situation.

Source: Based on Lewin’s three step process of change. 1947
Progress through curve depends on:

- Personality type
- How much we feel in control of the change
- How much other change is going on in our life
- Past experience
Effective approaches in complex situations

- Give the change problem back to those involved to generate solutions.
- Co-production – engage staff and service users.
- Constructive open dialogues (seek first to understand, then to be understood!).
- Experiment – small scale change – PDSA.
- Simple rules.
- Role of management is facilitating/enabling rather than directing.
Life QI collaboration platform
Life quality improvement collaboration platform

- An introduction to Life: https://www.lifeqisystem.co.uk/
- Quality improvement learning resources
- Life collaboration platform: https://life.seedata.co.uk/login/
The **Life System** is a web based platform designed to assist front line staff running quality and safety improvement projects.

It is not designed to collect detailed information on users, organisations or patients, and is not a performance management tool; instead the information collected is only to be used to support improvement.

The Life System is free to access for members of Eastern AHSN.

www.lifeqisystem.com
Learning resources

Life QI is the collaboration platform for people working to improve health and social care. It makes it easy for teams to run QI projects and organisations to report on QI activity.

See all the Features →

Driver Diagrams
PDSA Cycles
SPC Charts
Programmes
Share & Collaborate
Reporting
Life is a quality improvement collaboration platform that gives you and your teams:

- Everything to run your QI project in one place
- Mechanism to collaborate across the QI community
- QI reporting made easy

Life is fully funded by Eastern AHSN
Life QI

Quality improvement for health and social care

Life QI is the collaboration platform for people working to improve health and social care.

Sign up here

www.lifeqisystem.com
Welcome to Life QI

Log into your account

You are about to login to the new version of Life QI!

The new look platform has been designed with you in mind. We have taken your comments on board, added some exciting new features and improvements to enhance your user experience.

To find out more about the new version, check out the blog article, read through the updated Learning Centre, or just login and explore!

We hope you like it. If you have any comments or need any assistance, please drop us an email at help@lifesystem.com.

barbara.h cicilife@eahsn.org

Log me in

Forgotten your password?

Want to sign-up?
Programmes

Discharge to Assess Pathway 0
85% of patients who are discharged go back to their usual place of residence with the same level of care they had prior to admission.

Building QI Capability in Eastern Region
Our vision is to create a longer term strategic legacy - a quality improvement infrastructure which will support continued improvement within the system.

Suffolk Care Homes Programme
To improve quality of care in Suffolk Care Homes.

Patient Safety Collaborative
To make the East of England the safest place to grow old.

Showing 1 to 4 of 4 - Back to top ↑
NELA Community of Practice

About
To facilitate the development of effective change (quality improvement) initiatives and thereby spread examples of best practice and help local providers in the Eastern Region make the best possible use of audit results.

Discussions
Eastern Region NELA
Barbara Hercliff started on 04/11/2017 at 09:23:50
Showing 1 to 1 of 1
References on Quality Improvement

- The handbook of Quality and Service Improvement Tools. NHS Institute for Innovation and Improvement. 2010
- Quality Improvement Made Simple. The Health Foundation . 2nd Edition 2013
- Overcoming Challenges to Improving Quality, the Health Foundation Evidence Scan, 2012.
References on Measurement for Improvement

• The Measurement and Monitoring of Safety. The Health Foundation. Spotlight Report 2013
• Lining up: How is harm measured. The Health Foundation. Learning Report 2013
• QualityWatch. [www.qualitywatch.org.uk](http://www.qualitywatch.org.uk).