A guide to Quality Improvement in Care Homes

west midlands
ACADEMIC HEALTH SCIENCE NETWORK

CONTENTS ›

INTRODUCTION TO THE WORKBOOK ›

This workbook has been developed as a practical guide for care home teams to help guide and support them in designing and delivering a Quality Improvement (QI) project. It uses well established QI methods and includes examples from the SPACE (Safer Provision and Caring Excellence) Quality Improvement Programme. SPACE was large-scale QI programme involving care homes in the West Midlands which received regional and national recognition for delivering harm reduction and improvements in safety culture

The work-book includes guidance and templates to guide teams through each stage of the QI project.

What is Quality Improvement?

'Quality Improvement' is not the same as 'improving quality'. All organisations will be making efforts to improve quality, and this can be done in many ways – including planning (resourcing, restructuring, commissioning, training, periodic checks of quality through audit or inspection).

Quality Improvement (QI) is the use of a systematic method to involve those **closest to the quality issue** in discovering solutions to a complex problem. It applies a consistent method and tools, engages people (staff/ residents/service users/families/ outside agencies) more deeply in identifying and testing ideas, and uses measurement to see if changes have led to improvement.

Why is QI important to care homes?

Care home residents are vulnerable, highly care dependent and at risk of adverse events. QI is important to improve patient centred care, improve safety and quality of care for residents in a care home. The Care Quality Commission (CQC) are increasingly looking for evidence to assess the presence and maturity of a Quality Improvement (QI) approaches within all provider organisations including care homes. A copy of the CQC brief guide Assessing Quality Improvement in a healthcare provider is available at the end of this document on the WMAHSN Meridian website.

THE MODEL FOR IMPROVEMENT

The Model for Improvement (Langley GL et al 2009) is a useful framework to guide Quality Improvement work. It encompasses 3 simple but powerful questions for accelerating improvement and a process for testing change - PDSA cycle. This guide will take you through how to use this model.

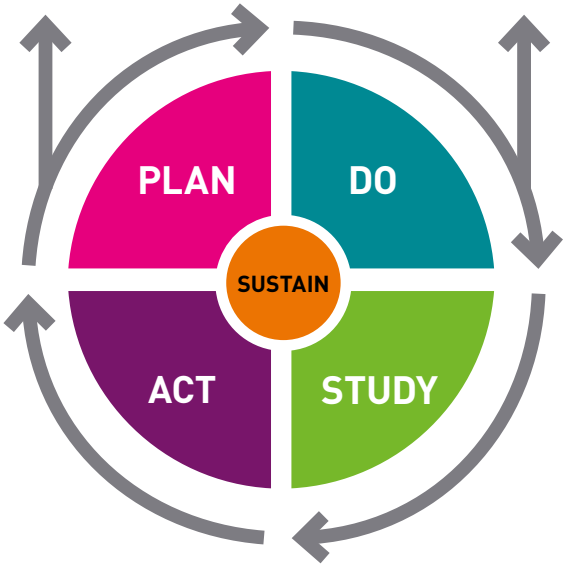
AIM:
1. What are we trying to accomplish?

MEASURES:
2. How will we know that a change is an improvement?

CHANGES:
3. What change can we make that will result in improvement?

The model has two parts:

- Three fundamental questions, which can be addressed in any order.
- The Plan-Do-Study-Act (PDSA) cycle which is used to **test** changes in real work settings. The PDSA cycle guides the test of a change to determine if the change is an improvement.



PLAN:
- Identify aim
- Questions/ Predictions
- Plan to carry out the cycle (who what where, when, how?)
- Plan data collection.

DO:
- Carry out the plan
- Document the problems and unexpected observations
- Begin analysis of the data

STUDY:
- Complete the analysis of the data
- Compare data to predictions
- Summarise what was learned

ACT:
- What changes are to be made
- Next cycle?

How do I form the right team?

Including the right people on a Quality Improvement team is critical to successful improvement. To ensure success and sustainability of your work, it is vital you form the right team. The team should include everyone who has a stakeholder interest in your project. It should be multi-disciplinary, include someone with enough seniority to make key decisions, have permanent members of staff to ensure sustainability, include people with specialist knowledge as well as frontline staff who will champion your work. In a care home it is important to think about the contribution that **internal stakeholders** may have. Make sure you consider ALL care home staff, carers and residents.
Please refer to the following page as an example of how different team members may contribute to a QI project.

