

BASICS OF IMPROVEMENT METHODOLOGY

This paper is intended to provide an introduction to the 'Improvement Model' which is central to all of our change management programmes. The 'Improvement Model' is underpinned by a range of other quality improvement tools and techniques which inform the model described below. There is now plenty of evidence to show that individuals find it an excellent way of demonstrating real impact quickly. You may also find the NHS Institute for Innovation and Improvement's "Improvement Leaders Guides" very useful.

1.1 The Improvement Model

Making improvements in services requires change and change can seem threatening or overwhelming for busy people already doing demanding work. Our environment is constantly changing. Some changes are imposed on us and we have to find a way to manage the impact and additional pressure of ensuring the change brings about improvement. At other times, change is something we choose to make, motivated by the desire to make things better. It is obvious to say, but whilst every improvement involves change, not every change is an improvement.

Making changes to the way that we do things can be time-consuming and can sometimes feel risky. The 'model for improvement' (Langley et al.) is a tried and tested approach to achieving successful change.

Use of the model offers the following benefits:

- It is a simple approach that anyone can apply;
- It reduces risk by starting small;
- It can be used to help plan, develop and implement change;
- There is plenty of evidence that it is highly effective.

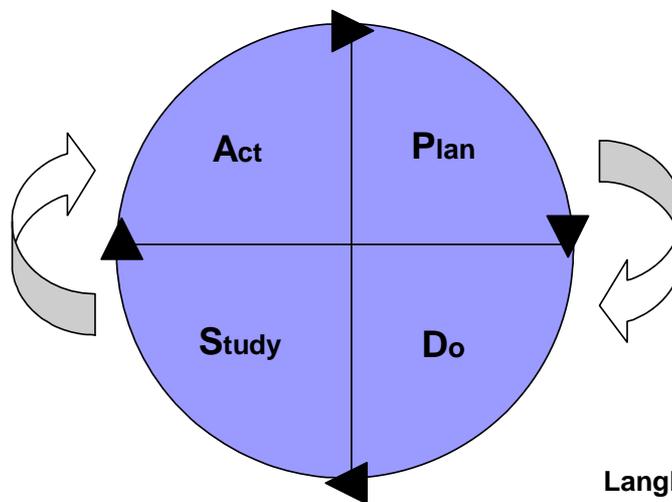
The 'model for improvement' was first published in 1992 by Langley, Nolan et al in '*The Improvement Guide: A Practical Approach to Enhancing Organisational Performance*'. The model provides a framework for developing, testing and implementing changes to the way that things are done that will lead to improvement, and is detailed on the next page.

The model consists of two parts that are of equal importance:

The first, the 'thinking part', consists of three fundamental questions that are essential for guiding improvement work.

The second part, the 'doing part', is made up of Plan, Do, Study, Act (PDSA) cycles that will help you make rapid change.

The Model for Improvement



Langley, Nolan et al

The Improvement Guide: A Practical Approach to Enhancing Organisational Performance. Langley G J, Nolan et al.
ISBN 0-7879-0257

1.2 The three fundamental questions for achieving improvement

A planned approach to improving things will give you a better chance of being successful. The three fundamental questions for achieving improvement are a useful way of framing your work.

1. What are we trying to accomplish?

This question is intended to help you be clear about the improvements that you would like to make, what results you would like to get and how you would like things to be different. Having a clear vision of your aims is crucial.

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

Without measurement it is impossible to know whether you have improved. Think about how you want things to be different when you have implemented your change and agree what data you need to collect to measure it. You can do this in terms of

the way in which your results or outcomes might be different, how the service that your patients receive will be better, or how your processes might change.

3. What changes can we make that can lead to an improvement?

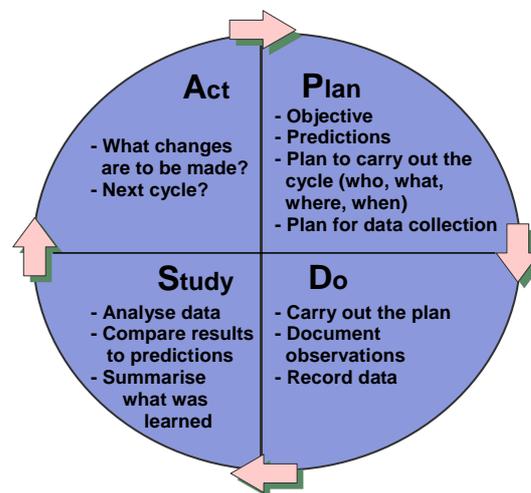
Finally, you need to decide what changes you will try in order to achieve the results you are looking for. What evidence do you have from elsewhere about what is most likely to work? What do you and your team think is a good idea? What have other people done that you could try? This is where you can adapt ideas or be completely creative. Remember that you know your own system best, so keep your objectives in mind and use your knowledge and experience to guide you.

