CENTRAL QUEENSLAND, WIDE BAY, SUNSHINE COAST PHN

CONTINUOUS QUALITY IMPROVEMENT IMPLEMENTATION GUIDE

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CENTRAL QUEENSLAND, WIDE BAY, SUNSHINE COAST
An Australian Government Initiative

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1. INTRODUCTION

1.1. Purpose

This guide is designed to help your organisation implement continuous quality improvement (CQI) and is specifically designed to help general practices.

Central Queensland, Wide Bay, Sunshine Coast PHN understands that general practices are typically very busy and operate within a complex health system. This guide will help you implement CQI over time and is designed to ensure that your efforts are focussed and build capability.

1.2. What are the key implementation steps?

There are a few critical elements required for the successful implementation of a CQI system. These include:

1.2.1. Executive Commitment

Support from owners, executives and organisational leaders is critical to successful implementation. Implementing CQI will require changes to business systems and therefore without executive commitment, it will be very hard to successfully implement CQI.

Central Queensland, Wide Bay, Sunshine Coast PHN acknowledges that general practices are in nearly all cases small businesses and that a positive business case needs to be made to ensure that change improvements are sustainable. This will be discussed further in this guide.

1.2.2. QI Plan

Changes within your business should be planned for and therefore a quality improvement (QI) plan is important.
The QI plan does not need to be a complex document and can be easily developed using a template available on the Central Queensland, Wide Bay, Sunshine Coast PHN website (link).

The QI Plan should articulate with other organisational planning documents, such as a strategic plan and/or business plans and ideally have a similar review timeframe. The QI Plan is not intended to replace other plans and should remain focused on how your organisation intends to improve over the period.

1.2.3. Protected Time

Protected time is a term used for time that selected staff will have that is available to them to help implement the QI plan. The QI plan should identify a person or a small coordination team and it is generally this team or person that will need a small amount of time, approximately 2 hours every fortnight, to dedicate to coordinating the QI plan and working with the team to test change using the Model for Improvement, which includes Plan, Do, Study, Act (PDSA) cycles.

1.2.4. PHN Support

While it is possible to implement CQI without PHN support, the PHN has resources to help your team and working with your Practice Support Officer can make your journey easier.

If you are serious about implementing CQI, you need some basics established to ensure success.

1.3. Methodologies and Approaches

The methodologies and approaches in this guide have been developed by:

- The Improvement Foundation (IF)
- The Institute of Healthcare Improvement (IHI)

Central Queensland, Wide Bay, Sunshine Coast PHN recognises these organisations as leaders in QI and we recommend that you contact them for any additional information you need about these methodologies and approaches.

2. CONTINUOUS QUALITY IMPROVEMENT

2.1. What is Continuous Quality Improvement?

Continuous Quality Improvement (CQI) is a system of regularly reviewing and refining processes to improve them over time. As a result of an effective CQI system, you should improve:

- the quality of care your patients receive
- staff satisfaction, teamwork and morale
- patient health outcomes, and
- your business efficiency.

A growing body of evidence demonstrates that CQI activities lead to positive change in general practices, particularly when implemented using a whole-of-team approach.
CQI in your general practice can address one or more of the following six domains, and in most cases more than one domain at once:

- Safety: avoiding or reducing harm to patients
- Effectiveness: providing evidence-based care and only providing services that are likely to be of benefit
- Patient-centricity: providing care that is responsive to each individual patient's preferences, needs and values
- Timeliness: reducing waiting times for care and avoiding harmful delays
- Efficiency: avoiding waste
- Equity: providing care of the same quality regardless of personal characteristics such as gender, ethnicity, location or socio-economic status.

2.2. Why Undertake Quality Improvement?

CQI makes good business sense as an effective CQI system will increase productivity and quality, with benefits often seen in the following areas:

- patient experience: improving patients' access to care; the quality and safety of care; with subsequent improvement in health outcomes
- care team wellbeing: improving staff satisfaction, morale, teamwork, and workforce sustainability
- population health: reducing the burden of disease and health inequalities across your region
- business efficiency: improved business outcomes through increased efficiency and effectiveness.

Quality improvement activities are a growing requirement for accreditation and achieving professional development recognition required by a range of national member organisations, such as Royal Australian College of General Practitioners (RACGP) and Australian College of Rural and Remote Medicine (ACRRM). For information on these requirements and how to access recognition points, please refer to your membership organisation's website.

3. IMPLEMENTING CQI

Effective CQI systems involve the team, at least most of them. You'll need to determine the best approach for your team as they all vary. You may have a highly functioning team and that are all ready to support CQI, or you may have a team that is largely disinterested in CQI and will be difficult to engage.

As CQI will certainly change business systems and impact on the way people work within the general practice, you will need to have executive commitment. Which means at least one of the executive managers and/or owners willing to support CQI. If you have more support, even better.

Once you have some level of executive commitment, you will need to establish a quality plan (if you do not already have one).

3.1. Quality Plan

The quality plan can be a relatively simple document that clearly states what your organisation is trying to achieve, how you will measure and monitor your work and what strategies you believe will help you achieve your goal. The quality plan should be achieved over time, a year or two is recommended. Aligning the quality plan with other business plans (strategic plan, business plan, annual budgets) is also important. The quality plan will generally include:

3.1.1. Understanding Your Population and Performance

Using your clinical information system or other software to generate summary results, briefly document your population profile, for example you should be able to present a picture of the organisation's current profile and performance to your team, such as:

- total number of 'Active' clients
- total number of clients
- proportion of Active clients with coded diagnosis of key chronic diseases
- x% of patients coded with diabetes have had a HbA1c test in the past year
- y% of patients coded with diabetes have had a GP Management Plan claimed in the past year
- z% of patients coded with chronic obstructive pulmonary disease have had their diagnosis confirmed with spirometry.

The above are examples and there are many nationally consistent quality indicators available in clinical information software to help you produce a profile that will provide to the broader team with a snapshot of your population and how your general practice is performing.

If you need a hand with this, ask your Practice Support Officer for assistance.

3.1.2. Agreement on a Focus Area

While plans can include multiple goal statements and numerous strategies, given the complexity of general practice and resources typically available, it is recommended that you start with one focus area. The focus area is typically stated as a disease topic or other health care topic. For example, chronic heart disease, cancer screening, diabetes, COPD, Aboriginal and/or Torres Strait Islander health, immunisation etc. To improve in any of these areas, you will need to achieve improvement in relevant processes and quite probably data quality. Therefore, it's best to choose a health-related topic and not a process or system. These will be the focus of your CQI work using a selected focus area as a place to start.