Example of the contribution of all members of the Care Home Team to reducing avoidable harm from falls

In addition to internal stakeholders, think about the **external stakeholders** that may help: District Nurses; CCG and Local Authority Quality teams; Tissue Viability and Falls Specialists; Speech and Language Therapists; Public Health; Dementia Support Workers and Continence Providers.

It is important to map out the key stakeholders that might contribute to an improvement project. The template on the next page can be used to identify key stakeholders, what their contribution might be and how you might engage their support?

Stakeholder Mapping Exercise

Stakeholder Name/Role	Internal/ External	How much will the project impact on them? Low/Medium/High	How much will they contribute to the project?	How will we engage with them?

Planning your QI project

Before you begin to plan a Quality Improvement project ask yourself and the team the following questions and use the space to make some notes to discuss with the team.

What area of practice do you want to improve and why?

Do you know how good you are now? What is working well and why? Do you have any baseline data/evidence about the problem?
Do you know where you stand relative to the best?
What information do you have? Quality audit/complaints or qualitative data –Healthwatch and CQC/resident/staff experience feedback.

AIM - WHAT ARE WE TRYING TO ACCOMPLISH? ›

AIM

MEASURES

CHANGES

TESTS

The model for improvement starts with setting an AIM.

Aim Setting

Having the right aim is a fundamental part of starting your project. The right aim will provide clarity, engage stakeholders, generate enthusiasm and enable measurement. The aim should be a "stretch aim" ie. an aspiration, not a target you can reach within a week and the aim should be SMART:

Specific	who, what, where, when
Measureable	numeric goals, by how much
Achievable	within your influence
Realistic/relevant	to stakeholders and organisation
Timebound	by when, give a precise date

Creating your AIM:

Developing an aim for a Quality Improvement project sounds simple but can take time to get right. Teams make better progress when they are very **specific** about their aims. Setting numerical goals not only clarifies the aim, but also helps team members begin to think about what their measures of improvement will be. The aim should define the population that will be affected, be measurable and time-bound.

WEAK AIM	Why is it a weak aim?	STRONG AIM
Reduce the number of resident falls in a care home	S: Which care home, type of fall (all or injurious?) M: Reduce by how much? T: By when?	Reduce the no. of injurious falls by 50% in **XXX** care home by 31st Dec YYYY.
All residents will have their medications in a timely manner	S: Which medications? (all or just PRN medication)? M: What do we mean by timely? At the exact time or within 30 minutes/60 minutes? T: By when? give an actual date	All residents will receive their prescribed medications within 30 minutes of the time prescribed by 1st October YYYY at **XXX** care home.
To reduce pressure ulcers in the care home	S: Which type of pressure ulcer M: By how much? T: By when? Give an actual date	Reduce the number of avoidable care home acquired Grade 3 & 4 pressure ulcers in **XXX** care home by 50% in the next 12 months

DEFINE your SMART AIM:

Planning your project – using a Driver Diagram

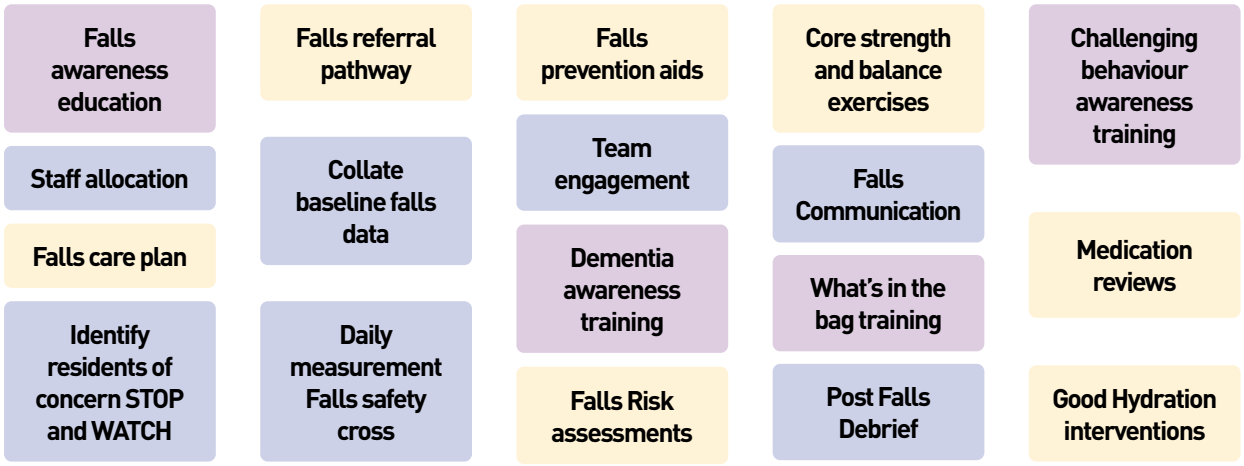
A driver diagram is a visual tool which shows the relationship between the overall AIM of the project, the **primary drivers** and **secondary drivers** that contribute towards achieving the aim.

