

6.5 Change Principle 3 - Pathways

The improvements you have made in the 'Foundation Work' are significant and will take your practice a long way. Are you ready for the next steps? Based on the insights gained from the first three years of the Australian Primary Care Collaboratives Program, four pathways have been designed to help lift your practice into high performance. These pathways involve more profound changes to the way you work and the way your patients relate to your business.

Based on the knowledge you have developed about the way your practice operates within its unique environment, you have the option of choosing which approach best suits your needs. Whether you choose to focus on one strategy or a mix of strategies, these pathways will guide you to the provision of patient-centred, timely and efficient care.

Plan for success

But wait a moment! Experience has taught us four critical preconditions that underpin your practice's path to success. The few minutes you spend considering the box below will greatly increase the outcomes of your work.

Precondition 1: The 'Foundation Work' completed.

The most significant piece of work that needs to be done prior to pursuing any of these pathways is to understand your capacity and demand. Where you want to go depends on where you are now. By carrying out the 'Foundation Work' you will have maximised your internal resources to match capacity to demand. The effort you have made in doing this work will greatly increase your chances of making significant improvements in the pathways

Precondition 2: The practice leaders understand the chosen pathway.

It is crucial that you, as leaders of the quality improvement work, understand the changes you plan to implement. You will be the coaches for the rest of the practice team. The handbook is your key resource for this, along with support from your Division.

Precondition 3: The non-clinical staff are onside.

Your reception/administrative staff are already under pressure. If they understand the changes and support them, they will drive improvement! If they are unconvinced, however, they can stop the change in its tracks. Research shows that the Access and Care Redesign topic can significantly improve work satisfaction for reception staff. Stressful hours spent on the telephone saying a long 'no' to patients are replaced by a short 'yes' as appointments open up.

Precondition 4: The doctors and other clinical staff are onside.

Like your non-clinical staff, your clinical staff will also commit to the change if they can see the benefits and understand where the changes are heading. Access and care redesign is a new idea. You will need to spend time exploring the chosen pathway with the clinicians before you start implementing any changes.

Spending time explaining the changes you are making, and the benefits of these changes for all of your staff, is time well spent. If staff understand the changes and the perceived benefits, they are more likely to actively support them.

The Pathways explored

Practices within the APCC Program have moved a long way from the simple mantra of 'more doctors' as a way to effectively connect with patients. There are as many solutions to the problem as there are creative, thoughtful minds at work on it. We have grouped the approaches, which we have learnt from international literature and our experience, into four broad categories. An overview of each pathway is presented below, with an indication of when you might choose to pursue a particular one. Each pathway is then described in more detail.

Advanced Access

Your demand and capacity are matched (or almost). You know this for sure because you have measured these key parameters and worked hard to improve them. But there is still a week's wait, you have a complex appointment system, and staff and patients are feeling stressed. You have a problem with delay, which can be fixed by implementing Advanced Access.

The Advanced Access model is a revolution in thinking about connecting patients with their healthcare practitioner of choice. It will help you get rid of backlog, minimise the need for reception staff to triage patients, and even reclaim lunchtime. It is based on proven and effective system redesign, and involves work on your appointment system as well as whole of practice efficiency. Importantly, the Advanced Access model involves the principle of 'doing today's work today', which preserves capacity in the future.

It is important to note that the Advanced Access model has been successfully applied where practices have achieved equilibrium between their demand and capacity. In situations where this balance does not exist, it may be more appropriate to look at the following pathways, which are designed to specifically address these variations.

Managing demand

Your demand is bigger than your capacity. You know this for sure because you have measured these key parameters. You have completed the 'Foundation Work' and things have improved considerably, yet your demand is still larger than you can accommodate. As a result, patients and the practice staff are feeling stressed and overwhelmed. In 'managing demand' we explore some known strategies for helping you cope.

Increasing capacity

Your data proves that your demand is bigger than your capacity. You have completed the 'Foundation Work' and seen significant improvements. Yet, your demand is still larger than you can accommodate and this is showing in the experiences that staff and patients have at your practice. It is time to get creative about increasing capacity. Of course you need more doctors, but it is also important to consider other changes that you can make to increase your capacity. What resources are there inside the practice? What about outside the practice?

This section will present some ideas to assist you in better utilising your existing capacity and increasing the scope of your capacity.

Increasing quality

Your demand and your capacity are in balance. You have measured these key parameters and you are able to meet each day's demand on the day. There are no delays in your system. Don't stop there! You are in the exciting position of being able to improve your quality of care. Are you doing the right things? Is your preventive care rock solid? Are there opportunities to move into new areas of business activity to the benefit of all? Now is the time to seize the opportunity that you have to creatively increase the quality of care that you provide to your patients.

Advanced Access

The 'Advanced Access' approach is based on ideas first put forward by Dr Mark Murray in the 1990s.² Murray developed an improvement process and set of principles that have been proven to improve access in thousands of practices in the United States of America (USA). These ideas have also been developed into a set of principles for improving access in primary care by Sir John Oldham in the United Kingdom (UK). The success of this methodology in both the USA and the UK health systems demonstrates its ability to adapt (with refinement) to both a 'fee for service' and a 'capitation' health system. The APCC Program has found that the approach is also suitable for the Australian context. The APCC Program has used an Expert Reference Panel, along with the experience of practices undertaking access work to date, to further adapt this approach to the unique Australian healthcare system.

Advanced Access represents best practice for connecting patients with your team. Importantly, it involves introducing the practice to some fundamental shifts in thinking about access:

Access is no longer just about an appointment system. Rather, it is about the way that the whole system operates to meet patient demand, utilising the knowledge and skills of all team members to address patients' needs.

Rather than thinking about patient demand being insatiable and endless, it is viewed as predictable and finite.

Demand is finite and predictable

A system of Advanced Access is one where capacity and demand for appointments within the practice are in equilibrium on a daily basis. As a result, patients can be seen when they want to be seen, either on the same day or at a future date. Long waits no longer need to be a feature of the practice and each week begins with sufficient available capacity to meet demand. There is no longer a need to prioritise one group of patients over another (i.e. urgent above routine). Instead, demand is expected, planned for and met.

² Mark Murray, MD, MPA Principal Mark Murray and Associates Sacramento, California, USA

The advantages of the Advanced Access model include:

- patient satisfaction, as all patients can be seen on the day they want to be seen
- staff satisfaction, as all practice staff can carry out their jobs effectively and no longer have to deal with unhappy patients
- predictability in clinicians' work, which gives them a greater degree of control
- the appearance of extra capacity (which was previously hidden) in the system, which translates to more time. This gives healthcare professionals the freedom to develop services in new ways and also provides them with the time to address their own personal development needs
- more time due to the appearance of extra capacity, which allows the practice to carry out more chronic disease work and increase the use of chronic disease care Item Numbers and incentives. This has the added benefit of increasing revenue for the practice.

Preliminary experience in Australia indicates that implementing the Advanced Access methodology will **not** reduce practice income. On the contrary, practices may find that work on Advanced Access releases hidden capacity, allowing them to free up consulting time and hence increase income. As an example, Dr Dato, a solo GP in Cootamundra, New South Wales, found that after implementing the Advanced Access methodology, he was able to gain an extra consulting day per month.

Implementing Advanced Access

Implementation of the full Advanced Access model requires careful planning to get it started. Furthermore, the ongoing management of the system is crucial for its success. Most practices report that implementation, although time consuming in the start up phase, is a rewarding experience and that the benefits of sustaining the system far outweigh the work involved.

The following section guides you through the work involved in implementing Advanced Access. The Advanced Access Recipe has synthesized the knowledge gained in the first three years of the Program and presented it in a systematic fashion, making it logical and easier to implement. At the end of this section, Figure 3 presents a checklist for 'cooking up' Advanced Access in your practice. It is important to note, however, that these steps are a guide and should be implemented in ways that suit the unique circumstances within your practice.

The Advanced Access Recipe

1. Plan for success

- lead staff need to understand the Advanced Access model
- get 'buy in' from the practice team
- set a date

The importance of ensuring that lead staff understand the chosen pathway, as well as the need to gain commitment from the whole team, has already been discussed. In the Advanced Access model, an additional step needs to be done: set a date.

Set a date

Most practices that have successfully implemented Advanced Access have set a date in the future when they go 'live' with the new system: 'Access Day' or 'A Day'. Setting a date allows the practice team to work towards a goal. It is important that you set this date far enough in advance that there is time to do the work required before going 'live' on 'A Day'.

The date chosen is determined by a number of factors:

- Time required to work down the backlog, if you choose to do so. Setting a date is a motivator for working down backlog (which will be discussed next), as it defines the period of time in which the practice team may have to work harder. Staff are unlikely to maintain the momentum if they feel that there is no end date.
- Time required to educate patients and staff about the changes being made to your system.
- The current bookings in the appointment book. You will need to select a date after which the appointment book is clear. In other words, there should be no pre-booked appointments already scheduled in the system after the chosen date.

Many practices choose a date as far ahead as six months and it is recommended that the minimum period of time is three months. When you hit 'A Day', you will have managed your demand and capacity and reduced your backlog; essentially you will be starting with a clean slate.

2. Work down the backlog

- Calculate and work down the backlog.

This is an important step in your path to Advanced Access. After completing the 'Foundation Work', your practice's demand and capacity are in balance. You know that you have enough appointments everyday to meet that day's demand, but there is a problem. You are still experiencing day after day of full appointments. This is because there is a **delay** in your system. In other words, patients may still be waiting two weeks to see their healthcare practitioner of choice.

- **Delay is waste. It reduces practice returns, decreases clinical outcomes and increases pressure on the system.**
- **If you can eliminate delay, you should.**
- **Delay can be eliminated.**

The reason for this delay is backlog.

'Bad' backlog consists of all those patients who could not be seen when required and, therefore, had to be given an appointment in the future. It is 'bad' backlog that has filled all your appointments, forcing you to continually deflect demand into the future. Removing backlog gets rid of the delay that your patients are experiencing and revolutionises life for your patients and the practice!

Remember that some of your current backlog will be patients who requested an appointment in the future and are happy to be waiting. You can think of this as 'good' backlog as opposed to your 'bad' backlog.

Clearing backlog is the section of implementing Advanced Access that places the greatest demand on the practice team. Frequently, this means having to work harder for a period of time to eliminate the backlog that is currently placing stress on your appointment system. Obtaining commitment from your whole practice team is crucial to clearing backlog. The whole practice team needs to understand and have a desire to see the benefits that will flow from removing backlog.

Communication across the whole practice team is particularly important to ensure that everyone understands the work that needs to be done and has the opportunity to share their concerns. The good news is that backlog represents a finite quantity of patients. Once these patients have been seen, the task of clearing backlog should not need doing again. Practices that have cleared their backlog find that the increased work is well worth it in the end.

How to calculate the backlog

The 3rd available appointment measure will tell you how many days delay there are in your system (the 3rd available appointment measure will be explained in detail in the 'Measures' section of this topic).

- Calculate the average number of appointments that the practice offers each day.
- Multiply this figure by the 3rd available appointment.

The resulting figure will give you a good indication of how much backlog needs to be cleared.

Example

If your 3rd available appointment is 4 days and you offer 27 appointments per day, your backlog is: $4 \times 27 = 108$ appointments.

Note: This figure can be made more accurate if you deduct the 'good' backlog; that is, the number of patients waiting because they chose to do so. Knowledge of demand will give you an indication of the proportion of patients that normally choose to pre-book appointments e.g. 25% of patients usually pre-book. Therefore, your true backlog = $108 \times 75\% = 81$ patients.

Strategies for removing backlog

Many of the strategies for removing backlog are similar to those used in contingency planning. You should review the following strategies, which were outlined in the section on contingency planning in change principle 2.2, to determine whether any of them are suitable for use in your practice:

- handle demand in different ways
- alter the skill mix of the practice team
- add appointments
- optimise the time available in the short term
- locums

You may also consider some others:

- temporarily reduce time out of practice
- run additional sessions
- temporarily limit pre-bookings

Temporarily reduce time out of practice

Your team of doctors may commit to foregoing annual leave, their weekly afternoon off or not attending meetings out of the surgery for a limited period of time. It may be ideal to reduce time out of the practice when there is a seasonal low in demand. Calculating the demand profile over a year will show you when your practice experiences these seasonal lows in demand.

Run additional sessions

This is a popular method as it clears the backlog fairly quickly. GPs may choose to work extra sessions in the evening or on weekends. This may involve each doctor working down their own particular backlog or all of the doctors sharing the practice's backlog equally.

Temporarily limit pre-bookings

Another option involves setting a date in the near future after which patients will temporarily be unable to book any future appointments. The date can be seen as the Advanced Access 'launch date'. The factors that need to be considered when choosing a date were outlined in the previous section on 'Set a Date'. It is important to note that once the practice goes 'live' with Advanced Access, the restriction on pre-booking is lifted, allowing patients to choose an appointment that suits them. If you utilise this method of clearing backlog, it is important that patients are advised that the restriction on pre-booking is only a temporary step towards an improved system.

Frequently, surgeries choose a quieter time of the year, such as Christmas and New Year, to work down their backlog. This also has the advantage of 'going live' with the new appointment system on 1st January, starting the New Year with the Advanced Access model.

Practices that move from 'Open Access' to Advanced Access will not have a backlog to clear, but do need to go through the process of understanding demand in order to identify how many appointments they will need each day.

3. Prepare for 'A Day'

Preparing for 'A Day' involves three key processes:

- educate patients about the changes
- educate staff about the changes and how they will manage 'A Day'
- establish contingency plans

Educate patients about the changes

Your patients will have learnt how your system currently operates and how to manage their visits to get the most out of your system. For example, patients may have learnt that they need to book two weeks ahead to get an appointment. If this established behaviour is unexpectedly discouraged, patients may get upset. This can place pressure on the whole practice team, particularly reception staff. On the other hand, if patients understand and support the changes you are planning, their support makes it easier to implement the new system. It is critical that any changes to the appointment system are communicated effectively with patients as these changes ultimately affect their behaviour. Use your creativity to get the message across!

Consider:

- flyers and posters in the waiting room
- articles in the local paper
- information mail outs to your frequent attendees
- interviews on local radio

When developing written information aimed at patient education, it is important that you also verbally explain the changes and, most importantly, what they will mean for your patients. Highlighting the potential benefits of the changes, for example being able to see a healthcare professional on the day of choice, is important in getting patients 'onside'.

Educate staff about the changes and how they will manage 'A Day'

Implementing Advanced Access involves a culture shift for practitioners and practice staff. Many will be nervous about what 'A Day' will mean for their workload. They may also be stressed about having to deal with patients who are worried by the changes. It is important to acknowledge these feelings before 'A Day' happens. Staff meetings are an effective way of ensuring that all staff have been informed about the proposed changes and have had an opportunity to ask questions and verbalise their concerns.

Experience in implementing Advanced Access has also highlighted the use of 'scripts' as an effective way of managing 'A Day'. The use of a script ensures that staff have a document to assist them in dealing with patient queries and also

ensures that all staff are providing a consistent response. Scripts should address the requests that patients will frequently have in the initial phase of the new system. For example, what should doctors and practice staff say when:

- a patient wants an appointment two weeks after 'A Day'?
- a patient complains that they cannot book a month in advance?

Alstonville Clinic, a Phase 1 practice in New South Wales, designed a script that is used by doctors and reception staff to answer these requests and to manage the Advanced Access system. The 'Advanced Access Script' has been included as Appendix 4.

Establishing contingency plans

Establishing contingency plans is an important step to ensuring that your demand and capacity remain in balance. The topic of contingency plans was previously outlined in the 'Foundation Work' section. Please ensure that you have read and understood the use of contingency plans. In the Advanced Access model, the use of contingency plans is very important as they ensure that your system remains in balance.

4. Manage 'A Day'

You will want to ensure that 'A Day' runs as smoothly as possible. Some strategies to achieve this include:

- all clinicians and staff are available to meet the demand
- eliminate appointment variability

All clinicians and staff available to meet the demand

'A Day' is an exciting day for patients and staff alike. However, it represents a new way of thinking that may bring with it a degree of anxiety. This day is very important as it sets the stage for patient behaviour. If you are able to positively reinforce the desired behaviour by providing an appointment to every patient who requests one on the day, patients are more likely to support the new system. To ensure that you are able to reinforce behaviour, you need to have maximum capacity to deal with all the demand that presents on the day. This demand will have been previously calculated and should be able to be accommodated. However, the system is new for everyone and will require adjusting for staff. Successful practices have ensured all hands are on deck - clinicians and support staff - to deal with the day's demand.

Eliminating appointment variability

An important aspect of the Advanced Access model involves eliminating appointment variability. Since all patients will be able to get in when they want, whether it is the same day or a future date, you do not need to have different appointment types to meet demand. You will **not** need to hold emergency appointments and you will no longer need staff to be triaging most patients. Furthermore, when patients can get in to see you on the day that they want, you will see a reduction in DNAs, which will free up hidden capacity in your system.

5. Run the System

Once you have successfully negotiated 'A Day', your practice will need to:

- learn to work the system
- listen to staff and patient feedback
- embed and monitor the system

Learn to work the system

In addition to monitoring the system, there are additional things that your practice team can do to ensure that your demand and capacity remain in balance. Coaching your reception staff to take a proactive view of booking appointments is an important way of 'working' the system to ensure that you get the most out of your capacity. The following strategies can be used:

- If you determine in advance which appointments are difficult to 'sell' (e.g. time of the day that is least popular), reception staff can book these appointments first, if possible. This is important to keep in mind if the patient does not have a preference for an appointment time.
- Relax the 'no booking in advance' rules. Once patients are confident that they can get an appointment whenever they ring, they will not need to book in advance, which will preserve future capacity. Those patients who require an appointment in the future, for example due to transport or work arrangements, should be given one.
- Understanding the demand for each clinician is also a valuable way of managing demand. If the patient does not have a preference for a doctor, reception staff should be encouraged to book these patients with the doctor that has the least demand.