To determine the focus area, you should consider choosing an area that has stronger team support. Reasons for this support may include:

- the clinical area
  You may have a clinician(s) interested in a focus area that is willing to help
- available resources
  There may be a local improvement program that you can join that will provide additional support and resources, or there may be existing resources that you can access to assist you
- current performance
  Looking at your current performance, identify where there is reasonable room for improvement. You may also have some ideas about what to do first.

Central Queensland, Wide Bay, Sunshine Coast PHN has a range of toolkits that may help you determine a focus area and provide a resource to help your work.

Once you have selected the focus area, you will need to determine a goal and measurement for this area.

3.1.3. QI Plan Goal

Make your goal a 'SMART' goal (Specific, Measurable, Achievable, Relevant, Time-bound).
In this example the team has chosen the following goal:
Over the next year, increase to 40% the proportion of Active clients living with diabetes, whose most recent HbA1c measurement result that was recorded within the previous 12 months was categorised as less than or equal to 7%.

The team has used HbA1c control as an indication of health outcome improvement to patients with diabetes. There were aware that the current performance was 27% and that it will be challenging to improve greatly. The 40% target in the goal sets a reasonable stretch without being unrealistic.

3.1.4. Measurement

There are many established quality indicators across a range of improvement topics available in clinical information system and other software. Using existing measurement makes it easier for you and it is consistent.

The measures you choose will vary depending on the focus area. However, they should include a couple of process measures and at least one outcome measure.

Example 1: if diabetes is your focus area you could use:

- HbA1c under control (Outcome)

The proportion of Active clients living with diabetes, whose most recent HbA1c measurement result that was recorded within the previous 12 months was categorised as less than or equal to 7%

- HbA1c measurement (Process)

The proportion of Active clients with diabetes who have had two HbA1c measurement result recorded within the previous 12 months

- GP Management Plans (Process)

The proportion of Active clients with diabetes who have had GP Management Plan (GPMP) claimed within the past 12 months or a GPMP review within the past 6 months.

Though your early improvement work you would expect to see positive trends in the process indicators. The outcome measure in this case is likely to take 6 to 9 months to start showing improvement as it is harder to achieve but can be improved over time with through improvement in care processes.

Example 2: if your focus area is immunisation you could use:

- Proportion of patients aged 65 and over who are recorded as being immunised against influenza within the past 15 months (Process). This is a PIP QI Improvement Measure

- Proportion of patients with diabetes who are recorded as being immunised against influenza within the past 15 months (Process) This is a PIP QI Improvement Measure

- Proportion of patients with COPD who are recorded as being immunised against influenza within the past 15 months (Process) This is a PIP QI Improvement Measure.

In this case the measures selected are all process as the outcome measurement is likely to be downstream (hospital avoidance) and/or quite complex to measure. However, if you are improving these measures, there is a reasonable reason to believe that outcome improvement will follow.

Please refer to the Measurement Improvement section on page 25 for more information about how to measure your improvement activities.

3.1.5. Ideas for Improvement

Once you have your focus area and measurement determined, you can work with your team to identify ideas for improvement. These ideas can also be called strategies or tactics.

In the planning context these are ideas that you might be able to implement over the timeframe of the quality plan. When compared with ideas generated for a Model for Improvement (which will be discussed later), the ideas are at a higher level and are focussed on the overall system you have in place and not one process.

In the plan these ideas (or strategies or tactics) can be listed and ideally have some completion date assigned and a responsible person. This person is not intended to be the only person that does the work, but someone who can lead that type of work with assistance from others in the team.

3.1.6. The Quality Team

Like any plan, the quality plan needs to be managed over time and therefore the quality plan should identify a core team. In smaller teams it may be one quality coordinator and in larger teams a few people. Regardless of the team size, someone needs to be responsible for coordinating the plan and reporting regularly back to the team.

Ideally the quality plan will also set out protected time for the team. Without protected time, which may only be two hours a fortnight, progress is unlikely as you will add work to an already committed resource. Protected time also sends a message to the team that this is important work and deserves to specific time to undertake coordination tasks. These coordination tasks help establish testing change ideas using the Model for Improvement, monitoring improvement over time and reporting back to the team.

3.2. Data Quality

As quality data and subsequent measurement are both essential quality improvement ingredients, attaining and maintaining data quality is essential.

In 2018 the RACGP has published ‘Improving Health Record Quality in General Practice’[1]. This publication identifies the following six data dimensions that make up high quality health record:

- Accurate
- Complete
- Consistent
- Easily read and understood
- Accessible
- Up to date.
-

This comprehensive resource will help you determine how to best establish systems and processes to ensure that the data collected for a patient is suitable for the particular patient context.

https://www.racgp.org.au/running-a-practice/practice-resources/general-practice-guides/improving-health-record-quality

3.2.1. Data Cleaning

You can undertake data cleaning and there are tools within clinical software system and third-party software tools to assist you.

However, if you do not have an effective data quality process in place, then data cleaning effort will be eroded over time through lack of a processes to maintain data quality.

Once off data cleaning may be valuable for your focus area to ensure that you have an accurate data set to start with. By focussing on one area to clean data in the first instance you can monitor the maintenance of data quality. If your data quality process is effective, it will improve data quality for all health records over time.

3.2.2. Data Quality Processes

Data quality processes refers to the range of activities that the general practice has in place that individual staff undertake daily to ensure that data within any health record is recorded and maintained over time as per the general practice's policy.

Achieving and maintaining high quality health records includes a range of activities, such as:

- ensuring everyone understands the importance of coding. Without accurate coding software systems cannot operate at an optimal level and safety and quality can be compromised
- developing processes and systems to undertake systematic, and continuous, data cleaning
- educating the practice team about the importance of high-quality health records and how to produce and maintain them
- identifying a champion that leads by example
- introducing a way to monitor data quality and review this with the team at each team meeting. This may include some form of audit
- providing protected time for the practice team to update patient records
- regularly reviewing processes and systems that contribute to data quality to ensure that they are effective.

Attaining and maintaining data quality is an iterative process and needs to be managed over time.

3.3. You are Now Ready to Start Improving

You should by now have a quality plan in place and someone to coordinate activities.
Choosing where to start is important and you must start small. The following section will guide you through the Model for Improvement and how to test ideas in a small way using Plan, Do, Study and Act cycles.