A Driver Diagram

- Reinforces the AIM statement as a goal
- Clarifies the bigger picture
- Identifies the Primary Drivers- which are the main drivers that influence your aim
- Identifies Secondary Drivers- which are actions or interventions that will lead to a positive effect on a driver
- Also aids in the development of measures for your project as well as guiding your 'to do' list

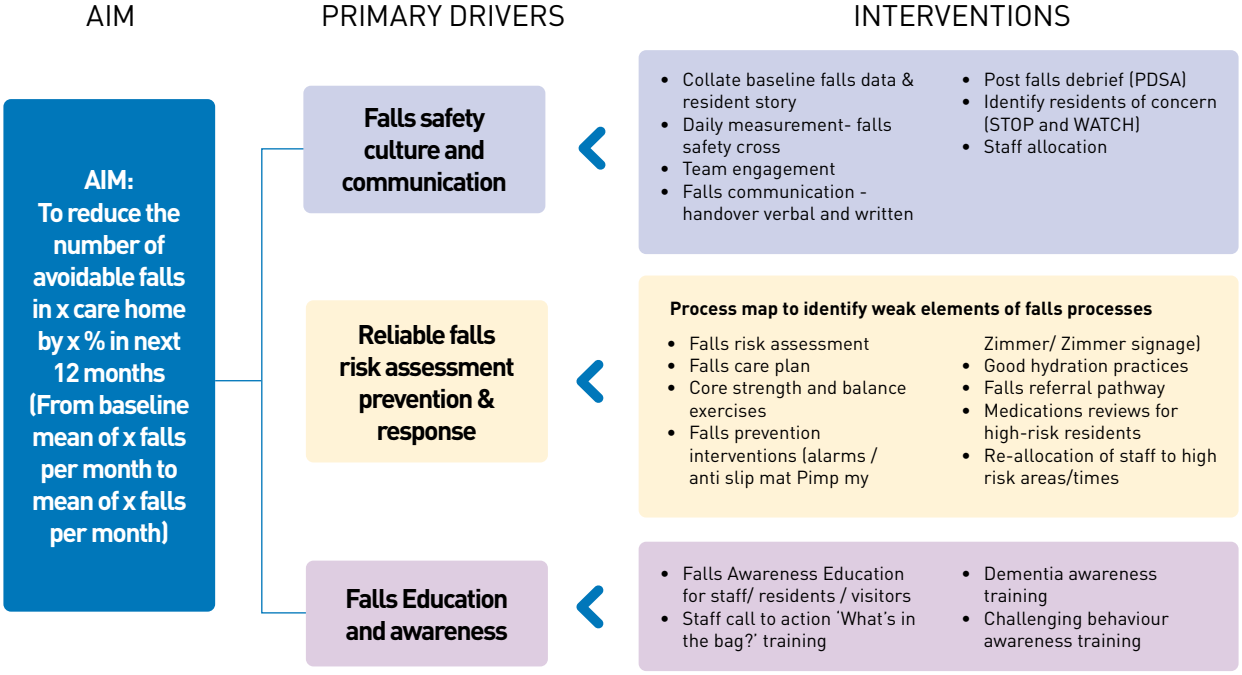
E.g AIM: To reduce all falls by 50% in all residents at XXX care home by December 2020

