

Quality improvement for General Practice

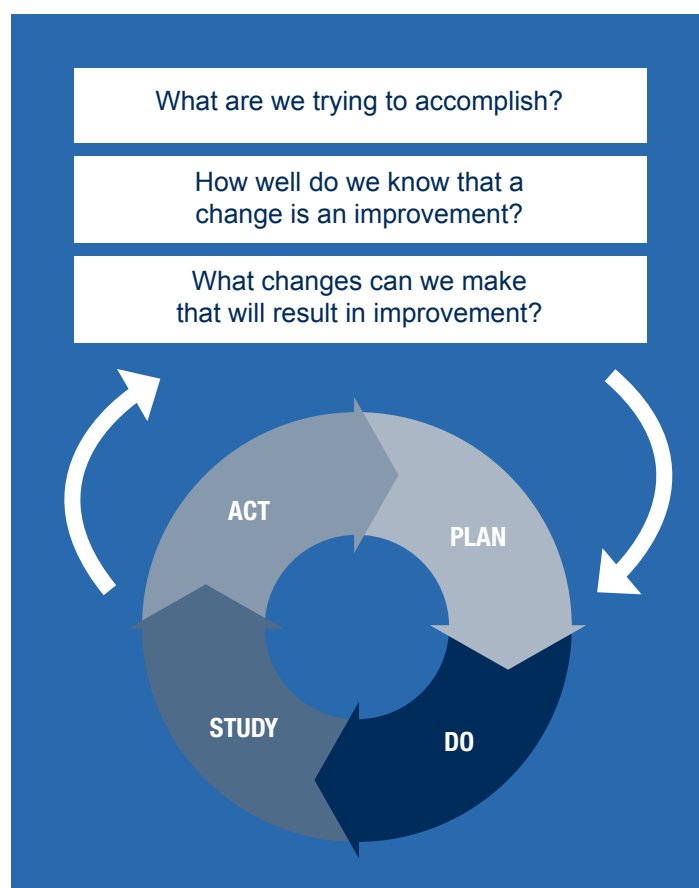
A guide for GPs and the whole practice team

The Royal College of General Practitioners (RCGP) has published Quality improvement for General Practice: A guide for GPs and the whole practice team. Designed with the busy primary care professional in mind, the guide details a range of straightforward quality improvement (QI) techniques that will see you and your team through a cycle of improvement time after time.

This paper offers practical guidance on using Model for Improvement and PDSA (Plan Do Study Act), one of a range of helpful tools described in the RCGP QI Guide.

MODEL FOR IMPROVEMENT AND PDSA (PLAN DO STUDY ACT)

Figure 1: Model for improvement diagram



MODEL FOR IMPROVEMENT

Before embarking on an intervention, ensure that you and the team are very clear and specific about what you want to improve and how you will know if you have been successful. The Model for Improvement

gives you three questions to answer before you start testing changes.¹

This section explains how to use the Model for Improvement approach to clarify your aim and measure of success by referring to a common GP issue – antibiotic prescribing.

Question 1: What are we trying to accomplish?

This needs to be specific and include 'by how much?' and 'by when?' For example: "reduce the number of antibiotics we prescribe at the practice" is not very specific.

A more specific aim would be: "reduce our antibiotic prescribing to be in line with the national average in 6 months' time"

Question 2: How will we know if a change has been an improvement?

Decide what you are going to measure so that you know whether your ideas for change are working. Some organisations provide us with external data about our practice, and this can be very helpful in deciding on the overall success of a project; however,

1. Langley GL, et al. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance* (2nd Edition). San Francisco, CA: Jossey-Bass Publishers; 2009. ISBN: 978-0-470-19241-2 and is the source of the diagram on this page.

this data is often slow to arrive and may not be provided frequently enough for judging the success of a change.

Continuing the antibiotic example:

Data about antibiotic prescribing compared to national averages is being provided every three months by the local CCG Medicines Management Team and this will be used to assess the overall success of the project after six months.

However, this externally collected data is not useful for judging whether our small changes have been successful. Another data source is required to measure each of those individually.

Question 3: What changes can we make that will result in improvement?

To answer this question, consider all of the ideas for change that were generated in both the diagnosis and the plan and test stages so that you can select those that you would like to test. In our example, the practice agrees to test three ideas:

- Put a poster in the waiting room explaining to patients why antibiotics are not useful for most coughs and colds.
- Benchmark the prescribing habits of the individual GPs in the practice – number of antibiotics prescribed per ten consultations.
- Provide all COPD patients with a leaflet explaining that most exacerbations should be treated with steroids first, and only use antibiotics if sputum becomes purulent.