It is important to note that pre-booked appointments are a part of Advanced Access. In the 'Advanced Access' model, there are **no** restrictions on pre-booking. Patients should be able to book an appointment at any date in the future that suits them. However, it is recognised that some practices may not view this as a 'manageable' or favourable option and choose to restrict the period of time in which a patient can book ahead. For example, some practices may decide that it is impractical to allow pre-booking of appointments into the distant future as the team needs to schedule leave and other time-out. It is important that if pre-booking is limited, a reasonable period of time is agreed by the whole practice team.

It can be helpful to 'test' how far ahead pre-booking is required. Some practices might start with a limited time-frame (one or two weeks ahead) and increase it gradually, measuring the effect on the system with the Model for Improvement. You may find that the need for a restriction is not as great as you originally anticipated.

Listen to staff and patient feedback

The sustainability of the Advanced Access model depends on patient and staff satisfaction with the model. If either party is not satisfied, this needs to be identified and rectified. You should have a mechanism by which you are able to 'hear' staff and patient feedback so that these views can be addressed early.

Embed and monitor the system

The importance of embedding and monitoring a new system was outlined in the 'Foundation Work' in change principle 2.2. These concepts are essential to the ongoing success of the Advanced Access model, as this model requires daily management to ensure that it is maintained. If you have not already reviewed the section on 'Embed and monitor the system' in change principle 2.2, please do so now.

In the Advanced Access model, the key indicators of success that need to be routinely measured include:

- the monthly Access and Care Redesign measures (which will be explained in the 'Measures' section of this topic):
 - average patient satisfaction score
 - number of patients whose appointment demands were unmet (unmet demand)
 - daily calculation of 3rd available appointment
 - number of empty appointment slots each day

In addition to these measures, practice knowledge of patient behaviour is key to managing the system. What percentage of patients generally want a same day appointment? What percentage want to pre-book their appointment? Understanding this ratio will help you keep the balance right for any given day. The identified staff member's vigilance in routinely monitoring the system will ensure that any problems are detected and corrected early, preventing the build up of backlog.

Your practice can say it has achieved Advanced Access when you have:

- no backlog
- sufficient capacity to match demand on a daily basis
- a 3rd available appointment of 1 day or less.

Figure 3 presents a checklist for ‘cooking up’ Advanced Access in your practice. Think about each of these steps and how they can be successfully implemented in your practice. Share the recipe with your staff and encourage them to provide input.

Figure 3- Putting it all together with the Advanced Access Recipe

Course	Ingredient	Checklist
1. Plan for Success	Lead staff need to understand the Advanced Access model	<input type="checkbox"/>
	Get ‘buy in’ from the practice team	<input type="checkbox"/>
	Set a date	<input type="checkbox"/>
2. Work down the backlog	Calculate and work down the backlog	<input type="checkbox"/>
3. Prepare for ‘A Day’	Educate patients about the changes	<input type="checkbox"/>
	Educate staff about the changes and how they will manage ‘A Day’	<input type="checkbox"/>
	Establish contingency plans	<input type="checkbox"/>
4. Manage ‘A Day’	All clinicians and staff available to meet the demand.	<input type="checkbox"/>
	Eliminate appointment variability	<input type="checkbox"/>
5. Run the System	Learn to work the system	<input type="checkbox"/>
	Listen to staff and patient feedback	<input type="checkbox"/>
	Embed and monitor the system	<input type="checkbox"/>

Managing demand

You have done the 'Foundation Work' and measured your capacity and demand. You know for sure that demand for appointments routinely exceeds capacity, and that this is not due to delay. It is difficult for any scheduling system to work in this situation and it is acknowledged that there are areas of Australia which have an imbalance between capacity and demand. There are no easy answers to the workforce issues. However, there are strategies that your practice can employ to better manage your demand and ease the stress for staff and patients alike.

In the 'Foundation Work' you will have made changes to your systems to increase your practice efficiency. Once you have done the maximum amount of work you can do to reduce delay and waste, you will have to look at other ways of managing your demand. Some examples include the development of policies aimed at:

- redistributing panels
- closing the books
- redirecting patients.

Redistributing panels

A doctor's 'panel' is the number of patients that the doctor serves. Panel size has the following relationship with demand:

$$\text{Panel size} \times \text{Average number of consultations per patient} = \text{Demand}$$

A big panel size or a high average number of consultations per patient may result in a very high demand for a given doctor. As a consequence, this doctor may have long wait lists and the potential for decreased quality of care. Strategies to reduce demand include limiting or redistributing the panel, or decreasing the number of appointments per patient.

The process of redistributing panels initially involves determining each doctor's current panel size. It is important to note that there is no ideal panel size. All doctors practice differently, train their patients differently and have different follow-up habits.

Then, decisions are made around redistributing the current panel between doctors to make each doctor's panel more equitable. When comparing panels, it is important that adjustments are made based on full time equivalence and patient age and gender. Some doctors may also have the skills to manage a larger panel and this should be considered.

There are a number of ways that panels can be redistributed:

- A letter to patients from the 'over-panelled' doctor advising his/her patients of the current situation and either encouraging them to see a specific alternate doctor or giving them the flexibility of being reassigned to a choice of alternate doctors.
- The 'over-panelled' doctor might ask patients to have follow-ups with a less panelled doctor, as their own wait time is too long.

- Devising a plan which moves patients from the ‘over-panelled’ doctor to another doctor over a period of time. Communication with patients and the ‘over-panelled’ doctor during the transition phase is crucial.

The following box presents a, ‘Red light/Green light’ method that some practices have utilised to direct traffic according to a doctor’s panel size.

Red light / Green light

- Red light doctors are ‘invisible’. They need a smaller panel. New patients are never directed to them and, wherever possible, their capacity is preserved by directing emergencies and nursing home patients away from them. ‘Red light’ doctors will need to be comfortable with this strategy and recognise that good care of their current patients means saying ‘no’ to new ones
- Amber light doctors occasionally see new patients. They also limit the number of new chronic and complex patients that they accept
- Green light doctors need a bigger panel. All new patients are directed to them. They take on jobs likely to introduce them to new patients such as Saturday mornings and flu clinics

Closing the books

Do you feel uncomfortable about limiting your panel by closing your books? Many doctors do. Even doctors who do not formally close their books end up doing so anyway. Effectively, your book is closed if new patients cannot get an appointment for weeks to see you. However, in this scenario, you are actually jeopardising the care of patients you currently have ‘on the books’ by making it very difficult for them to get an appointment.

On the other hand, you may be working in a situation where you are the only doctor in town. In this case, you can be considered to be an essential community service and closing your books to new arrivals may be unacceptable. There are many practices in this situation and some have had to make very hard decisions to limit their panel rather than having their staff burn out.

Many practices have recognised that their ability to serve a community is limited by their capacity. These practices have elected to limit their panel in some way, such as writing policies that regulate the number of new patients. If your practice chooses to do this, it is important that staff are aware of the policy and have a script they can follow when new patients contact the practice. For example, will the practice accept relatives or friends of existing patients? When your capacity increases, you may be able to re-open the practice to new patients as you can now serve a larger panel.

Some practices limit their panel by restricting the geography that their practice services. This can be done by defining the postal codes from which you will accept new patients. Practice staff need to have a policy they can refer to when individuals or agencies contact the practice.

Redirecting patients

The safety and well-being of your staff and patients is an important consideration. In certain circumstances, your excess demand may be so high that ensuring safety means you need to seek services in your community that can accept some of your demand. The work you have previously done to analyse your demand provides the information from which you can identify opportunities for reducing that demand. Consider identifying and partnering with relevant local services. For example, if you have a high proportion of mental health patients, you may partner with mental health services in the local community. Alternatively, it may become obvious that there is another source of funding or a new service which will relieve the pressure on your general practice. Your local Division of General Practice may be able to help with advocacy or organisation. Opportunities will vary depending on your unique context, but here are some ideas:

- a new general practice nearby might welcome an arrangement to accept new patients
- local council immunisation clinics may be willing to work cooperatively to service your demand for childhood immunisations
- a local women's health service may be able to provide pap smears and contraception advice
- the local drug and alcohol service may be able to serve some high demand, drug-seeking patients
- your pathology provider may be able to carry out more venepunctures, ECGs or other services to relieve your staff
- the local ambulance service may provide emergency home consultations, which can relieve the need for doctors to make such visits
- you may be able to teach patients to 'self-serve' some of their care by seeking guided advice over the internet or from services such as Diabetes Australia

The data you have collected about the size and type of excess demand will prompt you to develop specific strategies for managing that demand, whether you change your internal systems or look for resources available outside of your practice's walls.

Increasing capacity

Increasing capacity means offering more appointments to patients. You have already made changes to increase your capacity with your 'Foundation Work', for example when you explored strategies to eliminate waste. For further strategies on eliminating waste you may wish to explore the following website:

<http://www.ihi.org/IHI/Topics/Improvement/ImprovementMethods/ImprovementStories/ImprovementTipFindMudaandRootitOut.htm>

The 'Foundation Work' involved making significant changes within your practice's current structure. However, for some practices, no matter how efficient they become within their current resources, they will simply not have enough

appointments to meet their demand. If you are in this position and capacity is a serious problem, you will need to consider more transformational solutions. This is what the 'Increasing Capacity' pathway is all about.

The first step to solving your capacity problem is identifying it. What capacity do you need? The work you have previously done to calculate capacity and demand provides you with the information to devise solutions for your practice. In this section, we have built upon the literature in this topic and our experience in the last three years, to present some transformational solutions to address the problem of capacity. We have no doubt that you will come up with more ideas during the next three years. It is time to get creative in designing solutions to address the significant problem of capacity.

Examples of strategies you can use to increase capacity include:

- managing seasonal variation
- utilising clinical resources in the community
- working with your local Division
- teaching

Manage seasonal variation

The 'Foundation Work' has presented you with information and ideas to ensure that your capacity matches your demand on a daily, weekly and even monthly basis. However, it is widely accepted that there are seasonal demands in health care, for example the flu season. Measuring this seasonal variation provides you with information to better match your internal capacity to this demand.

Some options to manage your seasonal variation include the following:

- schedule planned visits such as 75+ health checks or major diabetes reviews to occur in relatively low demand times (i.e. not the flu season).
- agree on contingency plans which specify that your practice will only take holidays and study leave on low demand times of the year. This ensures that better staffing levels are achieved during times of peak demand.
- agree on a strategy with the team that increases clinical hours during the high demand season and eases off at other times

What other factors affect your local demand? Are you a tourism hot spot? Are there clever strategies for increasing your capacity in the ski season or the beach season? What about working holidays for cash-strapped doctor families? If you have thought of clever strategies, we would love to hear about them so that we can share them with the rest of the APCC community.

Utilise clinical resources in the community

In the 'Foundation Work' you have already matched your team to the reshaped demand. You may have hired other staff, such as nurses who specialise in diabetes or a chronic disease coordinator. However, for many practices there are simply no staff available to hire. If you are reading this section, the work you have done has

probably not increased your capacity to the point of achieving a balance with demand.

A strategy that other practices in this situation are employing involves moving capacity from outside the practice to within the practice's walls. Some examples include:

- negotiate with local services to place a community nurse, physiotherapist or other professional, on a part-time basis, in a room within your practice
- identify a funding stream through GP Management Plans and Medicare allied health funding. Suggest to your local health service that some of their staff (podiatrists, nurses) could do a half day or more of private work in your practice, funded by that money

Work with your local Division

Your local Division is a key resource for your general practice. With government funding, Divisions are responsible for managing projects that consider the issue of workforce and projects aimed at assisting general practices to provide quality care to their patients. The data that you have accumulated from your analysis of capacity and demand are powerful levers to direct your Division's activity. If you have identified a need, why not put it to your local Division to come up with ideas and money to increase your practice capacity to meet the demand?

Divisions become aware of new funding opportunities to build capacity all the time. Examples include Cancer Council funding for pap smear clinics, and the ATAPS project, which has greatly increased funding for psychological services in many areas. Once you know your situation, get in touch with your local Division and let them know about it.

Teach

The opportunities for teaching will grow exponentially in the next few years: new medical schools are looking for community placements, resident doctor placements are becoming more common, and GP training places are expected to double.

A registrar or two in the practice provides an extra pair of hands, which can help. The obligation to teach and supervise will reduce the capacity of your senior clinicians, but the benefits generally outweigh this reduction.

Furthermore, building a reputation as a great practice for students, residents or registrars will have great potential knock-on effects for your capacity. If you can provide a practice context that students, residents and registrars enjoy, you will have a great chance of attracting one of your trainees to join your practice in the future.

Overall, many of the ideas discussed in this section represent a novel approach to addressing the problem of capacity. We have seen practices come up with brilliant local solutions and look forward to hearing about yours.

Increasing quality

You have a balance between demand and capacity and have done the 'Foundation Work' to ensure that your practice is running efficiently and smoothly. Your patients can access their healthcare professional of choice on the day of their choice. This is great news! But it is no reason to relax. No matter how good you are now, you can always improve. For instance, you may be providing a great number of services - but are they the best services? Do your patients receive the right care from the right people every time? You are in a great position to think about these questions and improve the quality of care you provide.

First, you will need to use some of the strategies already described to improve efficiency. Once you have excess capacity, then you can start to explore ways of increasing the quality of care that you provide, in conjunction with your team.

Examples of strategies your practice can explore include:

- planned prevention
- target local health needs
- increase contact
- map the patient journey in healthcare
- involve patients in planning change

Planned prevention

Are you taking advantage of current incentives to provide optimal care? For instance, do you systematically assess all appropriate patients using the 45-49 year old health check? Are Aboriginal and Torres Strait Islander patients identified in your clinical records? Do you systematically carry out Aboriginal and Torres Strait Islander health checks for children and adults? What are your screening rates for faecal occult bloods, glaucoma, and pap smears? Do you run community programs for healthy eating, exercise, and weight loss? What about home medication reviews? How effective is your adult immunisation program (e.g. flu, pneumovax, boostrix)?

You are in the ideal position to start establishing proactive and planned strategies to address the above questions.

Target local health needs

As a result of the work that you have done on your practice systems, you now have the capacity to proactively address local health needs. Does your community have a particularly high rate of heart disease? Do you serve a large Aboriginal and Torres Strait Islander population? Or a large refugee population? Is obesity a particular problem? What about farm injuries? Do you have a large industrial area with a need for excellent work cover services? Are there a disproportionate number of local hospital admissions for asthma?

Your Division has access to data which will help you identify local health needs. Addressing these needs can add to your work satisfaction, improve the health of your patients and improve practice income.

Increase contact

Do you see all your chronic disease patients at an appropriate frequency? It is likely that many patients do not attend as often as they should. You now have the capacity to focus on this group of patients and implement strategies that enable them to see you regularly. A strategy might include the use of clinics that provide education and support for chronic disease patients, or you may focus on preventative care such as healthy eating information sessions for patients at risk of diabetes.

This approach may lead to patients having reduced presentations for acute conditions, which opens up further capacity.

Map the patient journey in healthcare

You are providing excellent services to your patients, but what is their experience of the rest of the health system? How smooth is your patient's journey from a diabetes diagnosis through to dietetic advice, diabetic educator input and back to you. Are the messages consistent? How confident is your patient in knowing their personal goals and knowing what their cycle of care will involve? You can ask the same questions for patients newly diagnosed with heart disease, cancer, or mental illness. Now that you have excess capacity in your system, you may elect to answer some of these questions by working on the patient journey.

Process mapping is a useful tool (refer to the Quality Improvement section of this handbook) to help you understand the patient's journey. It can be applied initially within the practice to identify opportunities for reducing sources of inefficiency such as waste and delay.

After you have applied process mapping within your practice, you can look more broadly and apply the tool to the patient's journey outside the practice, such as referral to a specialist. This can assist you in finding ways of working more effectively with specialists, allied health providers and external agencies. Is the patient's journey smooth? Are there any gaps or sources of dissatisfaction for your patients? Do patients feel that they receive adequate information and support through their journey in the healthcare system? Are there opportunities to establish agreed ways of working with specialists, allied health providers and external agencies? This may include the development of referral pathways to specialist care which also includes establishing systems to ensure a smooth flow of information between specialists and general practice.

Significant improvements in the patient journey will improve outcomes as well as satisfaction. Satisfied patients will recommend your practice to others.

Involve patients in planning change

One way of improving quality of care, an idea which is being implemented increasingly overseas, is to involve patients in redesigning care systems. We have already discussed the importance of involving patients in planning change through the use of mechanisms such as feedback surveys. The next step is to establish formalised ways of involving patients more actively in designing change. An example is having patients attend staff meetings that are focused on quality improvement. We believe that this approach will become more common and important in the years to come.

6.6 Access and Care Redesign Glossary of Terms

It is important that you take a moment to understand the terms which will be used to help you understand your practice and its scheduling system.

Backlog

Backlog consists of patients that are given an appointment in the future. There are two types of Backlog:

- 'bad' backlog consists of all those patients who could not be seen when required and therefore had to be given an appointment in the future
- 'good' backlog consists of patients who have chosen to book an appointment in the future, which can occur for a variety of reasons (e.g. transport or work arrangements).

Capacity

Put simply, capacity is the total number of routine appointments you offer on a regular basis. Traditionally this has been a simple sum of how many doctors you have, how many hours they work, and how frequently you book patients. You can count up all appointment slots for a day, a week or any defined period.

However, an accurate assessment of total capacity takes into consideration all the resources that you have in the practice to meet patients' needs. This includes face to face consulting time as well as non-clinical resources such as administration and teaching time.

Demand

Put simply, demand is the number of appointments that patients' request from you. It is formed by many factors, including:

- their illness behaviour (what makes them decide to see you rather than self manage?)
- your own behaviour (do you see people with hypertension monthly/three monthly/six monthly?)
- 'rework' (such as 'I saw Dr Y two days ago because I couldn't get in to you but I made an appointment with you just to check I'm on the right medication.')
- many other factors

Many doctors fear that demand is insatiable, unpredictable and controlled only by a long wait. Experience in the APCC Program teaches us it is actually predictable, controllable, manageable, and decreases when patients know they can get in to see you today!

Excess Demand

Excess demand is when demand far exceeds capacity. It is acknowledged that there are areas of Australia where this situation occurs and it is a very difficult context in which to work. If you are faced with excess demand, there are a number of strategies in change principle 2, Foundation Work, and change principle 3, Pathways, which can help you to understand your situation and make decisions about resources and strategies for living and working in your context.