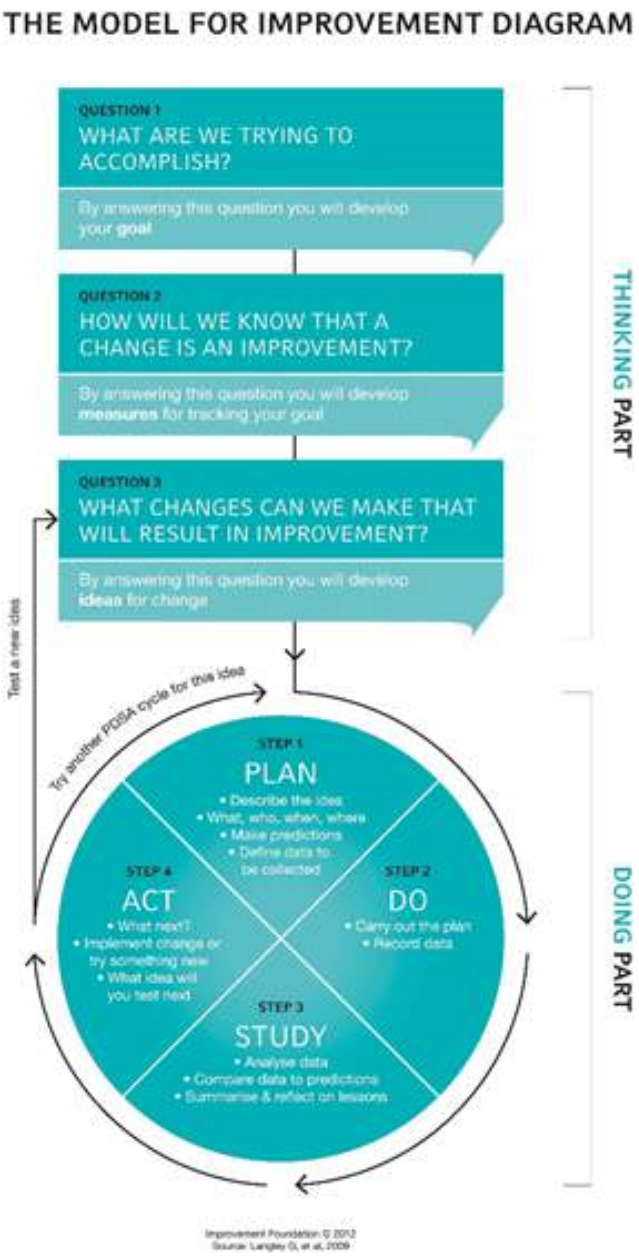
3.3.1. First Steps

Choosing where to start can be hard but it is important to start small. The following section will explore how to use the Model for Improvement to test small system change. Following this section will be some examples of first steps using the Model for Improvement and PDSA cycles.

4. THE MODEL FOR IMPROVEMENT (INC PDSAS)

The Model for Improvement (MFI) is a proven approach for developing, testing and implementing changes in general practice, and is the approach recommended by many leading national and international organisations, including the RACGP, ACRRM the Improvement Foundation, the Institute for Healthcare Improvement and many government health departments.

PDSA and Plan, Do, Check, Act (PDCA) cycles were originally developed for manufacturing by Dr. W. Edwards Deming (PDSA) and then Walter Shewart (PDCA) and used widely in manufacturing. The Model for Improvement was first published in ‘The Improvement Guide: A Practical Approach to Enhancing Organisational Performance’ (Langley GJ et al; 1992) and the model (including PDSAs) has been used widely in health care improvement programs ever since.



The MFI helps you to break down your change into manageable pieces, which are then tested to ensure that the change results in measurable improvements, and that minimal effort is wasted.

Remember:

1. Although every improvement is a change, not every change is an improvement
2. In the general practice context, you are working on a live health system. It is wise to test any change idea in a small way to make sure that it is an improvement before scaling and implementing.

4.1. The Benefits of Using the Model for Improvement

- It is a simple way to plan, develop and implement change that anyone can apply
- It reduces risk by testing small changes before wider implementation
- By starting small, there is less resistance to change
- You can achieve team unity on common goals

- It encourages individual creativity and ideas from team members.

Implementations of MFI have shown that it will work best when you:

- Define the problem
- Understand the problem
- Think small and test
- Involve the team
- Share success and lessons learned.

4.2. The Thinking Part of the Model for Improvement

The MFI is a two-step process compromised of the 'thinking' part, and the 'doing' part.
The 'thinking part' asks you to answer these questions:

1. What are we trying to accomplish?

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

3. What changes can we make that will result in an improvement?

The aim of these questions is to help you develop a relevant goal, and the measures and ideas that will form the basis of your test(s) to change the system(s) or process(es) currently in place.

> ***Note: The scope of an MFI is different to the quality plan. Therefore, while related, MFI goals and measurement may differ from those in the quality plan.***

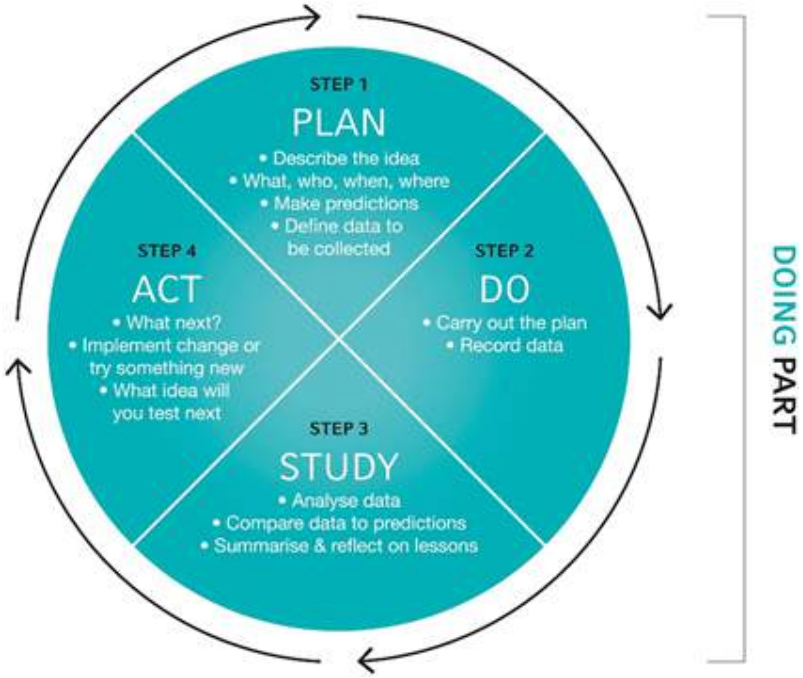
QI Plan Goal	One MFI example
Over the next year, increase to 40% the proportion of Active clients living with diabetes, whose most recent HbA1c measurement result that was recorded within the previous 12 months was categorised as less than or equal to 7%.	Over the next two months, increase to 60% the proportion of Active clients living with diabetes who have had a HbA1c result recorded in the past year.

The QI Plan goal sets the focus for QI activity over a longer period and the MFI goal is one of the steppingstones to achieving the QI Plan goal. PDSAs are used to test ideas generated by the MFI to ensure that the test is successful before scaling or implementing.

