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How to...

Use the PDSA model for effective change management

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Leadership in the NHS leads to improved services for patients. Furthermore, it has been shown that the more engaged doctors are in leadership within the NHS, the more improvement there is to services for patients.

The terms 'leadership' and 'management' are often used inter-changeably and Kotter argues that these are two separate functions.[1] In reality though, within a busy complex organisation such as the NHS, leadership and management go hand-in-hand.

It could be argued that the focus for what these functions do naturally organically materialises when there is a requirement for change within complex systems and therefore a requirement for change management.

One effective change management model is Edward Deming's PDSA cycle.[2] This is an often used process to help teams improve the quality of care. Improving quality is about making healthcare safer, more efficient, patient-centred, timely, effective and equitable. The PDSA cycle, shown in Figure 1, is a model for learning and change management.

The key components of the model are:

- **P**lan
- **D**o
- **S**tudy
- **A**ct.

The first step is **P**lan. There are a number of key questions to ask at this stage.

- What is it that you are trying to achieve? This is called the *aimed statement.*
- Underpinning this is the question … What is the problem? You then have to formulate an answer to the question …
- How do you know it is a problem? To answer this, baseline measurements must be acquired. These inform the understanding of the problem and it's

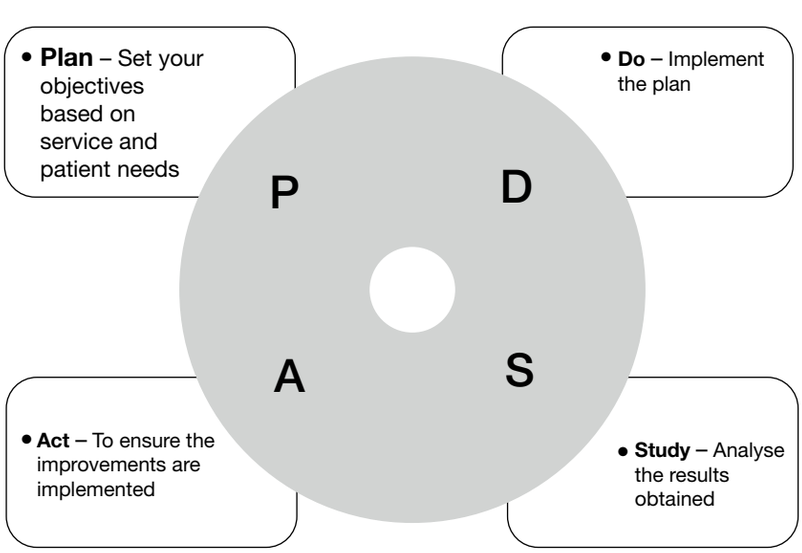

Figure 1 The PDSA cycle

scale. It is also important to acquire data which informs the likely or actual cause of the problem.

The points above naturally lead toward producing a description of the solution. One has to then decide and describe short-, medium- and long-term aspects of this solution. It is important to describe and write down the plan for successful implementation, naming individuals and what they will do, why they will do it and when they will do it.

These roles and responsibilities, accountabilities and targets are important further along the process for reviewing progress. You have to then decide how you will measure progress. It is important to consider predictions, i.e. what do you expect to see and why? What likely consequences and impacts will there be within the system?

The second step is **D**o. This is where you carry out the change, test or intervention and record what has happened. It is important to do this from a particular point in time and to take measurements over a period of time to record the pattern of data. It is important to document problems, changes and unexpected observations. One very important aspect is to use a run chart, a graphical display of your data plotted in some type of order. The horizontal axis is usually a time scale (e.g. days, weeks, months) but could also include sequential patients, visits or procedures. The vertical axis is the quality indicator being studied (e.g. infection rate, number of patient falls, readmission rate).

The third step is **S**tudy. In essence this is about studying or analysing your data and the process itself. Some key questions in this step are:

- Was the outcome close to what you predicted?
- Did it work out as planned?
- What were the lessons learned?