Gather together as many ideas as you can. These will form the basis for the next step – your PDSA cycles.

1.3 PDSA Cycles

PDSA stands for 'Plan, Do, Study, Act'. Once you have decided exactly what you want to achieve, you can use PDSA cycles to test out your ideas developed from the third question, *What changes can we make that will lead to an improvement?*

The PDSA Cycle for Improvement



The key to PDSA cycles is to try out your change on a small scale to begin with and to rely on using many consecutive cycles to build up information about how effective your change is. This makes it easier to get started, gives results rapidly and reduces the risk of something going wrong and having a major impact. If what you try doesn't work as well as you hoped, you can always go back to the way you did things before. When you have built up enough information to feel confident about your change, you can then implement it as part of your system. Think of a 'small' PDSA cycle in terms of the scope of your test.

The 'Study' part of the cycle gives you the opportunity to reflect on what happened, think about what you have learnt and to build your knowledge for further improvement.

Finally, you can move on to your next steps – the 'Act' part of the cycle. Do you need to run the same cycle again, gathering more evidence or making some modifications based on what you learnt? Or do you need to develop further cycles to move your work forwards?

1.4 Practicalities of Improvement Methodology

- Improvement is nearly always a team endeavour. Try to ensure that you involve the right people in your work.
- People have a tendency to jump straight to solutions rather than really work out what the root of the problem is. If you use the three fundamental questions, it will help you be sure that you are dealing with the issue that really needs to be addressed.
- When you plan your cycle, make sure you are clear about who is doing what, where and when. Your results are dependent on how good your plan is. We have developed a worksheet that you may find useful and included it within this document.
- Discuss what you think will happen when you try out your change. What is your hunch? When you have carried out the cycle, compare your expectations with what actually happened. You may learn something interesting about how things work.
- Record your PDSA as you go along: the plan, the results, what you learnt and what you are going to do next. Not only is it very motivating to see the results of what you have tried, it is also a great way of accumulating information about your systems and a good way of sharing your learning with other people.
- Use PDSAs consecutively to build up the information about your change and then use them to implement it systematically into your daily work. PDSA cycles generally do not operate in isolation – you should expect to have a series of them leading towards your goal.

And finally....

- PDSAs cannot be too small
- One PDSA will almost always lead to one or more others
- You can achieve rapid results
- They help you to be thorough and systematic
- They help you learn from your work
- Anyone can use them in any area

1.5 Templates to support development of improvement work

You may find it useful to use the following templates as a record of your continued improvement work and as a resource you can refer back to as you progress along the course of the programme. The templates are intended to run consecutively, in the order they are displayed here:

2.1 Change 'Planning' Sheet

Date: _____

What do you want to achieve?

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What are you going to measure?

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**What are you going to do?
(PDSA planning)**

Who will carry out the plan?

What exactly will we do?

Where will it take place?

When will it take place?

What do you expect will happen?

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2.2 PDSA Cycle Progress Sheet

Complete this part as you carry out your cycle. Keep notes on what happens.

Do

Complete this part when you have completed your cycle, having gathered your data and reflected on what happened. Include expected and unexpected results.

Study

Record what you will take forward from this cycle, or what you will do differently next time. What other tests or cycles will you do?

Act

3 Additional Quality Improvement Tools and Techniques

There are many different improvement tools and techniques widely referenced and sometimes applied in the UK healthcare system, Local Government and other public services. You may have come across some of those in the list below, and you may have alternative suggestions – the list is by no means exhaustive:

- EFQM
- Polarity Management
- Demand & Capacity
- Simple Rules/Complex Adaptive Systems
- Accelerated Quality Improvement
- Pursuing Perfection
- Eliminate Waste
- Scenario Planning/What Ifs
- Work and Patient Flow
- Process Mapping/Pathways
- Rapid Learning Cycles
- Process Control Charts/Variation Mapping
- Care Stream Design
- Theory of Constraints
- Change Management Theories
- Lean
- Six Sigma

We can't guarantee to cover all of the above at the learning events or improvement methodologies workshops, but we will expose you to a range of different tools and techniques as an integral part of the programme. Some of these will be useful to you as individuals, but many involve team working and will be useful for you as your improvement activity progresses. Equally, if there is something that you would really like us to cover just let us know – the programme is inherently flexible and we always try to respond to participant need. Familiarising yourselves with the following will help you to progress your improvement initiative:

- Process Mapping
- Root Cause Analysis
- Measurement
- Understanding variation
- Statistical Process Control