4.3. The Doing Part of the Model for Improvement – the PDSA Cycle

During the 'doing part,' work through Plan Do Study Act (PDSA) cycles that will:

- Help you test an idea
- Help you assess whether you are achieving your goal
- Enable you to confirm whether the change is an improvement
- Allow the use of multiple PDSAs to achieve your goal and test at scale and then move to implementation.



Using PDSA cycles allows you to use simple measurement to monitor the effect of multiple changes over time. You begin with small changes, which, once proven, can quickly become larger or be implemented more widely.

As you go through the successive cycles of change (shown in Figure 2: The PDSA Cycle: Plan Do Study Act), you review the process and identify what you have learnt so far. And you can quickly and easily test a suggested improvement based on ideas, research, or changes that have worked elsewhere.

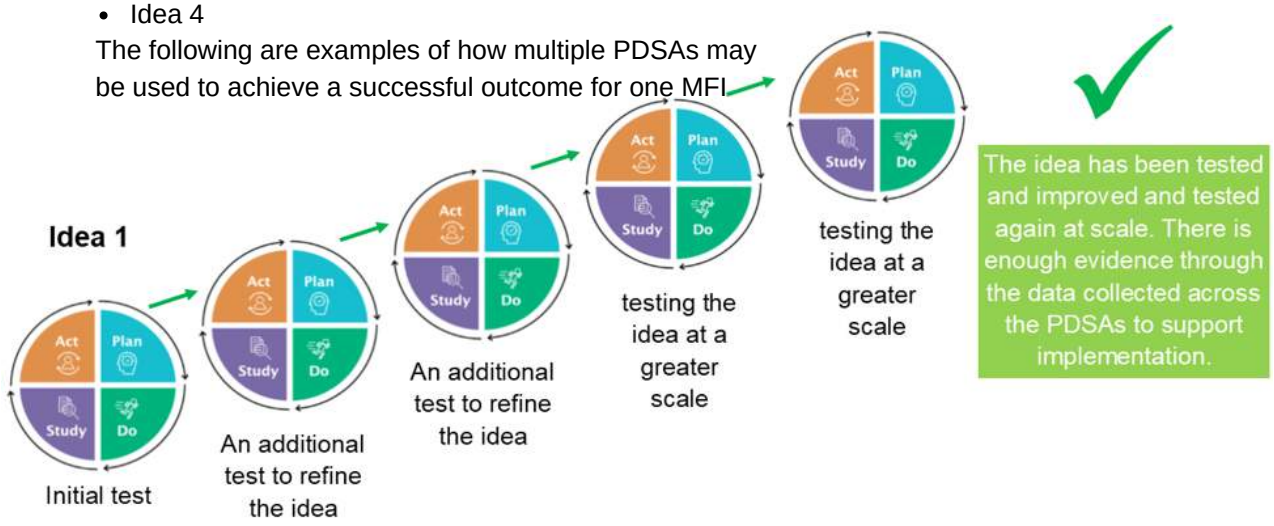
The successive cycles of change are shown in Figure 1: The Model for Improvement and Figure 3: Repeated Use of the PDSA Cycle.

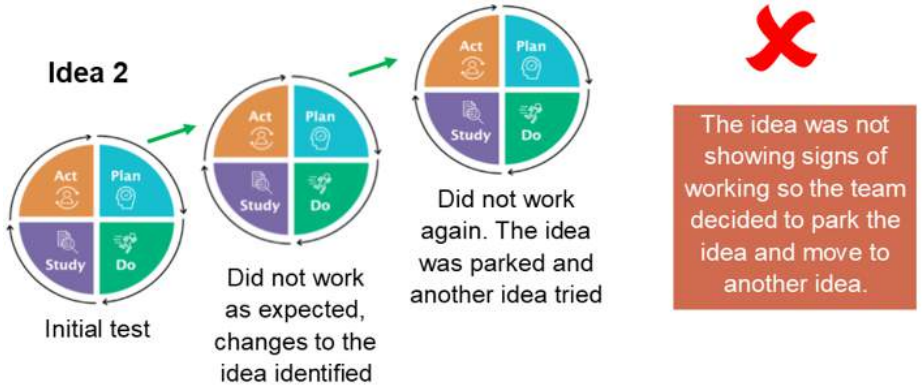
MFI Question 3: What changes can we make that will result in an improvement?

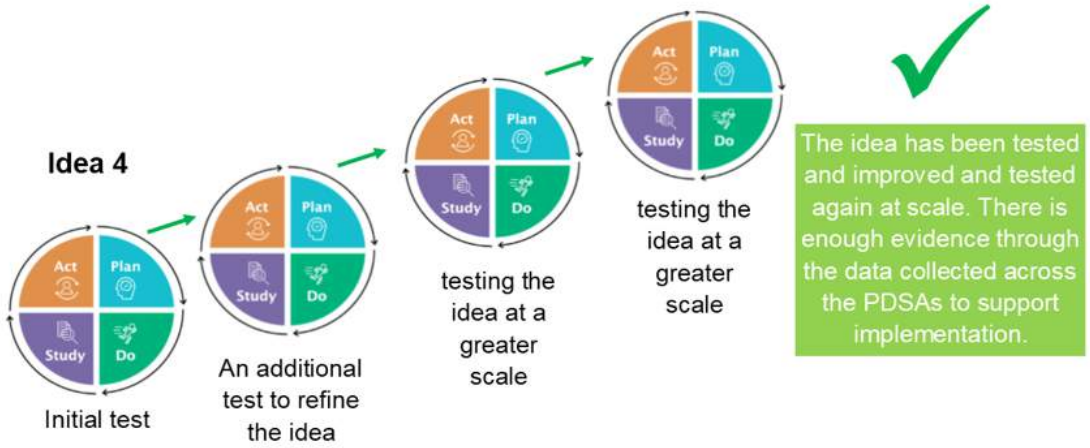
Answering this question will generate 'ideas' from the team that can be tested using PDSAs.

- Idea 1
- Idea 2
- Idea 3
- Idea 4

The following are examples of how multiple PDSAs may be used to achieve a successful outcome for one MFI







Ideas 1 and 4 contributed to achieving the MFI goal over a series of PDSA tests. Idea 2 was not successful and was abandoned after two PDSAs. Idea 3 did not have strong support from the team and given the success of ideas 1 and 4, idea 3 was not tested.

Multiple PDSAs are typically required for any one MFI. The MFI should generate at least a few ideas to achieve the MFI goal. Each idea should be tested using one or more PDSAs. Remember, PDSAs are small tests and may only involve testing with a few patients or one clinician to contain the test.