Step 1 To start your driver diagram, engage your team and identify all the factors needed to meet your aim. See example below:

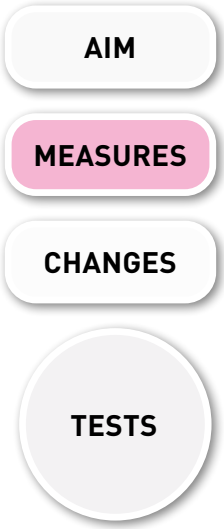


Step 2 Then theme the factors to identify the primary drivers (groups of related factors) as below and this will help you to identify interventions to test out (PDSA)

Driver Diagram Template



MEASURES - HOW WILL WE KNOW THAT A CHANGE IS AN IMPROVEMENT? ›



Measurement for Improvement

Real-time measurement is a key part of Quality Improvement and should drive your project, and this doesn't need to be complicated. Measurement is important because it allows you to monitor the effects of your changes and it provides hard evidence (data) of impact which will overcome resistance and increase belief.

There are 3 different types of measurement associated with Quality Improvement - **Outcome** measures, **Process** measures & **Balancing** measures;

1. **Outcome measures** relate to your aim and reflect the impact on residents e.g. number of pressure ulcers, ambulance call outs or falls rates.

2. **Process measures** reflect the things that you are doing (processes) and how systems are operating (e.g. Number of residents with a continence or falls assessment; Number of residents achieving daily hydration target)

3. **Balancing measures** can be described as unintended consequences (trade-offs) off your project e.g. number of moisture lesions which may increase as a result of improvements in hydration (fluid intake) practices, particularly if urinary incontinence is not managed correctly.