The Advanced Access model

The Advanced Access model is a revolution in thinking about connecting patients with their healthcare practitioner of choice. By measuring and balancing demand and capacity, practices reorganise their systems to ensure that patients can be seen without delay, to the benefit of all. The Advanced Access model is based on proven and effective system redesign and involves work on your appointment system as well as on whole of practice efficiency. It involves completing the 'Foundation Work' as well as work specific to the Advanced Access model (in change principle 3).

Importantly, the Advanced Access model involves the principle of 'doing today's work today', which preserves capacity in the future. Key features also include a reduction in appointment type variability combined with a whole of team approach to the provision of patient services.

Practices that achieve the Advanced Access model will:

- start each day with enough appointments to see all the patients who wish to be seen that day
- prioritise patient contact with their usual doctor or nurse
- allow patients to book in advance if they wish
- continually monitor delay in the system and respond to it
- have negotiated contingency plans for illness and holidays which keep delay under control
- save time and stress in managing appointment bookings
- have higher staff and patient satisfaction.

Panel size

A doctor's 'panel' is the number of patients that the doctor serves. In the Australian healthcare system, where panels are not fixed, a proxy measure can be the number of individual patients who access the doctor in the last 18 months. An individual doctor's panel size should also be adjusted based on their full-time equivalent status.

Appendix 1 – Tally sheet for calculating demand

Instructions

Tally every request for an appointment during the course of this week. These should include telephone requests, those made in person and follow-ups. Requests for appointments should be recorded against the day that the appointment was requested, regardless of whether it was required for that day or an alternate day. In other words, if a patient calls Monday afternoon and requests an appointment for Wednesday, the request should be recorded against Monday not Wednesday. You may need to have several of these forms at each point where appointments are being requested to capture all appointment requests.

Mon	Tues	Wed	Thurs	Fri
Totals:				
				Grand Total

Adapted from an original form from Woking PCT, UK

Appendix 2 – Tally sheet to calculate demand for same day and pre-booked appointments

Instructions

Please tally all appointment requests during the course of this week. These should include telephone requests, those made in person and follow-ups. Requests for appointments on the day should be recorded in the left column regardless of whether an appointment could be made or not. Use the columns on the right to tally requests for pre-booked appointments. Note: do not record when the appointment was actually made. We want to find out the variation in demand for same day appointments and how many appointments we need to provide for each day.

Today is:	Appointment requested for today	Pre-booked Appointment Requested for ...					
		Any day	Mon	Tue	Wed	Thu	Fri
Monday							
Tuesday							
Wednesday							
Thursday							
Friday							
TOTAL							

Appendix 3 – Understanding the profile of demand for types of consultations

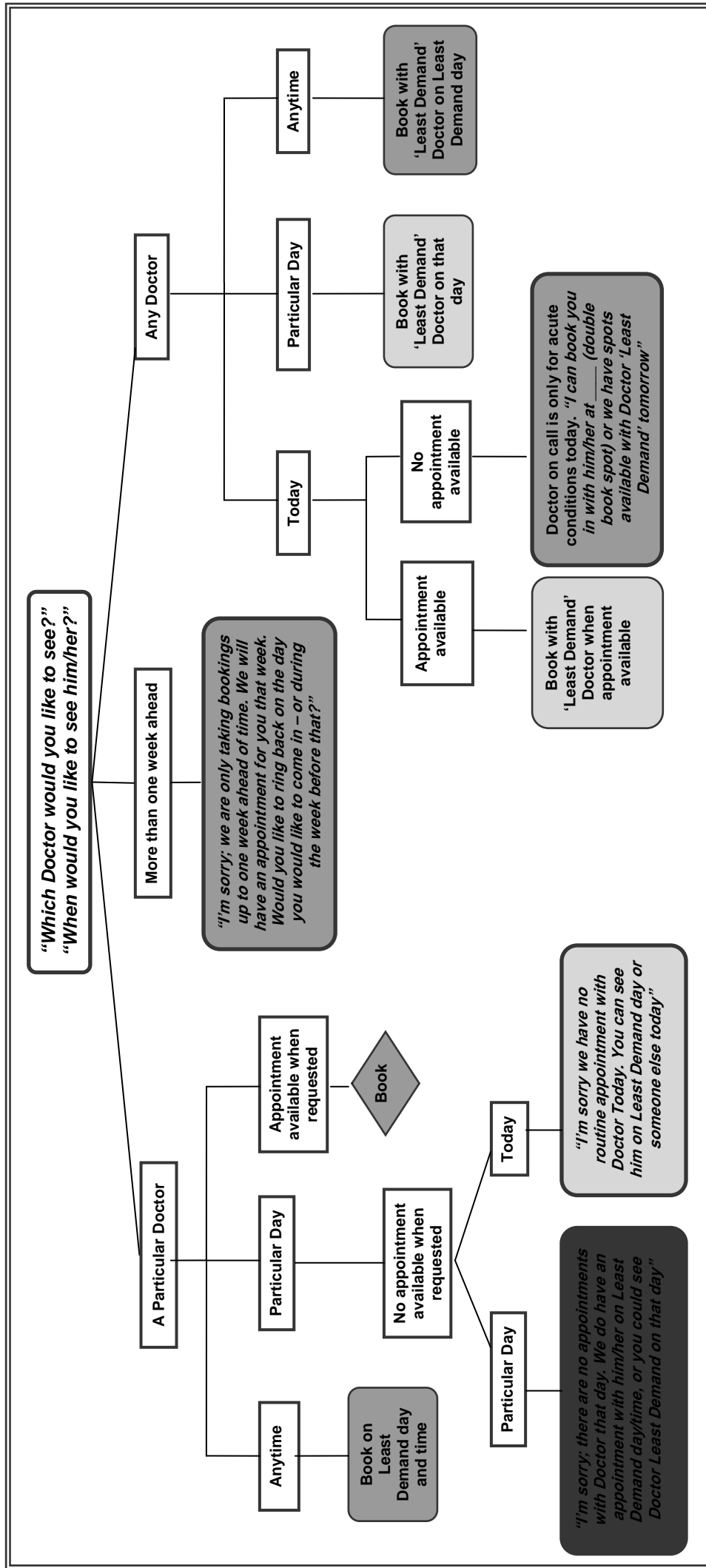
This sheet is designed for clinicians to use during consultations. It will help you understand what type of work you are doing. You may choose to alter the 'Consultation or Contact' types if they do not align to your demand types, but keep them at a fairly high level in the first instance. Place a tick in the appropriate column(s) for each patient contact, both face to face and telephone.

Day _____

Consult or contact	Type of Consultation or Contact										In my practice could any of the below do this work, or help by performing part of the work required?				
	Mental health	Chronic Disease Mgt	Acute Presentn	Multiple issues presented	New episode	Follow-up	Best dealt with by myself	Practice Nurse	Admin	Allied Health Professional	Other practice Doctor	Registrars			
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
Total	0	0	0	0	0	0	0	0	0	0	0	0			

Notes or Ideas

Appendix 4 – The Advanced Access Script



Original Script provided by Alstonville Clinic, November 2007

6.7 Measures for Access and Care Redesign

The purpose of the measures is to help you track progress in achieving the Access and Care Redesign aim. The Access and Care Redesign topic has three measures that can be used to gauge your practice's progress in this topic area. It is important to note that although these measures are to some extent influenced by external sources (e.g. change in the environment, such as the closure of a local hospital), the regular monitoring of these measures is important in guiding you on your improvement journey through Access and Care Redesign.

6.7.1 Access monthly measures

- average patient satisfaction score (collected and reported quarterly)
- the number of patients whose appointment demands were unmet (unmet demand)
- the number of days to the GP 3rd available appointment
- the number of days to the practice nurse 3rd available appointment (where there is not a practice nurse or the practice nurse does not have routine appointments, this measure is not required)

The APCC also encourages practice-specific measures that can be tested using the Improvement Model. This could reflect waiting times or efficiency measures (such as patients seen per hour per FTE practice nurse). The APCC is interested in seeing the outcomes of these measures, as they may be valuable to share with other practices.

6.7.2 Calculating the measures

Average patient satisfaction score

Access and Care Redesign is ultimately about your patients' ability to connect promptly with their healthcare provider of choice. To gauge the success of the work that you are doing, it is important to assess your patients' overall experiences with access to the practice. The APCC has designed a simple survey for this purpose.

The survey and how it's used

Utilising the survey below, ask a small, random sample of patients (a minimum of 5 in the morning and 5 in the afternoon) to complete the survey. Ask this number of patients every day over the course of a week. Ideally, you should make sure that patients are surveyed at different times of the day. The validity of such small samples comes from measuring this over time.

As a program measure, this survey is collected and reported quarterly (every 3 months). If you are actively making changes to improve access, you may choose to conduct this survey more frequently.

The number of patients whose appointment demands were unmet (unmet demand)

This measure calculates the number of patients turned away each day. This measure supplements the 3rd available appointment (as explained below) to give you an overall picture of your demand.

Method of calculation

It involves the practice tallying the number of people who ring the practice over one week (each month) with the intention of making an appointment, but who do not end up doing so. There are two principal reasons for this:

The practice is unable to accommodate the patient's request for an appointment due to lack of capacity. For example, the practice may not have an appointment available for 2 week's time and the patient finds this delay unsuitable and does not or cannot make an appointment. Consequently, the practice has not met this patient's need for an appointment.

The practice has made a policy decision that prevents some patients from getting an appointment (e.g. the practice has closed their books to new patients).

The total figure for the week is then reported on the web portal. Appendix 5 provides a template which can be used to tally the measure of 'Unmet Demand' at your practice.

The number of days until the GP and practice nurse 3rd available appointment

The purpose of Access and Care Redesign is to improve the ability for patients to connect promptly with their primary healthcare professional of choice. This is achieved by actively managing patient demand and improving practice efficiency. These steps increase the capacity of the appointment system for face to face consultations. Therefore, measuring available appointments is a proxy for success and will give you a good indication of progress.

Why calculate to the 3rd available appointment? We know that if you just take the first or second available appointment, they are highly subject to random effect (e.g. a sudden cancellation). The 3rd available appointment has been proven to be a much more stable measure of how the system is functioning and has been used successfully in the USA, UK, and Australia.

Please note that if there are no appointment systems for the GP and/or practice nurse because the practice is running an open access system with no advance or fixed appointment times, then you will not be able to calculate the 3rd available appointment measure. If this is the case, please ensure that when you log on to the web portal to submit measures, the 'Tick if open access' box is ticked.

If it is only the practice nurse that does not take routine appointments, then you will not be able to calculate the 3rd available appointment for the practice nurse. In this case, please ensure you tick the 'Tick if Not Applicable' box for the practice nurse 3rd available appointment when you log on to the web portal.

What is the 3rd available appointment?

To explain the 3rd available appointment, it is easiest to use a couple of scenarios.

In scenario one, a patient requests an appointment for Nurse R. The receptionist looks at Nurse R's schedule and finds the following routine appointments are available, in chronological order:

1st appointment	10:30 am today
2nd appointment	1:00 pm today
3rd appointment	4:15 pm today

The 3rd available appointment is at 4:15 pm today and is recorded as 0 days. If the 3rd available appointment had been 4:15 pm tomorrow, it would have been recorded as 1 day.

In scenario two, a patient rings on Tuesday morning and requests an appointment for Dr. M. The reception desk looks at Dr M's schedule and finds the following routine appointments are available, in chronological order:

1st appointment	3.00 pm Thursday
2nd appointment	4.30 pm Thursday
3rd appointment	8.45 am Friday

The 3rd available appointment is at 8:45 am Friday and is recorded as 3 days.

How do I measure it?

During the month, take the measurement on one day in each week. This day will be referred to as the 'measurement day'. Rotate the measurement day — e.g. Monday during Week 1, Tuesday during Week 2, etc. This gives a better overall picture of the whole month's activity.

On the measurement day, ideally between morning and afternoon sessions, use the practice's appointment system to count how many working days it would be until the 3rd available routine appointment for (a) each GP and (b) each nurse.

To take into account that not all clinical staff work full-time, the web portal uses a weighted average to calculate the result. This means that when you initially log on to the web portal to submit your 3rd available appointment result, you will need to enter the full time equivalence (FTE) status of each GP and practice nurse. This will need to be done at baseline and then only if there are any changes to the FTE status of any of your GPs and/ or practice nurses. Please note that FTE is based on 10 sessions per week, however, as long as each individual practice is consistent the actual definition of FTE is not critical.

How do I calculate the 3rd available appointment?

Calculation can be performed by using the web portal. If you would like more information about manually calculating the measure, please refer to the APCC website.

Each week:

1. Record the number of days until the 3rd available appointment for each GP and nurse; either on paper or on the excel spreadsheet available from the APCC website
2. At data submission time, log on to the web portal and click on the Manual Measures page.
3. You have two choices:
 - If you have used the excel spreadsheet calculate the 3rd available appointment, simply enter the result for your practice into the relevant box.
 - If you have recorded your measures on paper you will need to calculate the results for your practice. Click on the Calculator icon that is next to the 3rd available appointment measure. This will open up the 3rd available appointment online calculator. Enter all the data – names, FTEs, dates and the 3rd available appointment scores for each of your GPs. You will see that the 3rd Available Appointment measure will change as you add these details. The web portal is automatically calculating the GP 3rd available appointment for your practice for that month.
4. Repeat step 3 for the practice nurse 3rd available appointment, if applicable
5. Enter the rest of your measures and then click “Submit” to lodge the measures.

It is important to note that there are specific things that are **not** included in the calculation of queue to 3rd available appointment:

- any GP or practice nurse who is on holiday during the measurement week, unless they are directly covered by a locum
- any appointments for urgent cases that may become reclassified later for routine cases (these are not routine appointments at the time of measurement)
- Saturday or Sunday (i.e. when collecting data on a Friday, if the 3rd available appointment is on the following Monday, this counts as one day). However, if your practice is normally open for routine appointments on Saturday or Sunday, you should include these days. Once a decision is made on whether the practice will include weekends, the important thing is that you keep it the same each time.
- The 3rd available appointment is a valuable measure for determining the delay in your system. However, there are certain instances in which the

3rd available appointment calculation gives inaccurate results or is not meaningful:

- practices that do not take appointments (e.g. Open Access practices)
- appointment systems that are 'book on the day' only (where patients are not allowed to book in advance)
- appointment systems that are 'de facto book on the day'. i.e. patients can only book ahead a certain length of time (e.g. one week into the future). In this case, you can only calculate the 3rd available appointment for the week, and the results will be artificially low

Frequently asked questions on the 3rd available appointment

Why measure the 3rd available appointment for all GPs and all nurses separately? Why not the 3rd available appointment with any clinician?

If the measure was of appointment availability with anyone in the practice, an accurate measure would involve collecting to something like the 6th or 7th available appointment and adjusting for practice size. Most patients tend to consult the same GP or nurse where possible. Therefore, to represent the total availability of routine appointments in a way consistent with patient behaviour, it is suggested the measurement is performed for each clinician and then aggregated.

My practice has an appointment system where several appointments are kept free each day for people who want to be seen on the day. When counting to the 3rd available appointment, do I count or exclude these "kept free" appointments?

As these 'carve out' appointments are only available on the day; they are not available to patients as routine appointments. These appointments should not be included in the calculation.

How do I calculate 3rd available appointments when my GP is on holiday?

If a GP or Nurse is on holiday for 3 or more days during the measurement week, and is not covered by a locum, then do not calculate the 3rd available appointment for this clinician in the given week. In this instance, you should indicate that the GP is on holiday (see instructions on the 3rd available appointment calculator).

However, if the clinician is on holiday and there is locum cover, then the 3rd available appointment should be calculated. You can simply count the locum in the place of the GP that s/he is covering.

Do I include my registrar's appointments in the measurement?

If the practice offers routine appointments with a registrar, then these should be counted.

What if we have a GP who is very rarely in the practice?

If there is one member of the clinical staff who has very few clinical sessions, and whose figures would unfairly distort the summary measure for the practice, they can be excluded from the measurement.

Need assistance?

We understand that practices may need further assistance to capture the above measures. If you are having problems with the measures please do not hesitate to contact your local Division.

Appendix 5 - Weekly tally of unmet demand

	Monday	Tuesday	Wednesday	Thursday	Friday	Total
Unmet demand due to lack of capacity						
Unmet demand due to practice policy						
	Grand Total					

Instructions: On each day for one week, mark the number of patients who contact the practice (phone, walk-in, etc.) to make an appointment but do not or cannot make one. Total the number of marks to determine the number of patients the practice did not see (unmet demand) per day and again per week. Enter the weekly total into the web portal every month.

7 Diabetes

7.1 Aim of the diabetes topic

50% of patients with diabetes type 1 or diabetes type 2 within participating practices should have an HbA1c of 7.0 or less.

7.2 About diabetes mellitus

Diabetes mellitus is a metabolic disorder that primarily involves abnormal metabolism of carbohydrates, protein and fat resulting in elevated blood glucose levels. Two forms of diabetes mellitus exist: Type 1, where the primary defect is in the production of insulin by the pancreas, and Type 2, where the primary defect is the response of the body to insulin. These two forms of diabetes will often present with different symptoms, but common to both forms are polyuria (excessive urination) and polydipsia (excessive thirst). Diagnosis of diabetes is confirmed on the basis of an abnormal blood glucose measurement.

Diabetes is a chronic condition with potentially devastating health consequences. These problems are primarily a result of damage to the blood vessels and this can be classified as either macrovascular (large vessel disease) or microvascular (small vessel disease). Uncontrolled diabetes is often associated with complications that include, kidney failure (diabetic nephropathy), eye disease (diabetic retinopathy) that can potentially lead to blindness, heart disease, stroke and peripheral vascular that commonly leads to chronic foot ulceration, infection and ultimately amputation. There is however a large body of evidence showing that proactive diabetes care and good control of blood glucose can reduce the risk and incidence of these complications and delay the progression of this disease.