Once the first PDSA is completed, it's likely that there will be improvements to the idea that need further testing. If the test worked well and no further improvements can be identified, then increasing the scale of the test would be the next step (increasing the number of patients or increasing the number of clinicians involved). The PDSA cycles will test whether the idea continues to work as expected at a larger scale.

5. THE MODEL FOR IMPROVEMENT - EXAMPLE

The following example is provided as one way of starting small with diabetes as the focus area. As general practices vary greatly in the way they operate, you will need to think about how the following example may be applied for your general practice.

Your quality plan should include several strategies or ideas for change that can be explored. As these are stated at a planning level, for example:

- recall patients for a HbA1c test
- recall patients for a GP Management Plan
- establish a diabetes mini clinic
- ensure all diabetes patients have all of their annual cycle of care elements up to date
- ensure that all diabetes patients have an influenza vaccination.

This scenario works on the assumption that if a diabetes patient has a GP Management Plan in place with effective follow up, that the annual cycle of care elements would be largely achieved, including HbA1c tests. To test this, you need to work at a small-scale level and therefore your test would test systems to increase the proportion of patients with a GP Management Plan with follow up and test the effectiveness over a short time, say two months.

Under this scenario, Dr Sample is supportive of CQI and has an interest in diabetes. Using the clinical software system it will be easy to locate patients who would consider Dr Sample as their regular GP.

5.1. The Thinking Part

5.1.1. What are You Trying to Achieve?

Make your goal a 'SMART' goal (Specific, Measurable, Achievable, Relevant, Time-bound).

> ***Over the next two months, increase to 80% the proportion of Active diabetes patients who are regular clients of Dr Sample that have had a GP Management Plan claimed within the past year, or a GP Management Plan Review claimed in the past 6 months.***

5.1.2. How Will You Know That a Change is an Improvement?

Select measures that directly measure your gaol will be important.
In many MFIs using a single measure that directly measures the goal is suitable. However, in this example, it would be wise to include a few measures:

1.The proportion of Dr Sample's regular patients coded with diabetes who have had a GP Management Plan claimed within the past year, or a GP Management Plan Review claimed in the past 6 months

2.The proportion of Dr Sample's regular patients coded with diabetes who have had a HbA1c test in the past year

3. The proportion of Dr Sample's regular patients coded with diabetes who have had an influenza vaccination in the past 15 months.

The first measure will monitor progress against achieving your goal. The second and third measures are selected to provide an indication that the GP Management Plan claim, is also increasing the proportion of annual cycle of care elements, while acknowledging that the influenza vaccination is not listed as an annual cycle of care component in some cases.

As a result of working with Dr Sample over the next couple of months you would expect to see improvement in all these measures.
As part of your first 'Plan' in the PDSA cycle, you will establish your list of patients and baseline results for these measures.

5.1.3. What Changes Can We Make That Will Result in an Improvement?

Ideally you will have the support of a few people in the team, or you can use a team meeting to help identify change ideas. It's important to engage the team as people often think about things in different ways and sometimes team members can identify creative ideas to solve problems…it they are given the chance. There are a range of toolkits, QI tools and approaches you can try with your team to help harvest ideas for change and these are referred to on page 30 of this guide.

In this case, the team will need to identify ideas that will help them increase the proportion of Dr Sample's regular diabetes patients/clients that have had a GP Management Plan claimed within the past year, or a GP Management Plan Review claimed in the past 6 months.

The team consider the goal and list the following ideas:

- Recall all Dr Sample's patients who have not had a GP Management Plan claimed
- Recall all Dr Sample's patients who have not had a GP Management Plan review claimed in the past 6 months
- Use software prompts to remind GPs to undertake a GP Management Plan
- Use clinical software to identify all diabetes patients who had not had a HbA1c
- Opportunistically identify Dr Sample's diabetes patients as they book appointments and ensure they have adequate time for a GP Management Plan

- Recall Dr Sample's diabetes patients who have not had a HbA1c test in the past year and undertake the test and discuss/plan another appointment to complete a GP Management Plan.

There may be many ideas generated and you now need to establish your first 'Plan'. Remember, The Model for Improvement and PDSAs do not need to be used for every idea. Some ideas can be actioned and do not require a 'test' of the system. For example, holding a meeting to advise staff, or training of staff, or purchasing equipment are not process or system changes. While they may be necessary, and later may form part of a process or system change, but the initial action does not need a PDSA. In the above example, using clinical software to identify patients does not need a PDSA and can be included in the first Plan as an action.

5.2. The Doing Part (PDSA Cycles)

5.2.1. Plan

Your plan needs to describe what exactly you will do? Include what, who, when, where, predictions about what will occur and the data to be collected that will help determine if your test was successful of not. The data collected here may be different to the MFI measures, but should be related.
In this example, the plan decided by the QI co-ordinating team is:

What	Using our clinical software, we will first identify all Active patients that are coded with diabetes who have not had a GP Management Plan claimed in the last year or a GP Management Plan Review claimed within the past 6 months and list these by their regular GP. Working with Dr Sample, we will confirm those that are considered to be regular patients of Dr Sample. We will then recall 20 patients randomly selected from Dr Sample's list and ask them to contact the practice for an appointment. The list of the 20 patients will be provided to reception, where the receptionist will note any of the patients that call as a result of the SMS. In addition to attempting to recall patients for a GP Management Plan, Dr Sample will attempt to complete as much of the care elements as possible within the allocated time. A checklist will be prepared to help identify what had already been completed and what could be completed at the appointment. NOTE: The second paragraph above introduces another 'idea'. While it might be possible to undertake the two ideas at the same time, if you are just commencing your QI journey, it would be wise to separate these into two different tests.
Why	The practice manager will generate the list using the clinical software and then work with Dr Sample to review the list. Reception staff will also assist by noting any calls from people on the list. The practice manager will create the checklist based on the annual cycle of care and also include influenza vaccination.