Safety Crosses

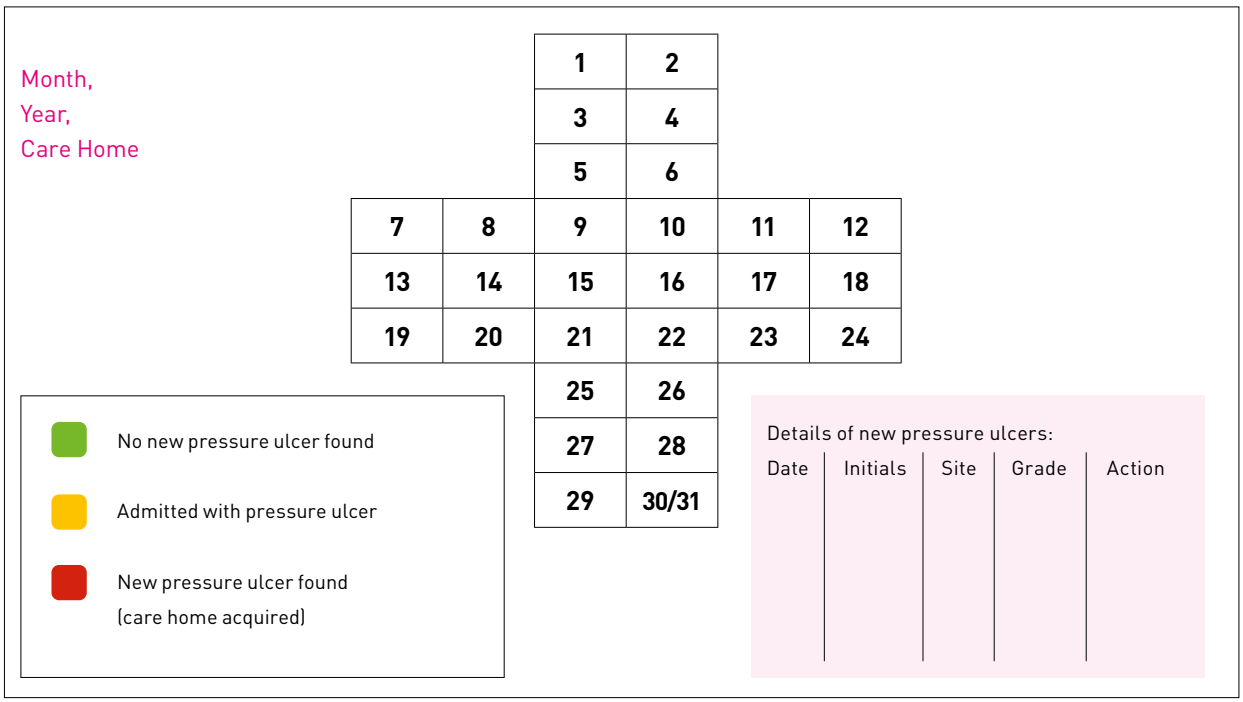
Safety Crosses

Safety Crosses are a great way of collecting data in real time about how you are progressing towards the aim. The visual nature of safety crosses means that they are a useful way of engaging front line staff with measurement of harm free care in care homes.

What is a safety cross?

- ✔ A safety cross is a visual data collection tool that we can use to identify areas for improvement
- ✔ A safety cross is a calendar in the shape of a cross in which we can record a metric and the number of occurrences

An example of a Pressure Injury Safety Cross



Safety Crosses are:

- Simple and visual
- Engage staff in daily measurement
- Encourage early detection of issues
- Allow staff to see trends and agree on solutions for improvement

› See resources section at the end of the document for Safety Cross templates and other information

Why use a safety cross?

- ✔ To improve patient safety and promote good practice by raising awareness within the team and others regarding the incident(s) being tracked
- ✔ To provide real time incidence data to let staff and patients/clients know on a daily basis how many days have gone by without a new incident occurring. You can do this by displaying in a public area 'Days without Incident ____"
- ✔ To link the data to an improvement goal/ initiative

There are multiple types of safety crosses including Falls, Pressure Ulcer (see next page), UTI's, Chest Infections & Challenging Behaviour, Medication incidents etc.

Presenting your data

Gathering Baseline data

Before starting any QI project it is important to collect data about the system **BEFORE** any interventions are started. This is called baseline data.

Presenting your data- run charts

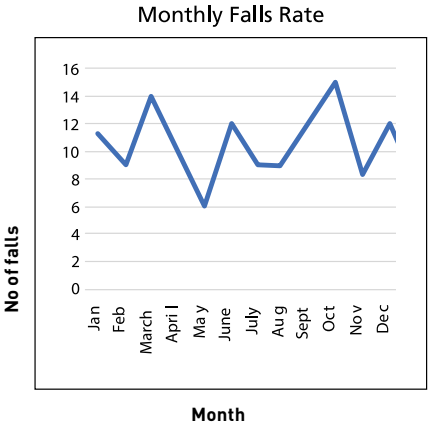
The way that data is presented is important. Small amounts of data can be collected regularly and complied into 'run charts.' A run chart is a line graph of data plotted over time which can show trends or patterns in a process. Run charts are a good way to show how much variation there is in your process over time. Once you begin to make your changes, plotting data over time is an effective way to understand the impact of the change and to determine whether the changes you are making are leading to improvements.

How do I know whether a change is an improvement?

However, in order to see if the changes being made in an improvement project are leading to an improvement, we need to have some way of knowing whether this is just normal variation or the result of a **real change**.

Understanding your data

When looking at any care home data there will often be differences over time with data. There are lots of examples of variation in every day life and in care home data. Variation is a part of everyday life and so when we are looking at improvement data, it is easy to over or under-react to a single or most recent data point and intervene in some way with the process. Plotting data over time is a simple effective and visual way to determine whether the changes you are making are leading to improvement. Here is an example of a run chart which shows variation in care home falls per month:



Here are some examples of measures that show variation in care home data:

- The **weight** of a resident each month
- The **number** of residents with a GP review each week
- The **quantity** of pressure ulcers each month
- The **number** of ambulance call outs each month
- The **percentage** of medication omissions each week

Analysing your data

To start the process of analysing your data it can be helpful to calculate the average (mean or median value). Once you have gathered your baseline you can calculate the mean or median value. The simplest way of doing this is to collect your baseline data and calculate the average. For example: To calculate the mean number of falls per month over a year - add up the number of falls each month and divide by 12. (As a general rule use the mean. However, if the data points look very 'spiky' (i.e. there is a frequent wide variation in your lower and upper figures then use the median. The median is simply the middle value of all your values if they were arranged in order).