The next step is **A**ct. Act is an important element in that you have to consider what measures and procedures are in place to ensure that whatever solution or solutions you have realised remain effective, so questions such as: What modifications are needed to process? Is it is a clear pathway? Also asking questions about the state of readiness to make another change, which leads on to generating a plan for the next PDSA cycle.

This last point is key to PDSA use, in that the evidence tells us that small incremental changes within a complex system are more likely to be effective in producing overall effective outcomes. It is possible to enter an almost constant cycle of small changes. It is, however, important to assess readiness for further change facilitated by PDSA cycles.

The key message is that repeated use of small PDSA cycles to facilitate change, results in the best likelihood of sustained improvements (Figure 2).

TOP TIPS

1 Think about your objective: What is it that you want to accomplish, be clear in your aim, test it by checking with colleagues. Being clear at this stage gives your project the best chance of success and avoids 'drift'. Use the 'SMART' model for your objectives.
2 Start small and keep it simple.
3 Be organised – plan your time.
4 Be very careful in regard to the group that you pull together. Engagement and commitment is important, don't assume that you have it. Ask direct questions of proposed participants.
5 Consider from the beginning what resources you might need and revisit this question as you work through the project.
6 Constantly ask is there anyone else who should be in the project communications, i.e. have you told everybody who needs to know?

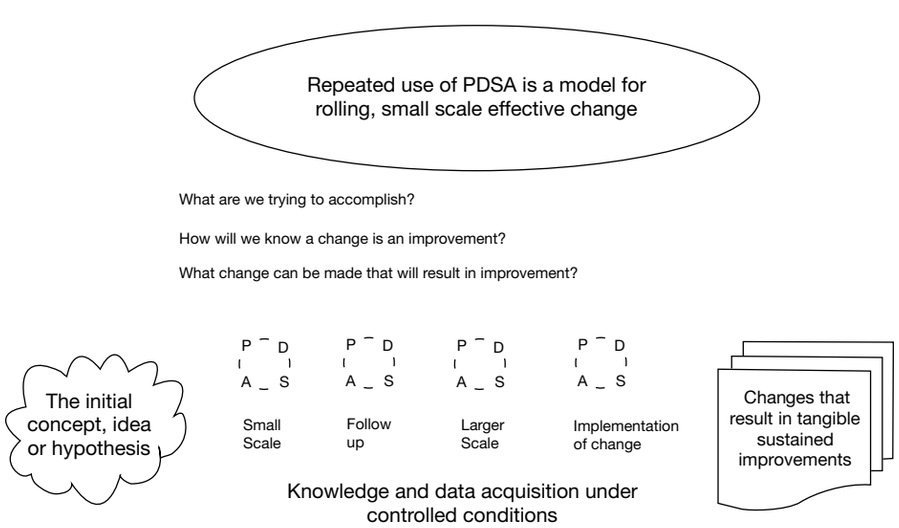

Figure 2 Repeated use of the PDSA cycle

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7 Make sure you know what to measure, to ensure that whatever changes you have introduced have made a difference.
8 The measurement should be straightforward, simple and verifiable, in order to minimise the risk of challenge to the proposition that improvement has been made.
9 If it works build on the improvement. That building can include scaling up to include more doctors, more nurses, more multi-disciplinary.
10 Document your project. Be clear about what was learnt, be clear about what worked.
11 Be clear about what did not work; learn from that.
12 Record your results on a run chart so that you can see the changes taking place over time.

The PDSA cycle can appear somewhat cumbersome and complex; in essence, however, it is identifying, describing, and providing structure for a natural process whereby groups/teams initiate change within their system, whether within healthcare or elsewhere.

Using this explicit framework for managing a change programme ensures that you do not drift from the initial objectives, that you have actual achievable measurements that are valid, and will show improvement if improvement is realised. It also provides the evidence that an approach worked.

Formalising your change management in this way enables you to 'sell' your 'intervention' to others.

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Further reading

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