7.3 Scope of the Collaborative Program work on diabetes

We recognise that every Division and practice may have developed a strategy for the local implementation of diabetes management and may have undertaken significant work to date. The APCC Program has distilled both expert and practical learning on changing and improving practice-based systems for diabetes care into a set of change principles and associated change ideas to further enhance that work.

Definition of Diabetes

For the purposes of the Collaborative Program, diabetes is defined as the following:

- diabetes type 1
- diabetes type 2

Below is an excerpt from the Diabetes Management in General Practice 2008/09 14th edition¹, outlining the guide for general practitioners of the range of blood glucose levels indicative of diabetes mellitus:

1 Diagnosis

- **People in high risk groups need to be screened for undiagnosed type 2 diabetes. See following page for high risk categories.**

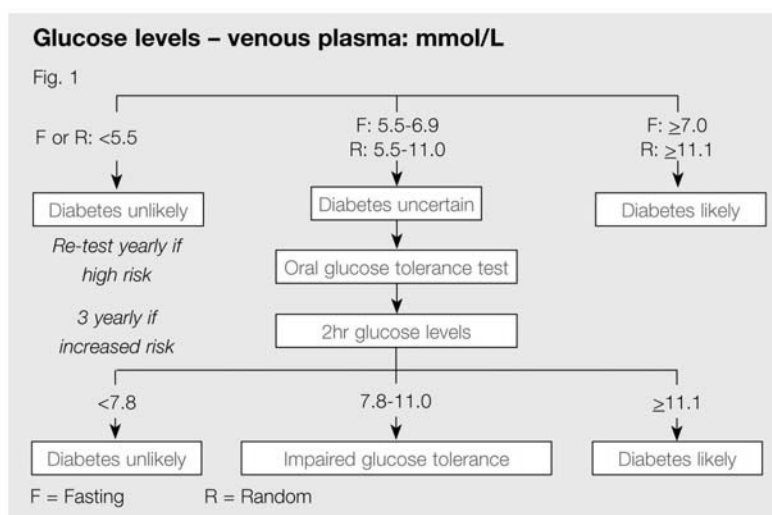
The diagnosis of diabetes is made in one of the following three ways but each must be confirmed on a subsequent day unless unequivocal hyperglycaemia with acute metabolic decompensation or obvious symptoms are present:

- Symptoms of diabetes and a random (non fasting) blood glucose > 11 mmol/L
- Fasting plasma glucose ≥ 7.0 mmol/L
- 2-hour plasma glucose > 11 mmol/L during an oral glucose tolerance test (OGTT)

The OGTT is unnecessary to diagnose diabetes in people with an unequivocally elevated fasting or random plasma glucose. An OGTT needs to be performed in a person with an equivocal result. (See Fig. 1).

The test is carried out after an overnight fast, following three days of adequate carbohydrate intake (greater than 150g per day). A 75g load of oral glucose is given and the diagnosis of diabetes can be made if venous plasma glucose level fasting is ≥ 7.0 mmol/L or 2 hour post glucose load is ≥ 11.1 mmol/L.

The diagnosis of diabetes must be established using a laboratory plasma glucose measurement and must be confirmed on a separate day in asymptomatic people.



4 Diabetes Management in General Practice

Further information can also be found at:

<http://www.mja.com.au/public/issues/apr19/colman/colman.html>

¹ Diabetes Australia and the Royal Australian College of General Practitioners, 'Diabetes Management in General Practice: Guidelines for Type 2 diabetes', 14th edition, 2008/9, September 2008, p9

For the purposes of the Collaborative Program, diabetes is NOT:

- gestational diabetes mellitus (GDM)
- previous GDM
- impaired fasting glucose
- impaired glucose tolerance

This section is intended as a pragmatic, practical guide to help practices apply the change principles and ideas quickly and effectively to achieve the best possible impact on outcomes for patients. It is not intended to be a text on the clinical management of diabetes and recognises that the care of the individual patient rests between the patient and the health provider.

The RACGP Diabetes Management in General Practice, 14th edition 2008/09 Appendix provides useful guidelines that address the management of diabetes.

7.4 Change principles

Change Principles

1. Build the practice team
2. Establish a system for creating, validating and updating a register of people with diabetes
3. Be systematic and proactive in managing care
4. Involve patients in delivering and developing their care
5. Develop effective links with key local partners

These are the change principles that other practices have used and delivered to maximum effect. Practices have found that consistent and systematic work in each of these change principles has delivered a substantial impact on the quality of care. The principles were approved by the APCC Diabetes Expert Reference Panel in 2008.

For each change principle, specific change ideas are identified, and practical examples, tips, guidance and tools are provided where possible.

The ideas and examples that follow are the result of work done by participating practices in the APCC Program. These ideas are intended to stimulate thinking and discussion about how the work can be developed in your practice.

Change Principle 1 - Build the practice team

Consider the change ideas below when tackling this change principle.

Change Ideas

- set realistic goals
- communicate with other team members
- engage the practice team
- assign roles and responsibilities around diabetes management
- reflect and review what you are doing

Experience from Phase 1 of the APCC Program suggests that having an effective practice team is a necessary foundation on which to begin any quality improvement work. Attempting to implement change without appropriately engaging the practice team and assigning tasks is unlikely to lead to sustainable change. As a starting point, everyone in the practice should be aware of the APCC Program, what changes are being tested, their specific roles in relation to implementing/testing change, and should receive regular feedback on the results the practice is achieving.

Program experience supports the need for effective practice teams and the 'Building the practice team' change principle is critical to the successful implementation of all other change principles and general practice effectiveness. Please read through the ideas in the 'Building the practice team' change principle to ensure you have done everything possible to build an effective team within your practice.

Example

The practice wanted to ensure that all practice team members were aware of the APCC Program and what would be involved as a result of the practice participating. Therefore, a meeting was arranged in the staff room at the clinic during lunch to learn more about the Collaboratives and discuss any issues or queries. The majority of the staff were able to attend and indicated that they understood the principles of the program and what would be involved.

Other plans may include:

- determining each team member's role
- determining who is to do what regarding diabetes care
- determining how to communicate ongoing program news and information
- diarising a regular collaborative update meeting
- reviewing roles and responsibilities each month, and asking if they are still appropriate

Review what is working and what is not. Please refer to the 'Building the Practice Team' change principle in the Access and Care Redesign section of the handbook.

Change Principle 2 - Establish a system for creating, validating and updating a register of people with diabetes.

Consider the change ideas below when tackling this change principle.

Change Ideas

- agree on a clear definition of diabetes type 1 and diabetes type 2
- develop a register of people with diabetes
- develop systems to maintain a valid register

Agree on a clear definition of diabetes type 1 and diabetes type 2

For the purposes of the APCC Program, the two types of diabetes are defined as follows:

- Diabetes type 1 is an autoimmune condition in which the body's own immune system destroys insulin-producing cells in the pancreas. This deficiency needs to be treated with insulin injections, usually immediately, but sometimes up to one year after diagnosis. Diabetes type 1 usually occurs in people under the age of 30, often in childhood, although it can occur at any age.
- Diabetes type 2 develops when the body is unable to produce enough insulin, or cannot use the insulin the body produces properly (insulin resistance). This type of diabetes usually appears in people over 40 and depending on its stage of progression can be treated by a combination of changes to lifestyle and medication, including insulin if necessary.

Refer to section 7.3 for blood test definitions.

Develop a register of people with diabetes

An accurate, complete and current register of patients with diabetes is the crucial starting point for improving diabetes care. We suggest that initial work at your practice is focused on building a register that contains the right patients with the right information.

If you have not already done so, we suggest that you begin to construct the register by instigating a series of searches of your patient population. These could include searching for patients:

- who have a diagnosis of diabetes recorded
- who are on insulin and/or oral hypoglycaemic medications
- who are on blood glucose monitoring or who have had a glucose tolerance test performed
- who have an HbA1c recorded

Check that these patients have a diagnosis of diabetes entered in the patient history (if appropriate) and your register will develop.

Patients who have previously had gestational diabetes, or have been diagnosed with either impaired fasting glycaemia or impaired glucose tolerance, should also be reviewed to see if they have progressed to frank diabetes.

You may wish to contact your pathology provider(s) or local hospital laboratory and ask for a list of the patients for whom the practice has ordered an HbA1c test in the past two years. Check that all patients on this list are those with diabetes and cross-check with your current register.

Using a protocol for coding patient information (e.g. adding a working diagnosis of diabetes) can help to ensure consistency within your practice. Coding protocols used together with a diabetes template will improve data quality and consistency. For a list of codes and terms used to describe diabetes according to the clinical program that is used by your practice, please refer to the Diabetes Codes in Measuring for Improvement section, under 'Processing Data'. Once the register is compiled, distribute it throughout the practice to check if any names have been omitted.

Example

The practice updated its diabetes register by identifying patients prescribed hypoglycaemic agents who were not currently on their diabetes register. When the search was done, 35 patients were found. Of these 19 had not been to the clinic in the last two years, 4 patients were receiving metformin for PCOD and 12 patients were NIDDM but had not had a classification added. The 19 inactive patients and the 4 PCOD patients were removed from the register. The 12 NIDDM patients were then added to the diabetes register.

Ellen St Family Practice, Fremantle Regional, Perth & Hills and Kimberley DGPs, WA

Example

The practice wanted to improve the accuracy of its diabetes register by confirming that the diagnosis was entered correctly in patient records. First, the practice nurse identified all patients with diabetes who had a diagnosis of diabetes mellitus in their past medical history. Then she identified diabetes patients by HbA1c, diabetes medication, and other labels such as IDDM or NIDDM and added them to the register. The number of patients on the diabetes register increased by 44 patients.

Beulah Park Medical Centre, Adelaide Central & Eastern, Hills and Barossa DGPs, SA

Develop systems to maintain the register

Once the register has been established and validated, your next step will be to maintain its accuracy. This should include a system to ensure that new information on existing patients is gathered and recorded, and that new diabetes patients are identified and included on the register. Here are some questions to consider when you are developing your systems for maintaining the register:

Who will maintain the register? Could this person be formally recognised as the register manager? Would this person require training? How much protected time will this person need to maintain the register?

How will you identify new cases? Where does the information come from, e.g. within the practice, the hospital? How will you ensure that the information reaches the register manager and is recorded and coded appropriately?

How will the GPs in your practice notify the register manager of changes to patient information?

Do you need a system to routinely check the quality of the information on the register? Are all patients still active?

Do you need to document your system for maintaining the register so that things run smoothly when the register manager is away?

Example

Maintaining the diabetes register in the practice is a continuous quality improvement process. The practice encourages and continually reminds their doctors to use the diagnosis code when entering a diabetes diagnosis. The practice manager continually reminds the doctors of the importance of this at clinical meetings and ensures that the doctors are clear and in agreement on what diagnostic codes are to be used. The practice places laminated posters in each doctor's office to remind them to use the diagnostic codes. There is also a staff member who is responsible for regularly validating and checking the register.

Camp Hill Medical Centre, South East Alliance of GP, Qld

After all the time you have spent developing an accurate register, it is important to document the process you used for future reference.

This will help you when the practice formally reviews its register (e.g. annually) and ensure that things run smoothly when the register manager is away.

Change Principle 3 - Be systematic and proactive in managing care

Consider the change ideas below when tackling this change principle.

Change Ideas

- establish systems for delivering care to patients with diabetes
- establish appropriate care pathways for people with diabetes
- establish proactive call and recall arrangements for people with diabetes
- use guidelines, protocols and computer templates to support care delivery

Due to the multifaceted nature of diabetes, managing care effectively and consistently across a practice requires a planned, systematic and proactive approach.

Practices may find it useful to employ the principles of Access and Care Redesign to plan how they can best manage demand for diabetes care. Using the Access and Care Redesign principles, your practice could undertake a systematic review of the needs of people with diabetes. Your practice would then look at how demand is currently handled and by whom. It may also be useful to consider the rate of new diagnoses in the practice and build this into the demand for services. How could this demand be handled in the future? What contingency plans could be introduced? Your practice may need to consider providing training and training materials for staff in order to match the team of professionals and the skills they have to the demand. Finally, put plans in place to allow the system to function through predicted fluctuations in capacity.

Working through the change ideas in this section will help to ensure patients are given the greatest opportunity to receive optimal care.

Establish systems for delivering care to patients with diabetes

Consider how you can establish the practice systems, including the roles of the practice team, for delivering and improving care for diabetes patients.

Participating practices in Phase 1 of the Program found the following ideas useful:

- Establish a small, possibly multidisciplinary team to lead the work. This might include a GP and a practice nurse, or it could be expanded to include any of the following: patients, podiatrist, Aboriginal health worker, dietician, diabetes educator, pharmacist, etc. Together, this team would be responsible for developing and delivering the diabetes care management system and ensuring that the system was agreed upon and communicated to all members of staff. The micro-team would be responsible for leading the work through the change ideas in this principle.
- Some practices find that initially a combined GP and nurse-led approach is very effective, with other members of the primary health care team becoming involved where appropriate. The education and ongoing management, including monitoring of the annual cycles of care, can be undertaken by the practice nurse with the role of the GP crucial in

providing professional support at the clinics and in medication review. It may also be of value to involve a pharmacist in medication reviews.

Example

To improve patient management of diabetes, the practice nurse conducted two diabetes clinics in July and August. At the clinics, patients were checked for the following: BP, weight, foot examination, HbA1c, microalbuminuria, triglycerides, HDL, cholesterol, smoking status, diet, exercise and medication. The two clinics saw 60 patients. These 60 patients were flagged for review with the GP in three months time. With the success of these clinics, the practice plans to run similar clinics on a regular basis.

Family Medical Centre, Northern Rivers GPN, NSW

Identify someone who will take overall responsibility for co-ordinating arrangements across the team.

Example

The practice found that it was important to have a strong GP driver who was engaged and motivated to lead and promote the diabetes clinics. The GP needed to know the final detail of the clinic program and also be prepared to promote and educate others in the practice regarding the process and the benefits of the clinic.

East Bentleigh Medical Group, Central Bayside and Monash DGPs, Vic

Establish appropriate care pathways for people with diabetes

The baseline diabetes measures are the starting point for this work. Practices have found it useful to use the Model for Improvement to determine whether patients are being treated appropriately. Looking systematically at each group of patients will help you to understand your results and improve the quality of treatment and data.

Establish practice protocols (or customise existing protocols) for the care of people with diabetes

Basing your practice's diabetes care around agreed protocols means that the entire team is clear about roles, responsibilities and how patients are managed. Protocols need to be developed at the practice level to allow customisation for each individual practice and to ensure that members of the practice team are aware of their personal responsibilities within the system of care delivery. You will also need to ensure these protocols are flexible enough to allow for changes and are reviewed when new staff are appointed.

Practice protocols might include:

- all patients with diabetes see the practice nurse quarterly for review and assessment of cycle of care in the diabetes clinics
- all patients receive a diabetes hand-held record
- asking your Divisional Practice Support team for examples of and help in creating your hand-held records
- all patients with diabetes have a GP Management plan and Team Care Arrangement completed by the practice nurse
- all type 1 diabetes patients see an endocrinologist annually
- ensure people with diabetes receive optimal care including the use of drug therapies

Example

The practice decided to automate its manual diabetes review protocol using three-monthly recall intervals in Medical Director. Training on the new protocol was provided to the practice staff. With the new system, staff do not need to manually key in dates as an automated recall will advise the clinic of the patients' diabetes review.

Bordertown Family Medicine, Otway, Limestone and West Vic DGPs, SA

Example

Both the practice manager and practice nurse wanted to research and develop a resource centre for all the practice's patients who had diabetes. After contacting the local State Diabetes Australia office, a number of appropriate patient resources were suggested. These were either sent to the practice from Diabetes Australia or located and photocopied so all patients with diabetes had access to them.

In order to ensure that people with diabetes receive optimal care, consider staff skills and training. It is essential to have the right people in the right place with the right skills at the right time. This could also include the equipment used or needed to deliver optimal care.

Divisions and practices need to consider the quality and comprehensiveness of education for the practice team involved in the delivery of care to people with diabetes. It is likely that roles will change and that there will be an extension of responsibility and flexibility for several professionals within your team.

Training may be necessary at a practice level for insulin initiation of diabetes type 2. Your practice would need to consider who would be the most appropriate professional within your practice to be trained. When initiating the therapy consider:

- identification of patients who may benefit from insulin
- selection of a suitable insulin regime
- implementation of a customised education program for the patient
- consider ways of testing systematically whether patients are being prescribed the appropriate medication. Practices may find it useful to engage community pharmacists, who are well placed to offer support to practices, to offer healthcare advice to patients, to review prescribed medication for patients, and to monitor patients' therapy
- undertake annual cycles of care

Practices may wish to review the numbers of patients for whom completing an annual cycle of care for diabetic patients enables claims for a Service Incentive Payment (SIP). This means that over 12 months, the patient must receive the minimum requirements of care. Additional levels of care will be needed by insulin-dependent patients and those with abnormal review findings, complications and/or co-morbidities. The following are the minimal requirements of care to claim a diabetes SIP. However, most guidelines suggest the HbA1c should be checked two to four times annually, and other measures more frequently if clinical circumstances dictate.

Examinations/Tests	Frequency
Measure blood pressure	At least once every 6 months
Measure weight & height; calculate BMI	
Foot examination	
↓	
Assess diabetes control by measuring HbA1c	At least once every year
Test for microalbuminuria	
Measure total cholesterol, triglycerides and HDL cholesterol	
Risk Management review: <ul style="list-style-type: none"> • smoking • healthy diet • physical activity • self-care education 	
Medication review	
↓	
Eye examination	At least once every two years (consider doing this annually for at- risk populations)

*As of 14/03/05

The diabetes SIP consists of a payment of \$40 to GPs for each completed annual cycle of care. There is an additional incentive payment if at least 20% of patients with diabetes have a SIP claimed. See the Medicare Australia website www.medicareaustralia.gov.au or contact your local Division for more information.