When	The test will be carried out over the next 10 days where the practice manager will create the list and review with Dr Sample on the Wednesday afternoon. Patients will be asked to respond within a week to the SMS message.
Where	At the general practice.
Data	The data collected will include: 1. The number of Active diabetes patients identified without a GP Management Plan or Review within the stated time frame by regular GP 2. The number of clients where Dr Sample is confirmed as the regular GP on the list 3. The number of Dr Sample's patients (of the 20 selected for the test) that responded to the SMS recall within 10 days 4. The number of Dr Sample's clients that could make an appointment 5. Of those patients that could make an appointment, how many GP Management Plans were claimed 6. Of those patients that made appointments, how many annual cycle of care elements were completed. The above results can be used to generate a proportion which is more useful when looking at data. For example: a) The proportion of Active diabetes clients who have not had a GP Management Plan or Review claimed within the timeframe. You should already know the number of Active clients coded with diabetes from your QI plan. Therefore point 1 above divided by the total number. This will help you quantify the work that needs to be done across the whole practice b) The proportion of patients on the list that are regular clients of Dr Sample (point 2 divided by point 1 above) and also other GPs at the practice. This may be interesting and will vary depending on individual GP workload and historical practice c) The proportion of Dr Sample's patients that responded to the SMS (point 3 divided by 20) d) The proportion of patients where a GP Management Plan claim was made (point 5 divided by point 4 above) e) The proportion of care elements completed during the appointment (using the checklist count the number completed and divide this by the number that required completion). As you can see, there is potentially a lot of data that can be generated from a small test. But it is relatively simple to manage if planned in advance.
Prediction	The test will be carried out over the next 10 days where the practice manager will create the list and review with Dr Sample on the Wednesday afternoon. Patients will be asked to respond within a week to the SMS message.

5.2.2. Do

In the ‘Do’ section you want to note anything that happened through the doing part that was an unintended consequence of the test or anything contextual worth noting. This information may help in determining future actions or ideas for change.

In this example the following was noted:

The plan was implemented successfully, however, it did take the practice manager longer than first thought to generate the list of patients due to experience using clinical software for this purpose. No one else at the general practice could assist so it may be advisable to have some training and also train other staff to ensure that is greater capability.

5.2.3. Study

In the study section, the quality team, which included Dr sample and the practice manager, met briefly to discuss the outcome. It was noted:

- There are 387 Active patients coded with diabetes at the general practice
- 239 Active patients did not have a GP Management Plan or Review (62%)
- 121 of the Active patients coded with diabetes were considered to be regular patients of Dr Sample (31%). This was the highest of all GPs but not surprising given Dr Sample’s interest in diabetes and the length of tenure at the general practice
- Of Dr Sample’s regular clients on the list, 63 (52%) did not have a GP Management Plan or Review in the timeframe. This was a little surprising as Dr Sample considered this should be better (30 predicted without a GPMP or Review)
- Of the 20 selected for the test, 9 responded (45%)
- Of the 9 that responded, 5 could make appointments (55%) and the others could not work around Dr Sample’s short-term availability
- Of the 5 that made appointments, all completed a GP Management Plan and Dr Sample was able to complete several elements of care, but not all that were required and follow up appointments were required. An exact proportion was not calculated due to time, but less than half were completed.

The study raised a number of questions and identified opportunities for improvement, including more involvement of nursing staff to assist the GP complete elements of care once the patient was at the general practice. This would require a greater degree of coordination but is possible.

While there were a number of ideas for further testing identified, the QI coordination team chose to remain focussed on completing GP Management Plans for Dr Sample and wanted to better understand why only 9 of the 20 patients targeted responded. The team also discussed ensuring that the reception staff could make special arrangements to secure recalled patients an appointment with Dr Sample.

5.2.4. Act

Based on the first test, the team chose to:

Act 1 – A practice nurse will call the 11 patients that did not respond and seek to

1) understand why they did not respond to the SMS and,
2) make an appointment to see Dr Sample over the next two weeks.

Act 2 – Reception staff will call the 4 patients that could not make an appointment at the time of responding to the SMS and attempt to make an appointment over the next 2 weeks.

5.3. Documenting MFIs and PDSAs

It's important to document your work, including MFIs and associated PDSAs. Simple documentation is all that is required and if you use a MFI template, which can be found on the Central Queensland, Wide Bay, Sunshine Coast PHN website, you can record these chronologically in a folder or electronically. In addition to providing your team with evidence that ideas have been tested and build a case for change, you may need to submit evidence to your professional college for continuing professional development, for accreditation purposes or other evidence of your improvement work.

5.4. MFI and PDSA Summary

This was the QI coordinating team's first PDSA and they kept the test quite small. While the plan was detailed and returned a lot of tactical data and results, much of this work does not need to be repeated through subsequent PDSAs. The list of patients can remain and be worked through with Dr Sample as they optimise the recall and care delivery processes.

Over the next two months, the QI co-ordinating team and other team members should be able to achieve the goal of increasing to 80% the proportion of Active diabetes patients who are regular clients of Dr Sample that have had a GP Management Plan claimed within the past year, or a GP Management Plan Review claimed in the past 6 months. The team should also be able to improve local processes in a way that can be scaled to other GPs and/practice wide.

Reporting these findings and progress to the broader team is important. The QI co-ordinating team will have facts to support the case for change and this is compelling for other team members. There is also a financial business case to be considered. Increasing the number of GP Management Plans and Reviews claimed will provide an opportunity to increase revenue. Where the increase in claiming can be achieved more efficiently through better teamwork and improved processes, there is a net financial benefit to the practice.

Through the course of the QI plan, there should be many MFIs completed and many more PDSAs. As the team slowly improves systems and processes related to the improving the delivery of care to people living with diabetes, the team notes:

- Initially there is improvement achieved for Dr Sample's regular patients
- These changes are scaled to other GPs and then practice wide
- Continued improvements to care delivery and co-ordination make measurable improvements to the HbA1c measurement and GP Management Plans (Process indicators)
- Over time, the HbA1c under control (Outcome measure) starts to respond and the team note increased proportion of patients living with diabetes that have their HbA1c under control.

Experience through the Australian Primary Care Collaboratives Program (APCC Program) shows that continued, small and iterative improvements over time will achieve sustainable outcomes.

6. MEASURING IMPROVEMENT

Throughout your CQI journey, you need to monitor and evaluate your progress towards your overall goal, using the measures you decided on during the planning stage (your QI plan). You also need to assess processes and evaluate the outcomes and impacts of change activities you undertake.

Measurement is a critical component of QI and proper use of QI measurement can:

- Motivate your team
- Identify if a change is leading to an improvement
- Understand unintended consequences
- Improve efficiency and reduce waste
- Improve patient safety
- Identify and spread innovations
- Support sustainability by measuring over time
- Provide a common frame of reference, its objective
- Help understand patterns and trends
- Identify performance gaps, safety issues
- Support decision making & planning
- Allow for benchmarking.

6.1. Benchmarking

Benchmarking is extremely helpful when assessing your organisation's performance in CQI. Benchmarking allows comparison with other like organisations which adds another dimension to analysing organisational results and performance. Benchmarking needs to be undertaken across a number of like organisations using consistent measurement. Central Queensland, Wide Bay, Sunshine Coast PHN provides practices with a quarterly report which will provide some guidance. Where organisations are working on the same focus area, for example diabetes, specific benchmarking reports can be developed and provided to further assist your organisation understand and analyse improvement results and trends.