To find out more detailed information about variation and shifts / trends in run charts see links at the end of the guide.

Think about the measures you are going to use in your project and answer the questions below:

MEASURES: How will you measure the improvement? Consider how and who will collect data; how often and when?

What are the outcome measures for the QI project?

What process measures you might also consider?

What might be some balancing measures associated with the QI project?

Key rules of measurement for improvement:

- First collect your baseline data
- Measure at weekly or monthly intervals (little but often – a sample will do)
- Ensure measurement is in real time
- Make it easy to understand
- Make it part of your working routine and so easy to collect
- Displaying your measurement: use run charts ie. time series charts

Data collection

You can use simple audit tools to collect data about compliance with care processes such as observation of practice and reviewing care records. For example- A fluid balance or continence audit tool will provide information about whether hydration targets have been met or whether residents have had a falls risk assessment completed.

CHANGES - WHAT CHANGE CAN WE MAKE THAT WILL RESULT IN AN IMPROVEMENT? ›

AIM

MEASURES

CHANGES

TESTS

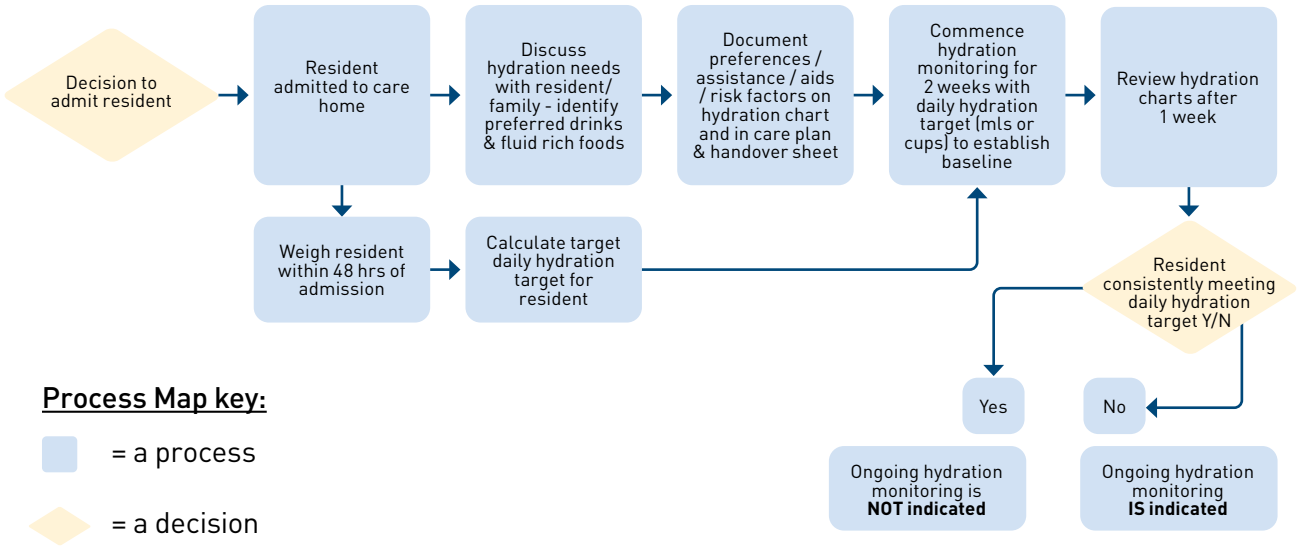
Quality Improvement Tools to identify potential change ideas

Before embarking on implementing any changes it may be useful to explore with staff the current systems and processes in relation to the area for improvement. Two activities which are relatively simple but can provide insight and identify potential areas for improvement are process mapping and reliability mapping.

Process Mapping

A process map describes the current pathway and can be used to identify problem areas, stakeholders and ideas for change. Very often there may be only one or two parts of a process that may be unreliable. Engaging staff in a process mapping activity will often reveal which parts of the care processes are least reliable and can be improved.