Example

The practice wanted to identify diabetes patients who were overdue for SIP claims. The practice manager ran a search on the patient database to identify patients who have had a cycle of care item claimed in the last 12 months. The information was then checked against patient information in the SIP column of the diabetes register. Patients with an incorrect date in their SIP column were corrected. Of the 92 patients with a SIP claimed in the last 12 months, 23 patients' records were incorrect and had to be updated. Of the patients on the diabetes register, 92 have had a SIP claimed in the last 12 months, 53 had a SIP claimed more than 12 months ago, and 92 patients have nothing listed in the SIP column of the register. A total of 145 patients are due for their SIPs. The practice manager held a meeting with staff to develop a strategy and a priority list for targeting these patients who are overdue for their annual cycle of care.

Brooke St Medical Centre, Central Highlands DGP, Vic

New item numbers for chronic disease management have been available since 2005. These item numbers (721, 723, 725, 727, 729) can be used to plan the care of those with diabetes, with specific items available for team care arrangements and reviews of those for whom previous care planning has occurred. Detailed information on the new items can be found at the Department of Health and Ageing website: <http://www.health.gov.au/>. CDM Medicare Items 'Q and As', (updated November 2008) can be found at:

[http://www.health.gov.au/internet/main/publishing.nsf/Content/D1794C87EE43B870CA2573D600833BF6/\\$File/qsandasnov08.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/D1794C87EE43B870CA2573D600833BF6/$File/qsandasnov08.pdf)

Establish proactive call and recall arrangements for people with diabetes

Is your existing call/recall system sufficiently proactive? Are patients invited for review at least annually? How do you track and follow-up with patients who do not attend?

How might the workload in the call/recall system be managed? Some practices find it useful to work out how many patients they need to see each year and have a system to call the right proportion each month or week, remembering to adjust this as the register grows. This allows a smoothing out of the demand for care, from this group of patients, throughout the full year and enables greater planning and control of the workload for the care team. Some practices find it useful to

provide a general clinic to cover a number of chronic conditions, e.g. asthma, diabetes, CHD.

Can you identify a member of your practice team to manage the call/recall process? Decide how you will call/recall patients. You may wish to use your clinical computer system (linking via your computerised diabetic template).

Consider how you will manage patients who do not attend.

Do you have a system in place to identify and recall those patients who are at higher risk of complications, e.g. those patients with hypertension and high HbA1c, where aggressive treatment in early stage type 2 assists control?

Do you have a system in place to follow-up patients in secondary care, especially diabetes type 1 patients? Often, these patients will not have their HbA1cs recorded at your practice and will form part of the 'No HbA1cs recorded' register.

Example

The practice nurse searched through the diabetes register to determine how many patients had not completed their annual cycle of care. There were 280 patients to be recalled. The clinic sent out 4 recall letters a week to ensure that it was not overloaded. Patients see practice nurses first when they come in and complete the major part of the assessment before their review with the GP.

Middle Ridge Medical Centre, Ipswich & West Moreton and Toowoomba DGPs, Qld

Use guidelines, protocols and computer templates to support care delivery

Embed protocols through the use of manual or computerised templates. The use of computer templates allows a systematic, consistent approach to delivering care to patients and improved accuracy and completeness of patient data. Some useful tips to maximise use of templates include:

- discuss diabetes guidelines with the other doctors in the practice
- keep templates simple and user friendly
- look for templates that suit you; ask your Division practice support team for some examples
- develop and use computer shortcuts where appropriate
- download pathology results in HL7 format which will allow self-propagation of some results into diabetes assessments
- determine an annual calendar for patient reviews
- provide one-to-one training and support to the health professional using the system/template

- regularly use the data from the template to inform the team of its performance

Example

At first the practice tried to use the computerised diabetes care templates that come standard as part of their clinical software to maintain and standardise their diabetes care. However, it soon became evident that this was too difficult to maintain as the GPs had to retrieve the template and then manually update the information by cutting and pasting from other screens within the program. The GPs did not have the time to do this. So the practice manager created a checklist that is attached to each patient's record (the checklist has all the annual cycle of care items listed and is easily identified as it is purple). The doctors tick off each item as it is completed. To clearly identify the patient as having diabetes, a bright green sticker is placed on the front of the patient's record. The sticker also records the date the last SIP was claimed for the patient.

Kent Road Clinic, North West Melbourne DGP, Vic

Change Principle 4 - Involve patients in delivering and developing their care

Consider the change ideas below when tackling this change principle.

Change Ideas

- implement a deliberate strategy for self-management to allow patients and carers to better understand and manage their conditions
- integrate the patient's perspective constantly in the design of services
- ensure written and verbal communication is appropriate and understood
- pay special attention to the needs of people from hard to reach groups
- identify psychosocial factors which may affect patient care

Implement a deliberate strategy for self-management

You may want to consider developing/modifying your system of care based on your patients' feedback. Patients should be able to provide valuable information on the style and content of letters and patient literature, the organisation and timing of clinics/appointments to maximise attendance, how to best deliver care to patients with more than one chronic condition, understanding issues around compliance with medication and developing patient self-care.

Use self-management plans for people with diabetes and goal-setting plans that have been agreed upon with the patient. Patients need to understand their condition and targets such as their HbA1c, cholesterol and blood pressure. If they are aware of what they should be, then they are better equipped to successfully manage their own health. The use of patient hand-held records which are

completed at each health visit can provide valuable insight for both doctor and patient.

Example

The clinic GP wanted to determine how many of his patients with diabetes were actually aware of their current results. He surveyed 10 patients with diabetes asking them about their HbA1c, cholesterol and BP results and target levels. The GP discovered that about 80% of the patients surveyed knew their current results but fewer were aware of their target levels.

Consider the use of a community-based program to empower patients and their carers to give them the skills to help themselves. The main areas of such a program would cover confidence, hope, empowerment, clarity and knowledge. These structured programs tend to have a more beneficial effect than solely doctor-encouraged self-management.

For further generic patient self-care and self-management information, please refer to the section 'Patient Self-Management'.

Develop a deliberate strategy for self-management

Patients live with their chronic disease 24 hours a day, 365 days a year. Many patients are happy to manage aspects of their own care and indeed do so very effectively. This may include developing an understanding of their condition and how it impacts on their lives through practice-based education, improving blood glucose control by home monitoring, and actively participating in improving their diet and lifestyle.

Patient self-management does not simply entail educating patients about their condition or giving them relevant information. It is about developing the confidence and motivation of the patient to use their skills, information and professional services to take effective control over life with a chronic condition.

The aim of education for people with diabetes is to improve their knowledge and skills, enabling them to take control of their own condition and integrate self-management into their daily lives.

It is suggested that patients should be involved in the decision-making process for individually agreed targets to manage their diabetes. It may be beneficial to utilise written patient-held records to enable this process to be more explicit.

Example

Murray Clinic devised and introduced a Patient Health History which is completed by all new patients on arrival. The new form requests information on previous illnesses and conditions, past operations and accidents, family history, medications and allergies, and immunizations. It also asks about smoking and drinking habits and ATSI status.

New patients are asked to come 15 minutes early to complete the form which they will then give to the doctor. The GP may enter the information into Medical Director at the consultation, but the practice nurse checks all forms to ensure that all relevant information has been entered.

Murray Clinic, Adelaide Central & Eastern, Hills and Barossa DGPs, SA

Example

Brighton Medical Clinic created laminated cards with various different topics and questions written on them, and placed them on the seats in the waiting room, to encourage patients to proactively manage their medical conditions.

This was very successful, with patients asking their GP to check their blood pressure, cholesterol, and so on, according to the topics on the cards.

The practice made more cards targeting other topics, such as immunisation, travel vaccinations, 45 to 49 year old health checks, emergency contact details and requests for longer appointments, and different cards are distributed each week.

Brighton Medical Clinic, Central Bayside GPA and Monash DGP, Vic

Scotland Diabetes UK has developed a buddy scheme to train people with diabetes to act as buddies to people with newly diagnosed diabetes. They also have a lot of educational material for people newly diagnosed with diabetes to help them gain a greater knowledge of their condition.

Example

Dennis Road Medical Centre removed the outdated magazines from their waiting area and replaced them with literature and magazines which were health focused. Many patients were observed reading the material and taking brochures home.

Dennis Road Medical Centre, Gold Coast & Logan DGPs, Qld

For further generic patient self-care and self-management information, please refer to the section on 'Patient Self-Management' in this handbook.

Integrate the patient's perspective constantly in the design of services

Involving and integrating patients' perspectives into the design of services can be seen as a continuum from low to high user involvement, as follows:

- decisions publicised/explained before they are implemented
- patients may take the initiative to influence decisions
- patients' views are sought before a decision is finalised
- patients have authority to take selected decisions

Patients and carers offer a unique insight into services, and their participation in redesign is crucial in enhancing care. Teams should consider how they might meaningfully involve patients in decision-making about care delivery. It would be useful to ensure that the views of patients are incorporated into a range of initiatives around diabetes, such as the development of guidelines and protocols, patient information and in redesign initiatives.

Practices may wish to consider the use of group consultations for people newly diagnosed with diabetes. This method of care delivery may also be useful for people with established diabetes - groups could be managed as type 1 or type 2, or a mix of both sub-divisions.

Example

The practice nurse searched the diabetes register and invited patients for an information session on diet. The talk focused on diet and cooking for diabetes patients. Patients were given information packs containing recipes and cooking tips and encouraged to try them. The event was so well received that the practice plans to host a small group for morning tea, and serve snacks that are diabetic friendly.

Woodville Family Practice, Adelaide Southern, Western, Murray Mallee & Mid North DGPs, SA

Example

Alstonville Clinic provided each of its diabetes patients with a personal patient-held care plan. The plan included general information on diabetes, the patient's individual results and targets and the rationale for them. Included also were guides to healthy eating, exercise and weight loss. It is designed to have the capacity to add all educational material from other providers, as well as acting as a consultation record and communication tool for all participating providers. Patients were contacted within one week of their appointment to ascertain usefulness of the care plan. The practice had a 100% favourable response and patients were happy to be proactively managed.

Alstonville Clinic, Northern Rivers GPN, NSW

Ensure written and verbal communication is appropriate and understood

Most practices have written material (letters and advice leaflets) to support patient care. Some general practices are giving written diabetes management plans to their patients. It may be useful for individual teams or your Division to review patient education literature to ensure it is appropriate and clear.

Most practices invest significant amounts of time in patient education and health promotion groups for disease-specific care. Patients can be a valuable source of evaluation/critique for this material.

It is worth noting that the Plain English Campaign recommends that written material should be pitched at a reading age of seven years to be understood by 90% of the population. Diabetes Australia or your local Division should be able to direct you to patient information resources.

Example

Russell Clinic installed a community TV channel in the waiting area which provides health education and healthy lifestyle information and promotion. The patients responded positively, and it prompted discussion between patient and GPs. New information will be added as necessary in the future.

Russell Clinic, Adelaide Southern, Western, Murray Mallee & Mid North DGPs, SA

Example

Tudor Medical Centre created mobile signs to hang from the air conditioning vents in the waiting room, each with a risk factor described on one side (e.g. 'High cholesterol?') and a strategy for the risk factor on the other side (e.g. 'Ask your doctor for a diet sheet').

Tudor Medical Centre, Adelaide Central & Eastern, Hills and Barossa DGPs, SA

Pay special attention to the needs of people from hard to reach groups

Where possible pay special attention to people who have particular needs and are often hard to reach. This includes the elderly, Indigenous patients, minority ethnic groups, people in rural and remote areas, and those with disabilities. Patients who are housebound or who are in nursing homes will need domiciliary eye testing and podiatry services as well as medical and nursing services.

Local community representatives and voluntary organisations can be a valuable source in helping to identify appropriate mechanisms of communication and in addressing issues around access.

Example

The practice wanted to improve the response rate from Aboriginal and Torres Strait Islanders to invitations to attend the clinic for the management of their diabetes. The practice nurse met with the Aboriginal health worker to gain assistance in ensuring follow up of diabetic care. The practice plans to hold a diabetes clinic for its Aboriginal and Torres Strait Islanders patients. The Aboriginal health worker would contact these patients three weeks prior to the event.

Atherfield Medical Centre, South East NSW DGP, NSW

Investigate specific patient self-management programs in your area, and consider referring your patients to those programs.

Identify psychosocial factors which may affect patient care

Diabetes and depression frequently coexist, and anxiety frequently coexists with depression. Lack of social integration and support may also be linked to depression.

Consider assessing your diabetes patients for comorbid depression and their level of social support, and implement strategies where relevant.

Change Principle 5 - Identify effective links with key local partners

Consider the change ideas below when tackling this change principle.

Change Ideas

- analyse the patient journey and redesign where necessary
- identify and engage local organisations and other sources of care in developing diabetes services
- provide integrated care by improving the relationship between primary, secondary and tertiary providers

There will be a need to coordinate other elements, particularly around agreed care pathways, with local hospital and community services colleagues.

Analyse the patient journey and redesign where necessary

Mapping the processes or sequence of events between primary and secondary care from a patient's perspective is an effective approach in starting to understand whether your current service provision is timely and of high quality.

Once this has been agreed, the following questions are useful in developing ideas to improve the patient journey:

- What are the problems - barriers and bottlenecks - in the patient's journey, especially in handovers between primary and secondary care?
- Are communication channels effective and timely? Is it two-way?

- Can steps be reduced or simplified, e.g. by the use of one-stop primary care clinics, mobile retinopathy screening cameras, intermediate care facilities such as General Practitioners with a specialist interest (GPwSI), or community-based diabetologists, involving group-based education sessions or group consultations?
- Can constraints (e.g. waiting times for investigations) be addressed? Some practices have a fax back system for expert diabetic opinion from secondary care to allow the patient to be dealt with in primary care, which is more efficient and effective for patient care.
- How best might the shortage of dietetic and podiatry services be overcome?
- How can the evidence base be better integrated into the provision of care (e.g. standardising computer coding between primary and secondary care)?
- Are the right people with the right skills in the right place to provide the right care at the right time? Do opportunities exist to relocate services in primary care?
- What are the training and development implications for staff and how can these best be addressed?
- What should be measured to demonstrate the effectiveness of the service and improvements made?
- Are all contact details for secondary care givers local and current?
- Do you have an electronic directory which is regularly updated?
- Is the patient a member of Diabetes Australia?

Identify and engage local organisations and other sources of care in developing diabetes services

You may find it useful to map local organisations and allied health professionals providing services for diabetes in your area, and think about how to involve these in developing diabetes services. Your local Division may already have a list of local services.

Local Government, for example, with their responsibilities around social care, education, environmental services and links with recreation, potentially have a very important role in providing complementary services to support health care for patients with proven diabetes.

In addition, many local communities have a vibrant and active volunteer sector with the potential for community networks to make an effective contribution. This is particularly relevant when looking at the needs of local minority ethnic groups. Implementation groups may wish to involve Diabetes Australia.

Practical ideas include:

- prescription for physical activity schemes using local recreational facilities (e.g. exercise classes)

- the SNAP Program, which works with patients on lifestyle risk factors of smoking, nutrition, alcohol and physical activity. For information, visit <http://www.racgp.org.au>
- targeted dietary advice and classes through existing local community groups, i.e. using volunteers to run the groups
- developing local support groups
- lifestyle prescriptions such as the Active Script program (VICFIT) and the Lifescripts Program

Example

The Ellen St Family Practice aimed to increase the usage of home medicine reviews. The practice contacted their Division's Domiciliary Medication Management Review (DMMR) project officer for resources. Useful information on DMMRs were placed in GPs' mail boxes and on the doctors' notice boards. An email was sent to all GPs encouraging the use of DMMRs and offering help with getting started. A talk by the Division's DMMR project officer was also planned, and further PDSAs have been planned to measure the increase in uptake of DMMRs.

Ellen St Family Practice, Fremantle Regional, Perth & Hills and Kimberley DGPs, WA

Example

The clinic organised a meeting with the diabetes educator and the diabetes clinic nurse to investigate whether services were being duplicated. It was found that HbA1c tests and other annual cycle of care components had been duplicated. To avoid continuing duplication, it was decided that communication would be maintained between the diabetes educator and clinic nurse. The clinic nurse would be responsible for care planning and will refer complex cases to the diabetes educator and dietician team for care plan.

Alstonville Clinic, Northern Rivers GPN, NSW

Example

Casuarina Family Practice gives Lifescripts assessment forms to all new patients when they attend the practice for their first consultation. It has provided more opportunities for the GPs and nurse to discuss lifestyle risks/issues with patients.

Casuarina Family Practice, GP & Primary Health Care, Top End, Central Aust and Kimberley DGPs, NT

Provide integrated care by improving the relationship between primary, secondary and tertiary providers

Ideally, there is opportunity to develop local networks of GPs, specialists and allied health professionals, all of whom you are able to liaise with as required.

Examples include the Victorian PCPs (Primary Care Partnerships), which have been set up in every Health Region. Joint working can also occur at a more local and informal level.

It might be useful for Divisions to set up a diabetes clinical network between the participating practices and other health providers, perhaps from State-funded services. The clinical network would include GPs and other practice staff, dietitians, optometrists and podiatrists as well as diabetes specialist nurses. A local physician with an interest in diabetes might also wish to participate.

Having such a group will help to ensure that the roles and responsibilities of people involved in services for people with diabetes are co-ordinated. The group's key functions are likely to cover measurement of progress, the production of referral criteria, formularies, discharge arrangements, and developing a strategy for training and ensuring that appropriate equipment is available. The group may also want to consider using this opportunity to review and redesign the patient journey. This will inform the clinical networks around issues relating to commissioning of services for diabetic patients within a defined geographical area.

The diabetes clinical networks may find it useful to map other local organisations that have an influence or potential influence on diabetes in their area, and think about how to involve them in developing diabetes services.

Many local communities have a vibrant and active voluntary sector and community networks with the potential to make an effective contribution.

Example

The Fremantle Regional Network has collated a list of resources available for diabetes patients. GPs can refer their patients to these resources:

- Western Australian Cardiac Rehabilitation Services has a multidisciplinary team of health professionals providing a range of chronic disease management, including diabetes
- UWA Health and Rehabilitation Program runs group and/or individual exercise programs as well as monthly educational talks on health matters
- The Arthritis Foundation runs a self-help course for people living with one or more chronic condition, including diabetes

Fremantle Regional GP Network, WA

7.5 Measures for Diabetes

The purpose of the measures is to help you track progress in achieving the diabetes aim and monitor your improvement efforts. Best practice management of people with diabetes extends beyond the subset of care reflected by these selected measures. For comprehensive clinical guidelines for the care of people with diabetes see the Diabetes Australia and Royal Australian College of General Practice publication, *Diabetes Management in General Practice – Guidelines for Type 2 Diabetes*. These guidelines are available at www.racgp.org.au/guidelines/diabetes .