PLAN-DO-STUDY-ACT (PDSA)

Why use PDSA?

The 'Plan-Do-Study-Act' approach is part of the 'Model for Improvement'.²

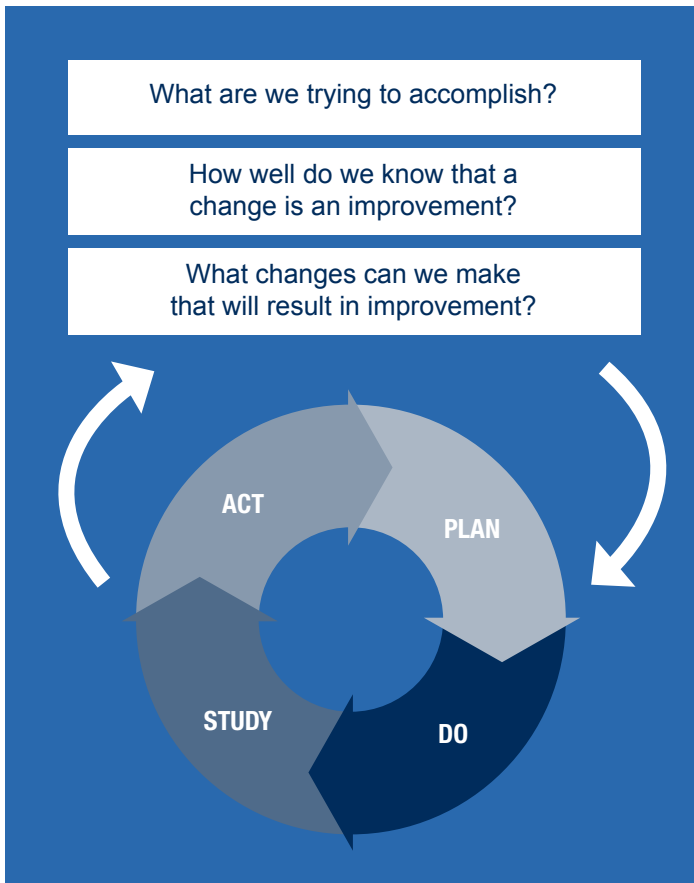
When we want to improve things in our practices, we often come up with a lot of ideas, but cannot be sure which will result in the change we want to see. Sometimes we try something different and we continue to do things the new way even if it does not actually result in improvement. It is easy to lose motivation and start to believe that we cannot make a difference.

The PDSA approach accepts the fact that not all of our ideas will work and allows us to test them out in a controlled way. We can then continue the ideas that work, and stop doing those that do not. It starts at small scale and so is a cost-effective approach.

Each change we identify from answering the third question of the Model for Improvement should enter a 'PDSA cycle' in turn.

We continue with the example of antibiotic prescribing to explain this approach.

2. Langley GL, et al. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance* (2nd Edition). San Francisco, CA: Jossey-Bass Publishers; 2009. ISBN: 978-0-470-19241-2; and is the source of the diagram on page 32.



The PDSA cycle

Plan: In this stage you identify the change you wish to implement in order to bring about an improvement. For each idea or change you can use the three questions from the Model for Improvement and driver diagrams to clarify your aim and measure. Planning will also include identifying who will be responsible for the change; when it will be carried out; over what timescale; and how the measurement will be conducted. Involve all stakeholders in the process and do persuade any reluctant team members to participate. Consider how you might look out for the unexpected – for example, checking that a reduction in antibiotic prescribing does not cause an increase in COPD admissions. This is called a ‘balance measure’.

In our example, the practice identified three changes it would test out: *a poster in the waiting room; benchmarking the GPs’ prescribing habits; and a leaflet for COPD patients.*

Do: First collect your baseline data to monitor the existing state of play. You might do this as part of ‘planning’ or ‘doing’. Ensure that all individuals who are conducting the measurements understand what data is being collected and how to collect it. After sufficient time, continue to collect the data but introduce the agreed change. If you are considering implementing several changes, you would usually introduce one change at a time so that the effect of each can be measured. By introducing only a small change you are likely to encounter less resistance, and, if unsuccessful, adaptations can be made more quickly. The scale at which you test your change should also be kept small at first. Any problems encountered, and any unexpected consequences, can be recorded as implementation progresses.

In our example: *For the second change, the practice decided to run a search every Friday at 17:00 to gather the number of antibiotic prescriptions issued that week.*

Study: The success or failure of the change is assessed at this stage, both quantitatively (by looking at the data collected) and qualitatively (by discussing how everyone experienced the change). Run charts could be used for numerical data. You should compare the results with the predictions you made and document any learning, including a record of the reasons for success or failure. Not all changes result in improvement, but learning can always be gleaned.