6.2. Measurement is for Learning

Measurement in the QI context is NOT judgement-based and should not be used to manage individual performance. QI measurement is a learning-based approach and seeks to help answer questions like why, how and what? A learning-based approach will help engage your team and produce better outcomes.

6.3. Key Measurement Attributes

Measurement for QI needs to be:

- Reliable
- Valid, and
- Responsive to change over time.

Often measurement in the QI context is not perfect and differs from measurement used in research activities. QI measurement needs to measure accurately and reliably, but not necessarily precisely. Seek usefulness and not perfection.

6.4. Measurement Levels

You will also measure your QI work at different levels, including:

- At the QI plan level – high level measurement over a longer period of time
- At the MFI level – it is possible to use only one measure that directly measures the MFI goal, but can be more than one. This is often measured only for the duration of the MFI
- At the 'Plan' level of a PDSA. At this level measurement is quite tactical and often very simple. You will collect data relating to your test of an idea to demonstrate whether the idea being tested is successful. Measurement will often be over successive PDSAs and help build evidence that the proposed change will lead to an improvement and can be scaled.

You can collect a variety of data in a variety of different ways and from a variety of sources, including:

- Clinical information software
- Manual measure worksheets
- Tally sheets
- Clinical audit worksheets
- Patient feedback
- Staff surveys

6.5. Data and Measurement

Primary care clinical information systems can collect a significant amount of data in relation to a patient. At a general practice level, the data set can be quite large and provide a rich data source for QI activities.

'Data' generally means a raw or unorganised format, e.g. letters, numbers, symbols etc. For use in QI, data needs to be organised to produce relevant and accurate information and this is typically done using measures (also referred to as quality improvement indicators). In the examples used in this guide, we have used data in the clinical information system to produce the following measures:

- HbA1c under control (QI plan level)
- GP Management Plan claimed (MFI level)
- Proportion of patients that responded to the recall (PDSA level).

There are a considerable number of quality indicators available in clinical information systems and third-party software. Please consider use of these measures in the first instance as they are established and easy to produce.

6.6. Measurement Types

6.6.1. Baseline and Progressive Data

Measurement in QI almost always uses a trend or control chart style of presentation and therefore measurement over time is essential.

Establishing your baseline should have been done at the point of finalising your QI plan. Through this process you should have established an understanding of your population profile and decided on a focus area. At this time measurement is also determined and therefore a baseline can be established before any work has commenced.

Measurement (QI plan level) typically occurs on a monthly basis so you can monitor your progress towards achieving your goal. Measurement at the MFI level also occurs over time but is a shorter time period and therefore any MFI measurement has to be highly sensitive to change over time.

6.6.2. Process Measures

Process measures measure process elements, like the recording of blood pressure. Process measures allow you to identify whether the changes to your system (or processes) that you are testing are producing the desired effect. Process measures are the usual choice for MFI measurement but also have a place in the QI plan. Examples in this guide include:

- QI plan level: HbA1c recording
- MFI level: HbA1c recording for patients that would regularly see a particular GP

6.6.3. Outcome Measures

Outcome measures identify if the various system elements are producing the desired result. For example, improving care delivered for people living with diabetes should improve the proportion of patients living with diabetes who have HbA1c under control. They will help identify the QI plan's actual effect on patient outcomes has eventuated.

In QI plan example in this guide we have used HbA1c under control. The proportion of Active clients living with diabetes, whose most recent HbA1c measurement result that was recorded within the previous 12 months was categorised as less than or equal to 7%
This measure is not suitable for MFI measurement as it is not sensitive enough for the time period that an MFI is generally completed within.

6.6.4. Qualitative and Quantitative Measures

Qualitative data refers to descriptive information. For example, you could collect information from satisfaction scales, Likert scales, answers to questions on a survey form, 'self-reported wellness', minutes from meetings, willingness to maintain the 'change'. This type of data may help you to identify patterns and gauge both team members' and patients' level of satisfaction with the care they have given or received.

Example: Responses to the question: “what are the challenges that you face as a nurse when measuring HbA1c levels in patients each quarter?” will provide qualitative responses.

Quantitative data refers to definitive information that is expressed in numerical terms such as amount or range, such as the number of diabetic patients with HbA1c recorded, the range of temperatures recorded on a thermometer in a refrigerator that stores vaccines.

Clinical software can produce results that are quantitative (i.e. actual numerical changes in a data element such as blood sugar or blood pressure).

For use in QI, quantitative data and measurement is used widely, however, in certain situations there is a place for qualitative data. When qualitative data are used in QI, there is generally a structured response framework provided, such as a choice of responses (as opposed to answering the question in free text) so that responses to the choices can be quantified across the survey instrument.

6.6.5. Sampling Measures

If a QI activity targets a large population, using a small sample of that population is a simple and realistic way to measure its effectiveness.

Example: Sampling just 20 patients over two months to measure the effectiveness of a new recall system for testing HBA1c levels. This is often used in MFI measurement to prove that a change is an improvement before scaling or implementing.

6.7. Measurement Visualisation

Presenting results of improvement activities visually is an effective way of:

- Informing and engaging your team
- Demonstrating outcomes
- Providing evidence that changes have resulted in an improvement.

If you are participating in a QI activity with other organisations, benchmarking is a valuable way of understanding how you compare with others in the cohort.