7.5.1 Definition of Diabetes

The APCC Program focuses on all people with diabetes type 1 and type 2. Collaborative practices will need to establish a clear definition for diabetes that is agreed throughout the practice team.

Note: people with diabetes type 2 originally controlled on diet and oral medication who commence insulin therapy at a later date should still be classed as a diabetes type 2 patient. This is an important factor for consistency within the practice, so that improvement can be monitored and comparisons made over time.

7.5.2 Diabetes monthly measures

- Number of people within the clinical database that are coded with a diagnosis matching the Diabetes definition
- Percentage of people on the Diabetes Register whose HbA1c has been recorded within the previous 12 months AND whose last recorded HbA1C result was:
 - less than or equal to 7.0%
 - greater than 7.0% but less than or equal to 8.0%
 - greater than 8.0% but less than 10.0%
 - greater than or equal to 10.0%
 - not recorded
- Percentage of people on the Diabetes Register whose total cholesterol has been recorded within the previous 12 months AND whose last recorded total cholesterol was less than 4mmol/l
- Percentage of people on the Diabetes Register with a last recorded total cholesterol within the previous 12 months
- Percentage of people on the Diabetes Register whose blood pressure has been recorded within the previous 12 months AND whose last recorded blood pressure was less than or equal to 130/80 mm Hg
- Percentage of people on the Diabetes Register with a last recorded blood pressure within the previous 12 months

- Percentage of people on the Diabetes Register who have ALL key measurables recorded within the required timeframe AND whose recordings are ALL within the recommended targets:
 - HbA1c \leq 7% within previous 12 months
 - Total cholesterol $<$ 4mmol/l within previous 12 months
 - Blood pressure \leq 130/80 mm Hg within previous 6 months
 - Albumin -creatinine ratio (ACR) or other urinary Micro albumin test within previous 12 months
 - Recorded smoking status of Never Smoked or Ex Smoker
- Percentage of people on the Diabetes Register who have ALL key measurables recorded within the required timeframe:
 - HbA1c recorded within previous 12 months
 - Total cholesterol recorded within previous 12 months
 - Blood pressure recorded within previous 6 months
 - ACR OR other urinary Micro albumin test recorded within previous 12 months
 - Recorded smoking status
- Percentage of annual cycle of care elements recorded for people on the Diabetes Register
- Percentage of people on the Diabetes Register who are aged greater than or equal to 55 AND who are currently prescribed Aspirin
- Percentage of people on the Diabetes Register who have had an urinary ACR OR other urinary Micro albumin test result recorded within the previous 12 months
- Percentage of people on the Diabetes Register who are recorded as receiving an Influenza vaccine within the previous 12 months
- Percentage of people on the Diabetes Register who are recorded as receiving a Pneumococcal vaccine

Reports and tools have been developed for the APCC Program to extract these measures from the various clinical software packages. Please refer to 'Processing Data' in the Measuring for Improvement section for more information about the tools available and details about how the diabetes measures are calculated. You can also refer to this section for tips on improving the quality of your data and resources which may be useful about the monthly measures.

8 Coronary Heart Disease (CHD)

8.1 Aim of the coronary heart disease topic

A 30% reduction in the mortality of patients with coronary heart disease in three years.

8.2 Cardiovascular disease (CVD) in Australia

The National Heart Foundation (NHF) report, *The Shifting Burden of Cardiovascular Disease in Australia* (2005), emphasises the dominance of cardiovascular disease (CVD) in the national health profile. CVD affects 1 in every 6 Australians (over 3.2 million people), and impacts 67% of families. An Australian dies every 10 minutes from CVD, and CHD, stroke and heart failure rank at the top of the list of major killers. Of the 50,292 people who died in 2004, 60% had not reached average life expectancy, which itself is largely driven by CVD mortality. The report suggests that if we are to continue to increase life expectancy in Australia, we cannot be complacent about CVD care, but must rise to the new challenges.

In Australia, coronary heart disease (CHD), which forms one of the main types of CVD, is the most common cause of sudden death and the largest single cause of death¹. Its main manifestations consist of heart attack (acute myocardial infarction or AMI) and angina. Patients with established coronary heart disease are at the highest risk for subsequent events. Survivors of heart attacks have an increased risk of recurrent attacks. For example, over 4 in 10 Australians who have a heart attack will die within a year². What can be done? The WHO-MONICA study³ monitored trends in CHD over 10 years in 31 populations. Results showed that secondary prevention, using well-recognised interventions, is strongly linked to reducing subsequent coronary events.

There is a strong body of evidence supporting practical and often simple interventions that can reduce the current mortality rate, thereby improving life expectancy.

Adopting a systematic approach to the daily provision of healthcare for Australians with CHD has the potential to lead to:

- a reduction in CHD mortality
- a reduction in subsequent CHD events
- an improvement in life expectancy

The Collaborative Program will be used to accelerate a systematic approach to the secondary prevention of CHD in Australian general practice.

¹ AIHW (2002) Australia's Health 2002: The eighth biennial health report of the Australian Institute of Health and Welfare, AIHW Cat. No. AUS 25, Canberra

² National Heart Foundation (2004) *Heart Facts*, available from www.heartfoundation.com.au

³ Tunstall-Pedoe H, Vanuzzo D, Hobbs M, Mahonen M, Cepaitis Z, Kuulasmaa K, Keil U, (2000), 'Estimation of contribution of changes in coronary care to improving survival, event rates, and coronary heart disease mortality across the WHO MONICA Project populations', *Lancet*, 355 (9205), 688-700.

8.3 Scope of the Collaborative Program work on coronary heart disease (CHD)

The CHD work of the Collaborative Program focuses on improvements in care for the subgroup of patients with established CHD. This will be achieved through improving secondary prevention activities based on established evidence.

This section is intended as a pragmatic, practical guide to help practices apply the change principles and ideas quickly and effectively to achieve the best possible impact on outcomes for patients. It is not intended to be a text on the clinical management of CHD and recognises that the care of the individual patient rests between the patient and the health provider.

For comprehensive clinical guidelines for the care of people with CHD, see the National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand publication, *Reducing Risk in Heart Disease – Guidelines for Preventing Cardiovascular Events in People with Coronary Heart Disease*. These guidelines have also been endorsed by the Royal Australian College of General Practitioners (RACGP), Internal Medicine Society of Australia and New Zealand (IMSANZ), Australian Cardiac Rehabilitation Association (ACRA), and Royal College of Nursing Australia (RCNA). There is also a user-friendly summary guide of two pages. The guidelines are available for download at www.heartfoundation.com.au or can be ordered from Heartline (Ph:1300 36 27 87).

If you are interested in the evidence underpinning the guidelines, the Heart Foundation website also provides validated up-to-date references on a wide range of topics relevant to the APCC Program's CHD work.

During the learning workshops you will be able to hear experts present on the clinical evidence for the activities and measures selected for the CHD work. These presentations will also be posted on the APCC website.

8.4 Change principles

Change Principles

1. Build the practice team
2. Establish a system for creating, validating and updating a register of people with CHD
3. Be systematic and proactive in managing care
4. Involve patients in delivering and developing their care
5. Develop effective links with key local partners

These are the change principles that other general practices have used and delivered to maximum effect. Practices have found that consistent and systematic work in each of these change principles has delivered substantial impact on the quality of care for CHD patients. The principles were approved by the APCC CHD Expert Reference Panel in 2008.

For each change principle, specific change ideas are identified, and practical examples, tips, guidance and tools are provided where possible.

The ideas and examples that follow are the result of work done by participating practices in the APCC Program. These ideas are intended to stimulate thinking and discussion about how the work can be developed in your practice.

Change Principle 1 - Building the practice team

Consider the change ideas below when tackling this change principle.

Change Ideas

- set realistic goals
- communicate with other team members
- engage the practice team
- assign roles and responsibilities around CHD management
- reflect and review what you are doing

Experience from Phase 1 of the APCC Program suggests that having an effective practice team is a necessary foundation on which to begin any quality improvement work. Attempting to implement change without appropriately engaging your practice team and assigning tasks is unlikely to lead to sustainable change. As a starting point, everyone in your practice should be aware of the APCC Program, what changes are being tested, their specific roles in relation to implementing/testing change, and should receive regular feedback on results the practice is achieving.

Program experience supports the need for effective practice teams and the 'Building the practice team' change principle is critical to the successful implementation of all other change principles and general practice effectiveness. Please read through the ideas in the 'Building the practice team' change principle to ensure you have done everything possible to build an effective team within your practice.

Example

The practice wanted to ensure that all practice team members were aware of the APCC Program and what would be involved as a result of the practice participating. Therefore, a meeting was arranged in the staff room at the clinic during lunch to learn more about the Collaboratives and discuss any issues or queries. The majority of the staff were able to attend and indicated that they understood the principles of the program and what would be involved.

Other plans may include:

- determining each team member's role
- determining who is to do what regarding CHD care
- determining how to communicate ongoing program news and information
- diarising a regular collaborative update meeting
- reviewing roles and responsibilities each month, and asking if they are still appropriate

Review what is working and what is not. Please refer to the 'Building the Practice Team' change principle in the Access and Care Redesign section of the handbook .

Change Principle 2 - Establish a system for creating, validating and updating a register of people with CHD

Consider the change ideas below when tackling this change principle.

Change Ideas

- agree on a clear definition of CHD
- develop a register of people with CHD
- develop systems to maintain a valid register

Agree on a clear definition of CHD

For the purposes of the APCC Program, coronary heart disease (CHD) is defined as current or past history of at least one of the following:

- acute coronary syndrome (myocardial infarction)
- unstable angina pectoris
- angina
- revascularisation as evidenced by:
 - angioplasty +/- stent
 - coronary artery bypass surgery.

Patients with these conditions belong in your CHD register.

Example

To build the CHD register, the practice printed a list of patients with the following diagnosis: MI, IHD, angioplasty, plus patients on aspirin, patients on ACE inhibitors, and patients on beta blockers. All the lists were correlated and reviewed for coronary heart disease. The relevant patients' records were changed to add a standardised code for CHD.

Bordertown Family Medicine, Otway, Limestone and West Vic DGPs, SA

Develop a register of people with CHD

An accurate, complete and current register is the crucial starting point for improving CHD care. We suggest that initial work at the practice is focused on building a register that contains the right patients with the right information.

The first step is to check which groups of patients should be included in your CHD register. To do this, you need to:

- Develop practice specific protocols/guidelines to ensure that there is consistency across your practice in identifying patients with CHD.

It is also important to consider the practicalities of the clinical system (or software) your practice is using (i.e. are there diagnostic codes or reason for visits that the GPs in the practice need to agree upon and consistently use?). For a comprehensive list of codes used by many of the software programs in Australian general practice to construct and validate their registers, please refer to the CHD Codes in Measuring for Improvement section, under 'Processing Data'.

Example

Positive Health Medical Centre searched their computer database for patients with CHD, and entered all patients with CHD onto the register by using the appropriate CHD codes. The doctors and staff were then briefed on the agreed definition and how to enter new patients on the register. During the one-week study period, they found that 80% of the records showed that the GPs were using the codes correctly. The practice will review the GPs' coding on an on-going basis so that the new coding system will become part of the practice protocols.

Positive Health Medical Centre, Brisbane South DGP, Qld

Example

Gilbert Medical Centre had 176 entries in the practice database under separate diagnoses for CHD. The practice established the CHD register by grouping all targeted CHD patients (i.e. patients with angina, CABG, IHD, MI, etc) under the common diagnosis of 'coronary heart disease' which was added to all patients' electronic records to facilitate the search. Duplicate entries (e.g. multiple diagnoses), deceased and inactivated patients were removed. The number of entries went down to 94 patients. This task took about four hours over a two-day period. Once this was done, 'coronary heart disease' was used as an umbrella diagnosis for all subsequent new cases.

Gilbert Road Medical Centre, Northern DGP, Vic

Other questions to consider include:

- In areas with high tourist numbers, would you include transient patients?
- When would you inactivate a patient?

Example

Cavenagh Medical Centre saw the need to refine their CHD register by deactivating patients who are no longer seen by their doctors. Patients who have not been seen in the last two years were identified and flagged as inactive. The practice database was updated, and this brought the number of active patients in the database down from 27,208 to 15,503. This then meant the patients on the CHD register were all current.

Cavenagh Medical Centre, GP & Primary Health Care, Top End and Central Australia DGPs, NT

Develop systems to maintain a valid register

Once the CHD register has been developed and validated, your next step will be to maintain its accuracy. This should include a system to ensure that new information on existing patients is gathered and recorded, and that new CHD patients are identified and included on the register. Consider the following questions when you are developing the systems for maintaining the register:

- Who will maintain the register? Could this person be formally recognised as the register manager? Would this person require training? How much protected time is needed to maintain the register?
- How will you identify new cases or changes in diagnosis? Where does the information come from, e.g. hospital letter, test results? How will you ensure that the information reaches the register manager and is recorded and coded appropriately?
- How will the GPs in your practice notify the register manager of changes to patient information?
- Do you need a system to routinely check the quality of the information on the register?

Example

Hatherley Medical Centre wanted to improve its GPs' coding habits and also ascertain if existing patients are coded correctly. A simple questionnaire was created and patients were asked to fill it in upon arrival. One hundred patients completed the questionnaire. When the data was analysed, four CHD patients were found not to have been coded as CHD patients. This was followed up with a discussion with the GPs on how to improve patient coding. The practice will administer the questionnaire on a regular basis to help keep their CHD register accurate.

Hatherley Medical Centre, Fremantle Regional, Perth & Hills & Kimberley DGPs, WA

Example

Staff at Border Medical reviewed the CHD register names and identified the doctor to whom each patient belonged. They gave each doctor their list of patients, and the doctors were then given responsibility for updating their own list either when the patients came in or were recalled.

Border Medical Clinic, Gold Coast DGP, Qld

After all the time you have spent developing an accurate register, it is important to document the process you used for future reference.

This will help you when the practice formally reviews its register (e.g. annually) and ensure that things run smoothly when the register manager is away.

Change Principle 3 - Be systematic and proactive in managing care

Consider the change ideas below when tackling this change principle.

Change Ideas

- establish systems for delivering care to patients with CHD
- establish appropriate care pathways for people with CHD
- establish proactive call and recall arrangements for people with CHD
- use guidelines, protocols and computer templates to support care delivery

Balancing workload and providing consistent evidence-based care for CHD patients requires a well organised approach. Working through the change ideas in this section may help you to achieve this.

Establish systems for delivering care to patients with CHD

Consider how you can establish the practice arrangements for improving the secondary prevention of CHD and communicate that to all members of the practice team. Participating teams in Phase 1 have found the following useful:

- Establish a small, possibly multidisciplinary team to lead the work. This might include a GP, nurse and member of the administrative team who can together ensure that all aspects of the system are developed and managed, and that improvements are shared across the whole practice team.
- Identify someone who will take overall responsibility for co-ordinating arrangements across the team.
- Consider making registers a recurring agenda for your practice meetings so that discussing ways of updating and validating them becomes a regular process.

Example

Hampton Bayside Medical Centre set up a system to recall patients who have not been in to the practice in over three months. First the CHD register was updated to reflect the treating GP per patient. A patient information sheet reflecting practice approach to chronic care and a new recall letter were created. Through this process, the practice realised that it did not have available staff with adequate time to focus on and drive these tasks. They created a position for a part-time chronic disease management nurse.

Hampton Bayside Medical Centre, Central Bayside and Monash DGPs, Vic

Example

Alstonville Clinic set up a process to provide systematic and proactive care for its CHD patients. An initial meeting was held between GP, Practice Manager, Collaborative Program Manager and NCAHS cardiovascular program co-ordinator. The meeting was productive, with participants committed to an integrated approach to primary health care. A flow diagram was designed to show the care process. Arrangements were made for two practice nurses to attend cardiac rehabilitation program training.

Alstonville Clinic, Northern Rivers GPN, NSW

Example

Medical Clinic Millicent discovered that their baseline CHD BP measure was only 33%, principally because patients' BP results had been 'free texted' into Medical Director. The practice nurse and practice manager developed an information sheet outlining the step-by-step process of entering blood measure results into Medical Director, and the new process was discussed at the practice's next Small Learning Group meeting. The information sheet was displayed on the staff notice-board, and monthly internal emails were sent to all staff to remind and reinforce this new approach, until the number of patient records showing an accurate blood pressure reading had improved.

Nine months later, their CHD BP measure was 60%, which had become a reflection of patient clinical status rather than inaccurate data entry.

The practice found that the Small Learning Group meetings were useful for staff education and training, and have continued to use monthly reminder emails for other topics.

Medical Clinic Millicent, Limestone Coast DGP, SA

Establish appropriate care pathways for people with CHD

How will you plan and organise systems in your practice to help provide the care you want your CHD patients to receive? At this point, consider how best to use your practice resources to provide optimum care, and the impact this will have on the workload and appointment system. The baseline CHD measures are the starting point for this work as they tell you how well the practice is currently going. Looking systematically at groups of patients (e.g. those on aspirin) will help you to understand your results and provide a basis for the improvement work. The same approaches can be used to develop strategies for other important aspects of care, such as patients' BP control.

Example

Leeuwin Medical Group aimed to start by identifying patients with CHD seen by each GP who are not on aspirin. A list of patients with CHD seen by each GP and not on aspirin was printed from Medical Director. The list was given to each GP to check for patients who are either already on aspirin or who have contraindications to aspirin. The GPs returned the list to nurse. This process took five days to complete. Amendments were made to patient records when required.