In our example: *The practice first tested having the poster in the waiting room and, once that PDSA cycle had completed, the practice tested benchmarking GP prescribing habits.*

Figure 2 shows the number of antibiotic prescriptions issued per week before and after the poster was displayed in the waiting room:

Figure 2: Run chart for reducing antibiotic prescribing (poster in waiting room)

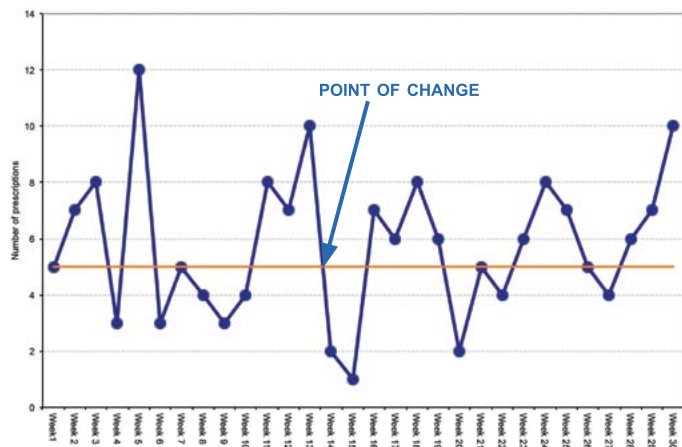
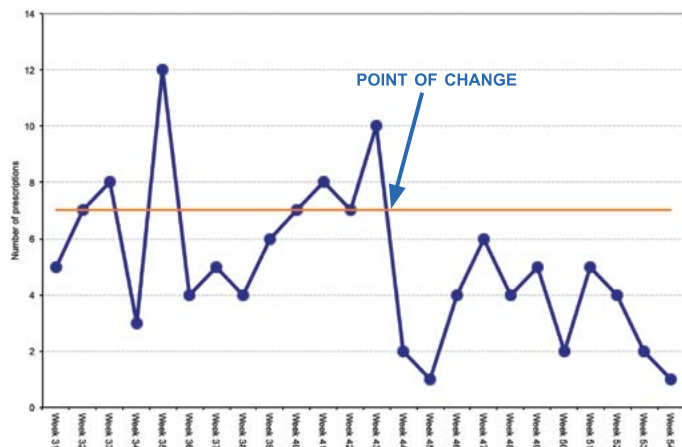


Figure 3 shows the number of antibiotic prescriptions issued per week before and after the GPs prescribing habits were benchmarked:

Figure 3: Run chart for reducing antibiotic prescribing (benchmarking GP habits)



From these charts the practice determined that the poster made no impact on the number of antibiotic prescriptions issued, but the benchmarking of GPs' prescribing habits did reduce the number issued.³

3. For guidance on creating a run chart see the *RCGP guide to run charts*.

The next section provides some simple rules for interpreting run charts like those above.

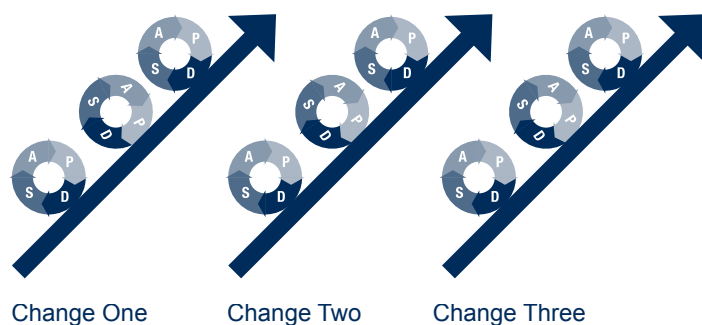
Act: In this stage, decide whether you just need to adapt what you have tried or whether you might try something completely new instead.

In our example: *The decision was made not to keep the poster in the waiting room, but to continue the benchmarking exercise every two months.*

Summary:

It is best to test small changes and then do multiple cycles. Learning from one cycle informs the next.⁴

Figure 4: Sequential PDSA cycles for learning and improvement



This method allows fairly rapid assessment of any intervention in a cost-effective manner.

4. Multiple PDSA cycle diagram. Institute of Healthcare Improvement. Science of Improvement: Testing Multiple Changes. Cambridge, MA: IHI. <http://www.ihl.org/resources/Pages/How-to-Improve/ScienceofImprovementTestingMultipleChanges.aspx> [accessed 3 March 2015].