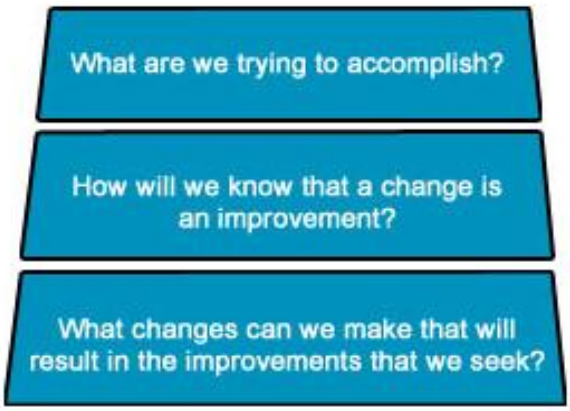
QUALITY IMPROVEMENT

THE MODEL FOR IMPROVEMENT AND THE PDSA CYCLE

The model for improvement and the plan, do, study, act cycle is one of the methods used in quality improvement. It supports an experimental "trial and learn" approach to quality improvement in which small changes are tested, learned from and further changes implemented.

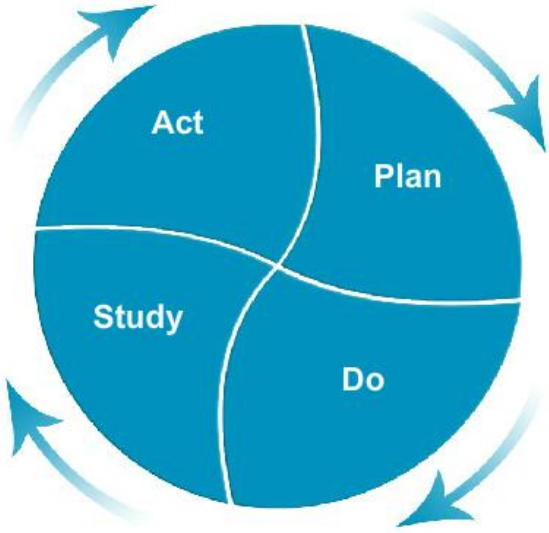


The Model for Improvement consists of three questions

What are we trying to accomplish? We must know exactly what we are trying to do – an example of a concrete goal would perhaps be: "we are trying to improve the time until PCI in patient with STEMI."

How will we know that a change is an improvement? We will know there is an improvement by measuring the processes and outcomes involved – for example by measuring the time between registering in the department and ECG being performed, or the time between registration and transfer to the Golden Jubilee.

What changes can we make that will result in an improvement? We must consider what changes can be made – this may be based on the success of others or our own intuition. One change could be to perform an ECG on every patient with chest pain during triage.

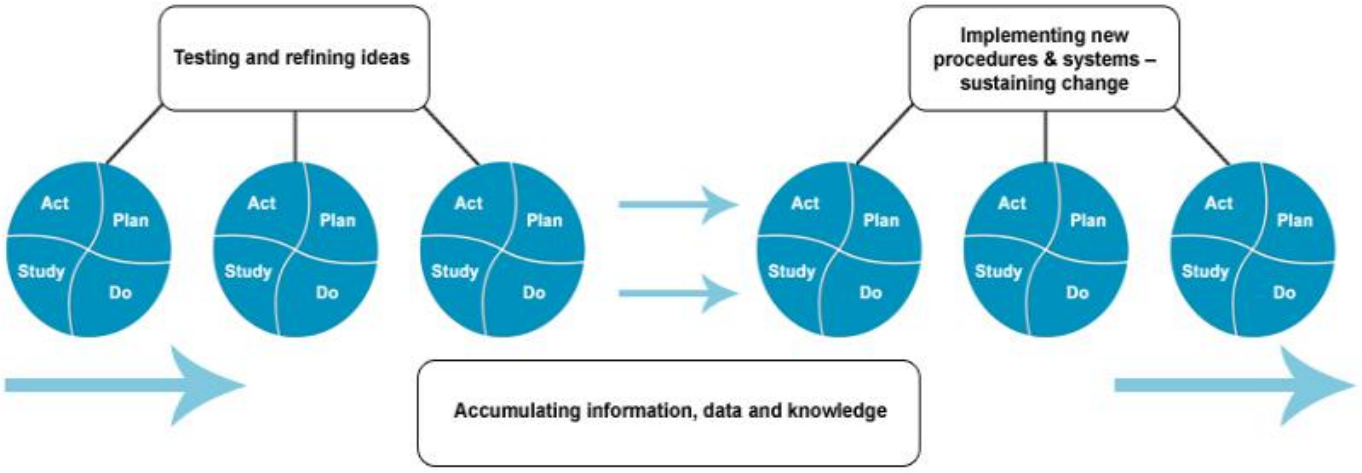


The PDSA Cycle

- **Plan:** what exactly are we going to do?
- **Do:** when and how did we do it?
- **Study:** what were the results?
- **Act:** what changes are we going to make based on our findings?

The PDSA cycle allows a healthcare provider to learn as quickly as possible whether an intervention works in a particular setting and to make adjustments to increase the chances of delivering and sustaining the desired improvement. Problems with the original plan can be identified early, the plan revised and a new experiment can be conducted. This flexibility and adaptability is its key strength.

A key feature of the PDSA cycle is that the process is circular rather than linear – one cycle leads fluidly into the next. One change will be studied, learned from and inform the next change, leading to constant, incremental improvements which will, hopefully, benefit patient care over time. It is more responsive than traditional audits as it allows a series of interventions to be tested, adapted and evaluated quickly.



The above diagram demonstrates the iterative nature of the process.

When performing a PDSA quality improvement project, it may be useful to start with a small intervention and a small group of patients. Small interventions are more likely to be adhered to by colleagues who may be resistant to change in the current practice. Piloting your project on a small scale will be safer – problems can be identified before the changes are applied more widely, limiting unforeseen adverse effects of the change. Trialling your changes on a small scale will also quickly provide you with evidence improvement, if there is any, which will help win over sceptical colleagues. Once the changes are seen to be beneficial and problems are ironed out, the changes can be applied more widely.

As with anything, the PDSA cycle has its limits. It does not guarantee improved patient care – it may merely demonstrate that improvement is resistant to small-scale, incremental change. This may be due to larger organisational or cultural factors that are beyond the scope of small clinical teams. Alternative methods of driving change, significant resources or support from senior managers may be required. This information still useful as it may highlight a deeper problem or indicate that effort is better directed elsewhere. Whether improvement in care is achieved or not, useful learning will take place.