Leeuwin Medical Group, Fremantle Regional, Perth & Hills and Kimberley DGPs, WA

Example

Ellen St Family Practice planned to increase the percentage of patients with CHD prescribed statins. A list of 116 patients with CHD was generated via query builder. On a quiet day, the two practice nurses individually checked electronic files to see if a statin had been prescribed in the last 6 months. If not, a patient alert and a message in the patient taskmaster were added: 'This patient has IHD. Consider a statin.' In all, 45 alerts were added.

Ellen St Family Practice, Fremantle Regional, Perth & Hills and Kimberley DGPs, WA

Other strategies may involve considering a nurse led clinic.

Example

East Bentleigh Medical Group provides a nurse run "Healthy Heart Clinic" for its patients, with the aim of supplementing the GPs' management of cardiovascular risk by education and non-drug advice. Patients with CVD risk factors or existing diseases are identified and referred to the clinic by the GPs.

East Bentleigh Medical Group, Central Bayside and Monash DGPs Vic

Example

Chancellor Park Family Medical Practice established a 'Smart Heart Clinic' to identify heart health and risk factors in the general population and, where appropriate, to introduce preventative measures and lifestyle changes to reduce their risk factors. To coincide with the Clinic's opening, they placed a half-page editorial on Heart Disease in their local newsletter, and also advertised its commencement date. Clinic details are also displayed in the waiting area.

The Clinic is held once each week in the late afternoon and early evening, to suit people who can't attend during business hours.

Following completion of a general health screening and lifestyle questionnaire, the nurse reviews and discusses the information with the patient, takes a blood sample for 'on the spot' lipid and glucose analysis, measures height, weight, waist circumference, BMI and blood pressure, and records an ECG. The GP then conducts a physical exam of the cardiovascular system, reviews the measures taken by the nurse, reviews family history, discusses findings with the patient and makes appropriate management recommendations. Following explanation by the GP, each patient receives a 'take home' pack, which includes National Heart Foundation leaflets and phone numbers, Quitline contact details, sample patches or gum as appropriate, BP record cards, healthy eating recipes, cholesterol lowering booklets, pedometers and safe alcohol level guides.

Within two months, 30 patients had attended the service, 80% of whom required further investigation or management.

Following its success, the practice has now established its 'Total Health Clinic', which incorporates the features of the 'Smart Heart Clinic', the 45-49 year old health check, GP Management Plans and Team Care Arrangements where appropriate.

Chancellor Park Family Medical Practice, Sunshine Coast DGP, Qld

You may find it useful to use the principles of Access and Care Redesign to plan how you can best manage demand for CHD care (see the Section 'Access and Care Redesign')

Establish proactive call/recall arrangements for people with CHD

Consider the following when establishing proactive call and recall arrangements:

- Is your existing call/recall system sufficiently proactive? Are patients invited for review at least annually? How do you track and follow up with patients who do not attend?
- How might the workload in the call/recall system be managed?
- Who will manage the call/recall system?
- How will you implement the system?
- Can you develop a system with your patients?
- How will you manage patients who do not attend?
- How would you deliver care to patients within nursing homes, in rural areas, the housebound and those whose first language is not English?

Example

Evans Head Medical Centre identified their patients whose last recorded blood pressure was 140/90 mmHg or greater using the CHD register. Beginning with those whose blood pressure was the highest, 3 to 5 patients were recalled each week until the nurse was confident that all of the patients had been reviewed.

Evans Head Medical Centre, Northern Rivers GPN, NSW

Example

Dr Troy's Practice identified their CHD patients who had not had their blood pressure measured in the previous 12 months, and invited them to attend the practice's nurse-led CHD clinic. All of the patients contacted responded to the letter. One patient telephoned to notify the practice that he had left the area so his file was archived. The remaining patients all attended the nurse clinic within 10 days, and GP Management Plans were developed for them all, with follow-up ongoing reviews arranged.

The practice has since re-examined the way it manages its CHD patients, so that patients do not 'fall through the cracks'. It now systematically recalls all patients on the register to attend the nurse clinic, working backwards from those with the highest blood pressure measurements, and follows them up with a 3 to 4 monthly recall.

Dr Troy's Practice, Fremantle Regional and Perth & Hills DGPs, WA

Use guidelines, protocols and computer templates to support care delivery

Consider common protocols and guidelines on the management of CHD patients that your practice can adopt. In this way, your entire team can be clear about roles, responsibilities, and how patients are managed. When developing your practice protocols, you may want to ensure that they align with the clinical best practice as defined in the National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand publication, *Reducing Risk in Heart Disease – Guidelines for Preventing Cardiovascular Events in People with Coronary Heart Disease*.

The use of computer templates allows a systematic, consistent approach to delivering care to patients and improved accuracy and completeness of patient data.

Useful tips in maximising the use of the template are:

- keep it simple and user-friendly
- provide one-on-one training and support to the staff using the system
- routinely review the template and amend where appropriate
- regularly use the data from the template to inform the team of its performance.

Support in developing protocols and templates is available from your Division and your clinical system supplier.

Example

Hampton Bayside Medical Centre wanted to ensure that their practice protocols for CHD management were aligned with national guidelines. At a doctors meeting, the GPs reached a consensus on the National Heart Foundation guidelines. The practice manager then produced a wall chart of protocol for each GP's station. 'Reminder' prompts for attachment to GP computer screens were also developed.

Hampton Bayside Medical Centre, Central Bayside and Monash DGP, Vic

Consider how you can identify CHD patients who may be at higher risk of further events, for example people from Aboriginal or Torres Strait Islander backgrounds, lower socio-economic backgrounds, or with multiple risk factors.

Example

The Lennox Head Medical Centre manually searched the Medical Director files of their CHD patients to see whether their current smoking status had been recorded, and identify how many were smokers.

Of the 193 patients on the CHD register, four were smokers, and only one had no smoking status recorded. A recall was put into MD to update the smoking status of this patient, and at the next staff meeting the doctors were asked if they would like to target those 4 patients who do smoke, perhaps offering smoking cessation advice.

The Lennox Head Medical Centre, Northern Rivers GPN, NSW

Change Principle 4 - Involve patients in delivering and developing their care

Consider the change ideas below when tackling this change principle.

Change Ideas

- implement a deliberate strategy for self-management to allow patients and carers to better understand and manage their conditions
- integrate the patient's perspective constantly in the design of services
- ensure written and verbal communication is appropriate and understood
- pay special attention to the needs of people from hard to reach groups
- identify psychosocial factors which may affect patient care

Implement a deliberate strategy for self-management

Patients live with their chronic disease 24 hours a day, 365 days a year. Many patients are happy to manage aspects of their own care and indeed do so very effectively. Strengthening this may include developing the patients' understanding of their condition and how it impacts on their lives, through practice-based education and actively participating in improving their diet and lifestyle.

Patient self-management does not simply entail educating patients about their condition or giving them relevant information. It is about developing the confidence and motivation of patients to use their skills, information and professional services to take effective control over life with a chronic condition.

The aim of education for people with CHD is to improve their knowledge and skills, enabling them to take control of their own condition and integrate self-management into their daily lives.

For further generic self-care and self management information please refer to the section entitled 'Self Management' in the Handbook.

Some practical ideas include:

- provide patients with their own hand-held record
- refer patients to self management programs
- encourage patients to monitor their lifestyle changes using the Heart Foundation's 'Managing My Heart Health' self-monitoring card.

Example

Springwood Family Medical Centre aimed to increase patient self-involvement in the management of CHD by having their GPs raise awareness of self-care with CHD patients. They supported this with patient education sheets from Medical Director and pamphlets supplied by various sources. All doctors participated in delivering and developing self-care information, and the practice expects this to be reflected in data collected in the future.

Springwood Family Medical Centre, Blue Mountains, Hawkesbury & Nepean DGPs, NSW

Example

Bowenfels Medical Practice investigated the National Heart Foundation's '10,000 steps' program, and obtained a box of 25 pedometers from a pharmaceutical company to give to their CHD patients. The patients and nurse were able to monitor how much walking was being done, and develop strategies to increase the steps taken when needed. Over time, patient fitness levels and blood pressure measures improved.

Bowenfels Medical Practice, Riverina DGP & PH, NSW

Example

Robina Town Medical Centre developed a CHD hand-held patient record which would be small enough to fit into a wallet and be useful and understandable to their patients.

Each booklet contains the patient's details including emergency contact details, a record of current statins and anticoagulants, allergies to medications, a chest pain action plan, a list of National Heart Foundation targets and space to record each patient's personal targets regarding their weight (BMI), waist circumference, blood pressure, cholesterol, triglycerides, diet, exercise, smoking status, and alcohol intake. There are pages to record results of blood work, and the three- and six-monthly and yearly checks to be done by the practice nurse and doctor. There is also a section for long term medications and another listing other service providers and programs involved in the patient's care.

The booklets are kept in a drawer in each GP consulting room, and are used as part of GP Management Plans to motivate patients to set their own goals and tasks and take ownership of them.

The practice has found that since their introduction, there has been less duplication of pathology testing, and better achievement of cholesterol, blood pressure, exercise and diet targets. Patients also report feeling more in control.

Robina Town Medical Centre, Gold Coast DGP, Qld

Integrate the patient's perspective constantly in the design of services

Patients and carers offer a unique insight into the design of healthcare services. Their participation in redesign is crucial to the achievement of a patient-centred healthcare system.

Teams should consider how they might meaningfully involve patients in decision-making about how care can be designed and provided. Successful teams have incorporated the views of patients into a range of initiatives around CHD such as the development of guidelines and protocols, patient information and in redesign initiatives.

AGPAL has some useful resources for obtaining patient feedback. Visit the following website for information. <http://www.qip.com.au>

Example

Brentwood Village Medical Centre asked all the patients on their CHD Register if they felt that their blood pressure was well controlled, to assess patient perception. Results showed that almost 80% felt that their blood pressure was under control, whereas the reality was that only 50% were well controlled. It seemed that many patients equated receiving treatment with good control.

Believing that patient perception of disease control is crucial to managing their patients effectively, they realized that they needed to educate patients about targets that can be realistically achieved.

Brentwood Village Medical Centre, Fremantle Regional and Perth & Hills DGPs, WA

Ensure written & verbal communication is appropriate and understood

Most practices have written material (letters and advice leaflets) to support patient care. It may be useful for individual teams to review such material, checking against criteria such as readability and currency.

It is worth noting that the Plain English Campaign recommends that written material should be pitched at a reading age of seven to be understood by 90% of the population. The Heart Foundation has a range of information resources for people with or at risk of coronary heart disease, including information about the disease, its diagnosis, treatment and risk factor modification. These are available from Heartline (1300 36 27 87), the Heart Foundation's national telephone information service. Heart Support Australia (www.heartnet.org.au) also provides accessible health information and support for heart patients, their families and the wider community. Your local Division should also be able to direct you to patient information resources.

Example

Pacific Family Medical Practice developed a magnet which provided information about how to successfully and safely manage chest pain. Each CHD patient received a magnet at their next visit to the surgery.

Pacific Family Medical Practice, Brisbane South DGP, Qld

Example

Cape Byron Medical Centre promoted Healthy Heart Week by decorating the waiting room with balloons, displaying National Heart Foundation material and distributing pamphlets. Patient response was very positive, with increased discussion between the patients, their families, and practice staff regarding heart disease.

Cape Byron Medical Centre, Northern Rivers GPN, NSW

Pay special attention to the needs of people from hard to reach groups

It is obvious, but where possible pay special attention to people who have particular needs, including patients from minority ethnic groups and patients with disabilities. Local community representatives and voluntary organisations can be a valuable source in helping to identify appropriate mechanisms of communication and addressing issues around access.

Example

Riverina Medical & Dental Aboriginal Corporation was able to explain the importance of adopting a culturally appropriate approach when dealing with Koori clients to the local Rehabilitation Program team, which was prompted by a team member inadvertently causing distress to a client through their choice of words, and the client refusing to continue with the program. As a result, the client resumed the program, and an appropriate protocol regarding their ongoing management was established.

Riverina Medical & Dental Aboriginal Corporation, Riverina DGP & PH, NSW

Identify psychosocial factors which may affect patient care

Coronary heart disease and depression frequently coexist, and anxiety frequently coexists with depression. Lack of social integration and support may also be linked to depression.

Consider assessing your CHD patients for comorbid depression and their level of social support, and implement strategies where relevant.

Change Principle 5 - Develop effective links with key local partners

Consider the change ideas below when tackling this change principle.

Change Ideas

- analyse the patient journey and redesign where necessary
- identify and engage local organisations and other sources of care in developing CHD services
- provide integrated care by improving the relationship between primary, secondary and tertiary providers

Analyse the patient journey and redesign where necessary

Mapping the sequence of events between primary, secondary and tertiary care from a patient's perspective is a useful approach in starting to understand where care begins to fragment. Patients are the most able to help process map these events.

The following questions are useful in developing ideas to improve the patient journey:

- What are the problems - barriers and bottlenecks - in the patient's journey, especially in handovers between primary and secondary care?
- Can steps be reduced or simplified (e.g. rapid access chest clinics, mobile echo services)?
- Can constraints (e.g. waiting times for investigations) be addressed?
- Are the right people with the right skills in the right place to provide the right care at the right time? Are there opportunities to relocate service in primary care (e.g. in-house echocardiography, echo and 24 hour ECG by GP with referral from other practices)?
- What should be measured to demonstrate the effectiveness of the service and improvements made?

Example

The Fremantle Regional Network collated a list of resources available for CHD patients. GPs can refer their patients to these resources comprising cardiac rehabilitation services, chronic self-management courses, telephone help lines and support groups:

- Fremantle Hospital runs an outpatient Cardiac Rehabilitation program
- Lifecare Murdoch runs cardiopulmonary exercise classes
- Western Australian Cardiac Rehabilitation Services has a multidisciplinary team of health professionals providing a range of chronic disease management including CHD
- UWA Health and Rehabilitation Program runs group and/or individual exercise programs as well as monthly educational talks on health matters
- The Arthritis Foundation runs a self-help course for people living with one or more chronic condition, including heart disease

Helplines:

- Heartline 1300 36 27 87,
- Targeting Good Health 1800 11 22 04

Support Groups:

- HeartNET: <http://heartnet.cci.ecu.edu.au/>
- Fremantle Heart Patients Support Group (9319 1538, 9431 3100),
- Heart Support Australia www.heartnet.org.au
- Cardiomyopathy Association of Australia www.cmaa.org.au

Fremantle Regional Network, WA

Identify and engage local organisations and other sources of care in developing CHD services

You may find it useful to map local organisations and allied health professionals providing services for CHD in your area, and think about how to involve these in developing CHD services. Your local Division may already have a list of local services.

Local Government, for example, with their responsibilities around social care, education, environmental services and links with recreation, potentially have a very important role in providing complementary services to support health care for patients with proven CHD.

In addition, many local communities have a vibrant and active volunteer sector with the potential for community networks to make an effective contribution. This is particularly relevant when looking at the needs of local minority ethnic groups.

Practical ideas include:

- prescription for physical activity schemes using local recreational facilities (e.g. exercise classes)
- the SNAP Program, which works with patients on lifestyle risk factors of smoking, nutrition, alcohol and physical activity. For information, visit <http://www.racgp.org.au>
- targeted dietary advice and classes through existing local community groups, i.e. using volunteers to run the groups
- developing local support groups
- lifestyle prescriptions such as the Active Script program (VICFIT) and the Lifescripts Program
- investigate local cardiac rehabilitation programs

Example

The West End Family Clinic wanted to build closer links with local health professionals and establish a list of allied health professionals who would be interested in becoming partners with the practice in providing affordable services for their CHD patients. The Clinical Nurse generated a list of allied health professionals and contacted each name on the list by telephone to ascertain interest and details, such as cost of services and Medicare rebates. The practice was then able to generate an updated database of current allied health professionals and pass that information on to their patients, thus helping to alleviate any fears the patients may have about being able to afford such services. Another benefit was the subsequent discussion generated between doctors within the practice about health professionals they had found particularly useful.

West End Family Clinic, South East Alliance of GP, Qld

Example

Sheidow Park Family Practice contacted the Heart Failure Nurse at Flinders Medical Centre to learn more about their outreach program, and have begun to refer suitable CHD patients to improve their overall control and management of their disease.

Sheidow Park Family Practice, Adelaide Southern, Western, Murray Mallee & Mid North DGPs, SA

Example

Gatton Plaza Medical Centre attended the launch of the new Cardiac Rehabilitation Unit at their local hospital to learn more about its services and referral criteria, then downloaded the referral form into the practice computers for easy access.

Gatton Plaza Medical Centre, Ipswich & West Moreton and Toowoomba DGPs, Qld

Example

Koorringal Medical Centre met with the Coronary and Respiratory Care Coordinators from Wagga Wagga Base Hospital to learn more about the services provided and referral criteria and protocols. The information was useful particularly as they had recently developed their Care Plan template.

Koorringal Medical Centre, Riverina DGP & PH, NSW

Provide integrated care by improving the relationship between primary, secondary and tertiary providers

This is a complex area in the Australian health services and most work has been done to date by Divisions. The Division could play a useful role in seeking out ways to improve the patient journey between services and improve service coordination. To be effective, however, there needs to be cross-sectoral consultation between GPs, Divisions, other health service providers, and consumers.

To ensure continuity of care across primary and secondary care, consider enlisting the support of the Division to establish multidisciplinary implementation groups, with representatives from primary and secondary care.

You may want to use this opportunity to review and redesign the patient journey. A number of Medicare items are available that focus on prevention, better coordination of care and assist with medication reviews. This is particularly relevant when looking at the needs of local minority ethnic groups. Implementation groups may wish to involve Heart Foundation.

These include:

- discharge planning
- health assessment (non-Aboriginal people over 75 years of age)
- adult Indigenous Health Check
- HMR
- care planning
- case conferencing

Example

Laidley Professional Centre arranged for the local pharmacists to attend the practice at a regular time each week to conduct Home Medicine Reviews, and then recalled all the patients they had identified as potentially benefiting from an HMR to attend on those days.

Laidley Professional Centre, Ipswich & West Moreton and Toowoomba DGPs, Qld

Example

Bowenfels Medical Practice created a service directory of local service providers which offered healthy lifestyle programs and services. The directory was put into checklist form, and can be incorporated into the hand-held patient record. As the GPs and nurses discuss lifestyle management with each patient, they tick which services the patient should contact.