Example: Process map of hydration monitoring in a care home



Process Map key:

= a process

= a decision

Reliability Mapping

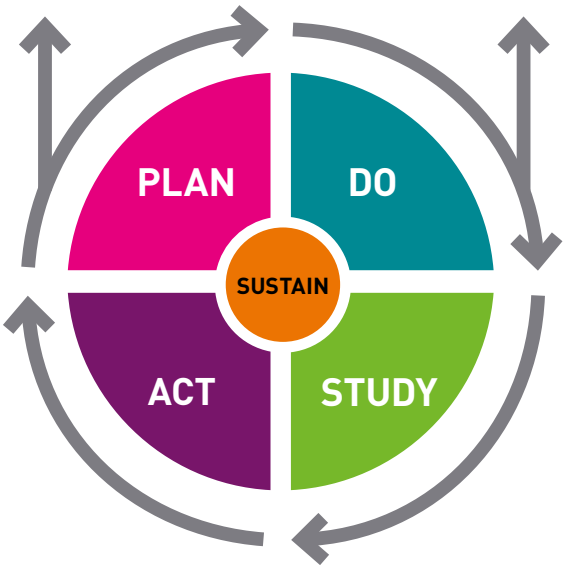
Another simple technique to explore how the reliability of a particular care process is to ask 10 staff the same question about the process. If 8/10 staff provide the same response then this is deemed a **reliable** process. For example, if you ask 10 staff ' What is the standard for daily fluid intake in this care home?'

If 8/10 staff say fluid intake is calculated based on 30mls/kg/day this is a **reliable** process.

However, if 3 staff say fluid intake is 1000mls per day, 2 staff say fluid intake is 1500mls per day, 3 staff say fluid intake is 8 cups per day and 2 staff say fluid intake is calculated based on weight of resident 30mls / kg **This is not a reliable process and reliability of the hydration practices could be improved.**

Tests of change - PDSA's cycles (Plan Do Study Act)

Testing change ideas is done using PDSA cycles (see diagram below).
It is now time to think about the specific changes we could make to achieve that improvement. It is likely that there will be a number of changes you will need to make achieve your aim. There are a number of tools you can use to help you understand your current processes and identify the areas for improvement. These tools including process and reliability mapping and exploring human factors are outlined in the next section.



For each test of change, run the PDSA cycle as follows:

PLAN:
- Identify aim
- Questions/ Predictions
- Plan to carry out the cycle (who what where, when, how?)
- Plan data collection.

DO:
- Carry out the plan
- Document the problems and unexpected observations
- Begin analysis of the data

STUDY:
- Complete the analysis of the data
- Compare data to predictions
- Summarise what was learned

ACT:
- What changes are to be made
- Next cycle?

Features of PDSAs

- Keep tests small so failures cause minimal disruption (i.e. one resident / one day)
- Measure, so that you understand the impact of any change
- Test only ONE change at a time as it will be difficult to establish which changes are the most effective
- Don't change the system until you understand the impact of each change
- Retest the change in each new environment e.g., don't assume that a pathway which has been tested in one care home / group of residents will work in another area or with a different group of staff / residents
- Give team members ownership of different tests
- Celebrate failures, this is useful information too. It is as important to know what doesn't work as much as what does work!

PDSA: THEORIES AND RESULTS ›

Use this sheet to record some of the tests of change PDSA's that you might want to trial in your Quality Improvement Project.

PDSA (Plan Do Study Act) ideas

PDSA TEMPLATE ›

This cycle will be used to: test / develop / implement a change

Objective of this cycle: To test .....

PLAN -The change to be tested (include who, what, where and when). Agree the process for data collection. Predict what will happen.

DO -Carry out the plan Collect the data Begin analysis of the data.

STUDY -Describe what happened when you ran the test or change (note any unexpected events / problems). Compare data before and after the change. Summarise what was learned.

ACT -Identify the changes / modifications that need to be made. Implement the next cycle? Full implementation?

Human Factors and Quality Improvement

What are Human Factors?

Human Factors are those things that affect an individual's performance. Human Factors encompass all those factors that can influence people and their behaviour, including the environmental, organisational and job factors, and individual characteristics which influence behaviour at work.

In care homes when staff go to work, 99.9% of the time they set out to do a good job. However, how the human brain processes information and functions is affected by external and internal conditions. When we are not functioning at our best physically or emotionally – or when we are in an environment that affects our thinking and decision-making processes – errors can result.