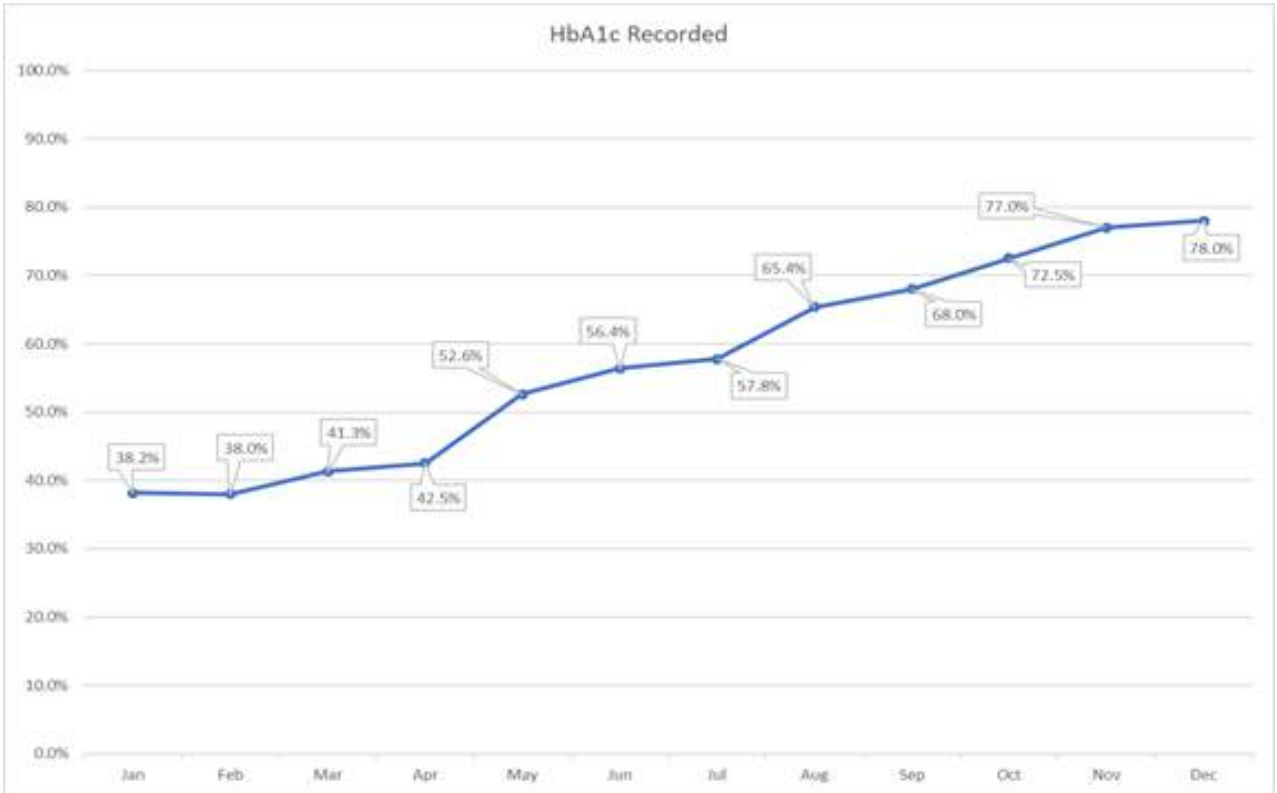
As mentioned earlier, QI activities are best displayed over time using trend or control charts. Trend charts are easy to produce and interpreted and are generally the QI tool of choice. These can easily be created using Microsoft Excel and inputting the monthly results from your QI plan measures. Equally, you can graph an MFI using multiple PDSA tests over time which is a good way to show that a change has produced an improvement.

Clinical information software or third-party tools will also produce information visually, so that people can quickly and easily understand the data.

When deciding which information to present, consider the following questions:

- What does the data say?
- What story are you trying to tell?
- How should it be summarised?
- Can it be used to motivate or influence?

The following chart is an example of how you can display results over time so that your team can quickly see progress.



7. QUALITY IMPROVEMENT TOOLKITS AND TOOLS

7.1. QI Toolkits

There are a range of QI toolkits and tools available to help you with your CQI journey.
Central Queensland, Wide Bay, Sunshine Coast PHN has developed the following toolkits which are available via the following link:.

https://www.ourphn.org.au/practice-incentive-program/

At the time of publication, the following toolkits are available:

- Building the health service team
- Diabetes
- COPD
- Older Person's Health

The quality improvement web page also hosts QI improvement ideas and other general information about quality improvement.

If you need assistance with implementing any of these toolkits, please contact your xxx for assistance.

7.2. QI Tools

It is important to engage your team and use different approaches to understand and solve problems or identify opportunities for improvement. QI tools, when used properly, allow team members to think about the problem differently and it is through introducing new thoughts and ideas into consideration that helps create innovation.

> ***"We cannot solve our problems with the same level of thinking that created them." -- Albert Einstein***

To get the most out of your team, you need an environment where team members can express ideas openly and without criticism. Sometimes what may seem to be a crazy and unrealistic idea may not be, or it can act as a catalyst and generate other ideas from the team that would otherwise not be discovered. There are many QI tools available and these can easily be found by searching online. QI tools can be categorised into three broad classes of tools:

- Creative Tools
- Problem Solving Tools, and
- Decision Making Tools.

The quality improvement tools guide, which is available on the Central Queensland, Wide Bay, Sunshine Coast PHN website provides some examples of tools that have been widely used.

8. SUMMARY

For your QI activities to be successful, you need to plan, test ideas for change to make sure that they are an improvement, scale accordingly and implement.

In nearly all cases, your general practice must function as a business and therefore there needs to be a sensible business case for change before implementing any change. Hence testing changes at a small level using the Model for Improvement will provide valuable information to help make good business decisions before implementing change on a broader scale.

8.1. Key Strategies for Success

- Make sure you have executive support
- Engage your team
- Get help when needed, contact your practice support officer at the PHN
- Develop a QI plan that is accepted by the team. Start by focusing on one area of improvement over a year or 18 months
- Identify and consider several ideas for improvement
- Always use ‘SMART’ goals that are realistic
- Consider the effect of the change on patient experience, population health, care team wellbeing, costs
- Implement small changes first and work up to large changes, using the Model for Improvement and PDSA cycles
- Measure what you do and monitor change over time.

8.2. Collect Useful, Accurate and Varied Data

- Collect feedback from your patients and team members
- Collect baseline data and progressive data
- Keep stakeholders informed, involved and engaged
- Involve your staff, keep them informed, and acknowledge their contributions and celebrate successes
- Involve some of your patients in Quality Improvement activities
- Display information visually (e.g. graphs, charts and/or tables).

8.3. Review Your Outcomes and Learn from Them

- Monitor and assess the outcomes honestly, so you can improve your processes and achieve real improvement in system change
- Document your process and outcomes, including how the process could be improved, so you can learn from them

8. GLOSSARY

AAPM	Australian Association of Practice Managers
ACRRM	Australian College of Rural and Remote Medicine
AHPRA	Australian Health Practitioner Regulation Agency
APCC	Australian Primary Care Collaborative
CPD	Continuing Professional Development
CPR	Cardiopulmonary Resuscitation
CQI	Continuous Quality Improvement
ED	Emergency Department
EOI	Expression of Interest
GP	General Practitioner
IF	Improvement Foundation
IT	Information Technology
MBS	Medicare Benefits Schedule
MFI	Model for Improvement
NP	Nurse Practitioner
PDSA	Plan Do Study Act cycle or cycles
PIP	Practice Incentive Program
PLAN	Plan Learning and Need activity
QI	Quality Improvement
QPA	Quality Practice Accreditation
Qualitative	Measures that are descriptive or subjective (e.g. patient feedback)
Quantitative	Measures expressed in a numerical format (e.g. healthy weight)
RACGP	Royal Australian College of General Practitioners
SIP	Service Incentive Program
SMART GOAL	A goal that is Specific, Measurable, Achievable, Relevant and Time-based