When care processes are not carried out as intended, it may be related to human factors –So, if staff don't follow the policy or procedure, they're not being malicious: the procedures might be poorly designed or they might not have the resources to follow them.

Human Factors and Quality improvement

Health Education England and NHS England have recognised the need to increase awareness and understanding of the concept of Human Factors, highlighting how the approach can be used to drive improvement in quality and safety in health and social care.

Human Factors can help us to understand and investigate the ways in which we find out why errors are occurring and help us design better ways of working. The aim is not to be critical but to gain a better understanding of what makes life difficult and what makes life easy. Human factors awareness helps to prevent errors and helps us to understand why errors occurred. However it only helps if we are really honest in our investigations about why things may have gone wrong.

When undertaking a Quality Improvement project one of the ways in which potential improvement ideas could be identified is to explore human factors that could be influencing reliability of a process. By having open, honest discussions about why staff might not be following policy / procedure, and exploring ideas about what might make the process easier to follow could identify potential improvement ideas that make it easier for people to work and improve the quality, safety and reliability of care. In other words, human factors are about making it **easy** to do the **right thing** - rules that are easy to follow every time, not rules that you have to work around to get the job done. Health Education England have produced a video 'Human Factors - A Quick Guide' which explains some of the principles of Human Factors.

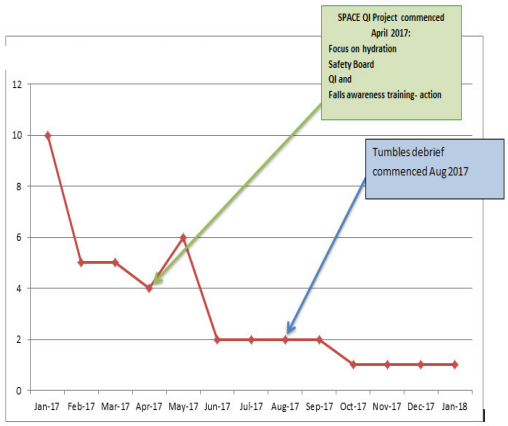
Learning from things that go well

We can also drive improvement by looking at areas where things go well internally or externally. Two approaches that are particularly useful in an improvement project are Learning from Excellence and Appreciative Inquiry (links can be found in Useful Resources section).

Once you have identified what changes you can make go onto testing them through PDSA cycles.

COMMUNICATING AND CELEBRATING SUCCESS

An important part of any Quality Improvement Project is to recognise and celebrate progress and to communicate this to those involved. Providing feedback about the impact of different interventions, what worked and what didn't, will help guide future direction. It will also maintain momentum and enthusiasm about the project and generate new ideas.
Here is one example of how to communicate and celebrate QI progress.



WELL DONE EVERYONE!!!!

Did you know that since the start of the project there have been only 18 falls in 8 months?

This equates to:
228 / 246 FALLS FREE DAYS

USEFUL RESOURCES

CQC brief guide Assessing Quality Improvement in a healthcare provider:
www.cqc.org.uk/files/brief-guide-inspection-teams-assessing-quality-improvement-healthcare-provider

Creating driver diagrams for improvement projects
www.improvement.nhs.uk/resources/creating-driver-diagrams-for-improvement-projects/

Davidge, M Measurement for Improvement (a 10-minute video available on YouTube):
www.youtube.com/watch?v=Za1o77jAnbw

HEE Human factors video
www.youtube.com/watch?v=aGZz3w5Hy8Y

Interpretation of run charts
www.improvement.nhs.uk/documents/2157/run-charts.pdf

Learning from Excellence
www.learningfromexcellence.com/

The Institute of Healthcare Improvement has useful resources as well as some online courses:
www.ihi.org
www.ihi.org/education/ihiopenschool/courses/Pages/default.aspx

SPACE QI and Appreciative Inquiry resources
Select the resources tab to access resources
https://meridian.wazoku.com/#/challenge/a4b56b3fe0f14dd288e603ad4a166231?entities=idea&sort=-relevancy&page=1&pageSize=15&parentType=challenge&parentId=a4b56b3fe0f14dd288e603ad4a166231&communityId=5906910ba97b42f4be867abde716b3ef

NOTES ›

https://meridian.wmahsn.org/