Bowenfels Medical Practice, Riverina DGP & PH, NSW

Example

The Adelaide Western Division of General Practice established a cardiac rehabilitation project. A fundamental part of this project was establishing local support groups and self-management plans. A local Heart Support Branch was launched, providing patients with an educational resource and a self-support community group. Twelve members of this group subsequently undertook lay counsellor training coordinated by a Heart Support project officer and are now able to provide a more informed peer support network to patients with, or at risk of, CHD.

Adelaide Western Division of General Practice, Adelaide Southern, Western, Murray Mallee and Mid North DGPs, SA

8.5 Measures for CHD

The purpose of the measures is to help you track progress in achieving the CHD aim and monitor your improvement efforts. Best practice management of people with CHD extends beyond the subset of care reflected by these selected measures. For comprehensive clinical guidelines for the care of people with CHD see the National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand publication, *Reducing Risk in Heart Disease – Guidelines for Preventing Cardiovascular Events in People with Coronary Heart Disease*. These guidelines are available at

www.heartfoundation.org.au/Professional_Information/Clinical_Practice/Prevention.htm or can be ordered from Heartline on phone 1300 36 27 87.

8.5.1 Definition of CHD

The APCC Program focuses on all people with coronary heart disease (CHD) which is also known as Ischaemic Heart Disease (IHD) in some clinical software packages. Collaborative practices will need to establish a clear code for CHD that is agreed throughout the practice team.

8.5.2 CHD monthly measures

- Number of people within the clinical database with a diagnosis matching the CHD definition
- Percentage of people on the CHD Register whose blood pressure has been recorded within the previous 12 months AND whose last recorded blood pressure was less than or equal to 130/80 mm Hg
- Percentage of people on the CHD Register with a last recorded blood pressure within the previous 12 months
- Percentage of people on the CHD Register who are currently prescribed an Anti-Platelet Agent
- Percentage of people on the CHD Register who are currently prescribed a Statin
- Percentage of people on the CHD Register whose total cholesterol has been recorded within the previous 12 months AND whose last recorded total cholesterol was less than 4mmol/l
- Percentage of people on the CHD Register with a last recorded total cholesterol within the previous 12 months
- Percentage of people on the CHD Register who are currently prescribed an Angiotensin Converting Enzyme (ACE) Inhibitor OR an Angiotensin Receptor Blocker (ARB)
- Percentage of people on the CHD Register whose recorded smoking status indicates they are Non Smokers

- Percentage of people on the CHD Register whose recorded smoking status indicates they are a Current Smoker OR Ex Smoker AND who have had their smoking status assessed within the previous 12 months
- Percentage of people on the CHD Register who have had an Myocardial Infarction (MI) OR Acute Coronary Syndrome (ACS) recorded within the previous 12 months
- Number of deaths that were recorded within the previous calendar month where the person had a diagnosis of CHD
- Percentage of people on the CHD Register who satisfy criteria and targets for ALL of the following CHD Measures:
 - Blood Pressure $\leq 130/80$ mm Hg within previous 12 months
 - Anti-Platelet Agent prescribed
 - Cholesterol < 4 mmol/l within previous 12 months
 - ACE/ARB prescribed

Reports and tools have been developed for the APCC Program to extract these measures from the various clinical software packages. Please refer to 'Processing Data' in the Measuring for Improvement section for more information about the tools available and details about how the CHD measures are calculated. You can also refer to this section for tips on improving the quality of your data and resources which may be useful about the monthly measures.

9 Measuring for Improvement

Regular reporting of results is a key feature of the APCC Program. It establishes a momentum that encourages early engagement and active participation in the process of delivering rapid and sustainable improvements. Regular reporting is a powerful tool by which participants can assess their progress and benchmark themselves against others.

It must be stressed that measures are only collected to enable the tracking of progress towards improvement in the program topic areas. It is not a performance management tool. Measurement is the key tool used during the APCC Program to support practices in tracking improvement.

Previous sections of the handbook have addressed the definitions of the program topic areas. This section clarifies the monthly reporting requirements, and privacy issues including what is done with the data and feedback available to practices. The sub-sections identify what tools are available to get the measures out of clinical software packages, details about how the measures are calculated, tips on how to improve data quality and a step-by-step guide on how to use the web portal to lodge your monthly data and view results.

9.1 Practice reporting requirements

9.1.1 Measures

The following measures are submitted by participating practices before the first Wednesday of each month, and used to assess improvements in the three topic areas:

Access and Care Redesign:

Title	Short Description
Open Access	Is the practice using an 'Open Access' system? Select either a Yes or No check box
GP Third Available	The number of days until the GP 3 rd Available appointment. Include provision for two decimal places
Practice Nurse	Is there a practice nurse who takes appointments? Select either a Yes or No check box
Nurse Third Available	The number of days until the Practice nurse 3 rd available appointment. Include provision for two decimal places
Unmet Demand	The number of patients whose appointment demands were unmet. Include provision for two decimal places
Patient Satisfaction*	Average patient satisfaction score. Include provision for two decimal places

*Please note that the Patient Satisfaction measure is only required to be submitted *quarterly* (i.e. every 3 months). However you are encouraged to submit this measure monthly, should you feel your practice has made significant changes in this area.

Diabetes:

Title	Short Description
Diabetes Register	The number of people within the clinical database that are coded with a diagnosis matching the Diabetes definition
HbA1c	The percentage of people on the Diabetes Register whose HbA1c has been recorded within the previous 12 months AND whose last recorded HbA1C result was: <= 7.0% (i)
	ii) HbA1c >7% and <=8 %
	iii) HbA1c > 8% and < 10%
	iv) HbA1c => 10 %
	v) HbA1c not recorded
Cholesterol	The percentage of people on the Diabetes Register whose total cholesterol has been recorded within the previous 12 months AND whose last recorded total cholesterol was less than 4mmol/l
Cholesterol Recorded	The percentage of people on the Diabetes Register with a last recorded total cholesterol within the previous 12 months
Blood Pressure	The percentage of people on the Diabetes Register whose blood pressure has been recorded within the previous 12 months AND whose last recorded blood pressure was less than or equal to 130/80 mm Hg
BP Recorded	The percentage of people on the Diabetes Register with a last recorded blood pressure within the previous 12 months
Diabetes Key Measurables	The percentage of people on the Diabetes Register who have ALL key measurables recorded within the required timeframe AND whose recordings are ALL within the recommended targets: HbA1c <= 7% within previous 12 months Total cholesterol < 4mmol/l within previous 12 months Blood pressure <= 130/80 mm Hg within previous 6 months Albumin -creatinine ratio (ACR) or other urinary Micro albumin test within previous 12 months Recorded smoking status of Never Smoked or Ex Smoker
Diabetes Key Measurables Recorded	The percentage of people on the Diabetes Register who have ALL key measurables recorded within the required timeframe: HbA1c recorded within previous 12 months Total cholesterol recorded within previous 12 months Blood pressure recorded within previous 6 months ACR OR other urinary Micro albumin test recorded within previous 12 months Recorded smoking status
Diabetes Annual Cycle of Care	The percentage of annual cycle of care elements recorded for people on the Diabetes Register
Aspirin	The percentage of people on the Diabetes Register who are aged greater than or equal to 55 AND who are currently prescribed Aspirin
ACR	The percentage of people on the Diabetes Register who have had an urinary ACR OR other urinary Micro albumin test result recorded within the previous 12 months
Influenza Vaccine	The percentage of people on the Diabetes Register who are recorded as receiving an Influenza vaccine within the previous 12 months
Pneumococcal Vaccine	The percentage of people on the Diabetes Register who are recorded as receiving a Pneumococcal vaccine

CHD:

Title	Short Description
CHD Register	The number of people within the clinical database that are coded with a diagnosis matching the CHD definition
Blood Pressure	The percentage of people on the CHD Register whose blood pressure has been recorded within the previous 12 months AND whose last recorded blood pressure was less than or equal to 130/80 mm Hg
BP Recorded	The percentage of people on the CHD Register with a last recorded blood pressure within the previous 12 months
Anti-Platelet	The percentage of people on the CHD Register who are currently prescribed an Anti-Platelet Agent
Statin	The percentage of people on the CHD Register who are currently prescribed a Statin
Cholesterol	The percentage of people on the CHD Register whose total cholesterol has been recorded within the previous 12 months AND whose last recorded total cholesterol was less than 4mmol/l
Cholesterol Recorded	The percentage of people on the CHD Register with a last recorded total cholesterol within the previous 12 months
ACE/ARB	The percentage of people on the CHD Register who are currently prescribed an Angiotensin Converting Enzyme (ACE Inhibitor OR an Angiotensin Receptor Blocker (ARB)
Smoking Status	The percentage of people on the CHD Register whose recorded smoking status indicates they are:
	Non Smokers (i and ii)
	i) Never Smoked
	ii) Ex Smoker
Smoking Status Assessment	iii) Current Smoker
	iv) Not Recorded
Smoking Status Assessment	The percentage of people on the CHD Register whose recorded smoking status indicates they are a Current Smoker OR Ex Smoker AND who have had their smoking status assessed within the previous 12 months
MI/ACS	The percentage of people on the CHD Register who have had an Myocardial Infarction (MI) OR Acute Coronary Syndrome (ACS) recorded within the previous 12 months
CHD Death	The number of deaths that were recorded within the previous calendar month where the person had a diagnosis of CHD
CHD All	The percentage of people on the CHD Register who satisfy criteria and targets for ALL of the following CHD Measures: - Blood Pressure \leq 130/80 mm Hg within previous 12 months - Anti-Platelet Agent prescribed - Cholesterol $<$ 4 mmol/l within previous 12 months - ACE/ARB prescribed

More information about how to collect each of these measures can be found in the following section on 'Processing Data' (9.5).

Furthermore, several new measures have been included within additional topics (Chronic Obstructive Pulmonary Disease and General Prevention Measures). Please note that it is not a requirement of the APCC Program that these measures are submitted. Please refer to the web portal for information regarding these additional topics

9.1.2 PDSA cycles

PDSA cycles are also submitted monthly. Refer to the Model for Improvement section of this handbook for more information about this quality improvement tool.

Feedback will be provided by the Divisional Practice Support Team on the submitted PDSA cycles, to ensure that participants understand the methodology. The PDSAs cycles are also shared as examples of improvement work done by other participating practices, which enables the sharing of ideas and innovative approaches to improvement in the topic areas.

9.2 Privacy (and what is done with the data)

The Improvement Foundation (Australia) Ltd (IFA; the delivery organisation of the APCC Program) is committed to the protection of individuals' personal information in accordance with applicable privacy laws. Those privacy laws set out minimum standards for the way that organisations such as IFA deal with personal and practice information.

The program collects private information, such as participants' names and addresses, to:

- generally manage the APCC Program
- make travel and accommodation arrangements
- where applicable, provide professional accreditation points to your professional body

IFA only provides your details to third parties to perform the functions outlined above. These parties include your relevant professional body (such as the RACGP) and travel and accommodation providers.

With regard to practice information (Program measures) provided by you, this information is only used for the purposes of:

- monitoring improvement in the Program
- Program evaluation

In all cases, practice information is aggregated at practice level and de-identified. Therefore, it is not possible to identify patients of those practices. In cases where IFA has third-party agreements in place to assist with the management of this information (such as website hosting), agreements with the appropriate confidentiality clauses are in place to protect the information. Where IFA provides information to Program evaluators, all information is de-identified and aggregated to the practice level.

IFA will also use de-identified, aggregated information to promote the benefits of the Program.

Although the Commonwealth privacy laws do not require patient consent to provide de-identified information or statistical data sets which would not allow the patient to be identified, your practice can display a Practice Participation Sign in your waiting room to inform patients of your involvement in the APCC Program.

An example of this can be found on the APCC website at http://www.apcc.org.au/Documents/Data_Privacy_sign.pdf

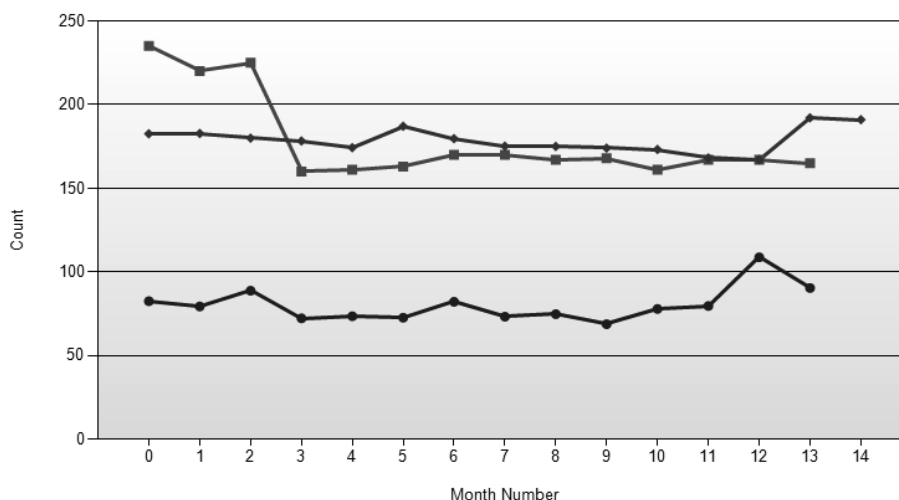
Please contact your Division or IFA if you have any questions relating to privacy or confidentiality.

9.3 Feedback

Feedback graphs will be accessible on the web portal, and available for viewing as soon as 10 minutes following data submission. Some of these graphs display line graphs of each practice's measures over time. These are benchmarked with other unidentified practices within the same Division along with a national average of all practices submitting data for the same Wave (see the example below).

CHD Register

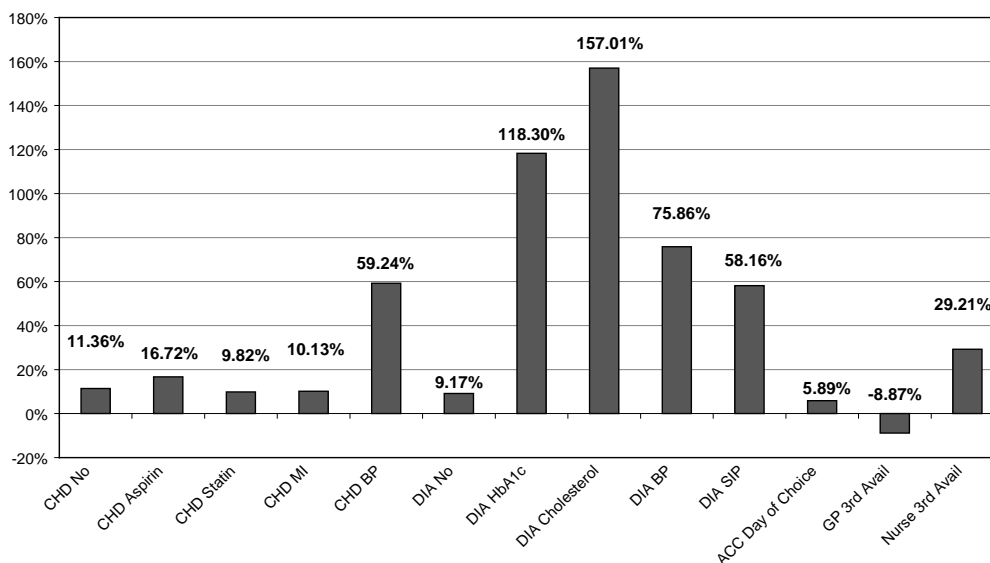
The number of patients within the clinical data base matching the CHD definition



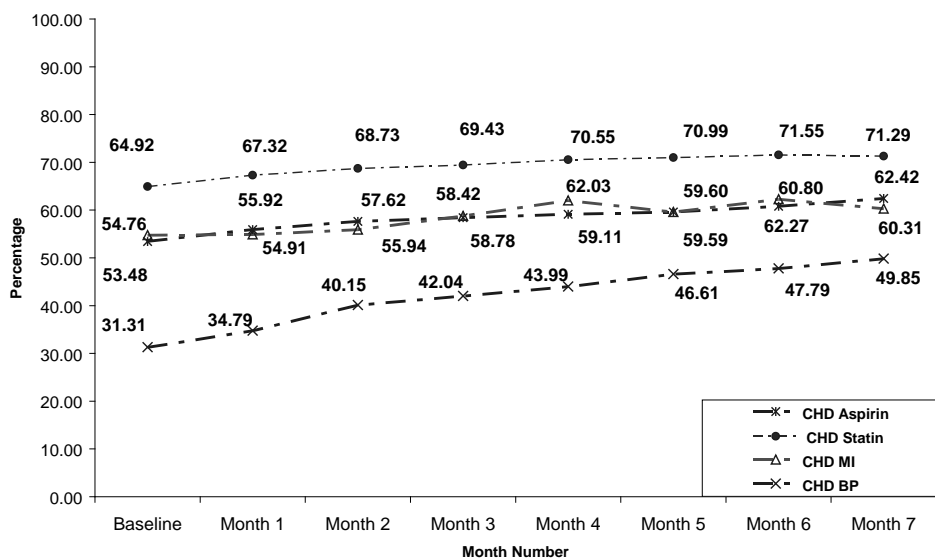
These graphs can be used to easily identify areas where improvements have been or can be made, and allow practices to visually see progress in the measures. This can be a great motivator in implementing future improvements.

National level graphs are also produced to display percentage improvements on baseline data for all measures and line graphs identifying improvements in the measures over time. Please see the below examples from Phase 1 of the Program (please note that the format of these graphs may change over the course of Phase 2).

**Wave Three % Improvement
Baseline to Month 7 (January 2007)**



**CHD Percentage Measures: Trend of Mean Percentage by Month Number
Wave 3 Month 7 (January 2007)**



These national graphs are published on our website and are available for everyone to see progress over time.

Divisions will also provide regular feedback on PDSAs and measures to assist practices with making ongoing improvements.

9.4 Advice and help

Practice support staff at your Division can provide advice and support regarding submission of your monthly measures and PDSAs as well as provide support and ideas on areas for improvements.

9.5 Processing Data

As there are a number of clinical, billing and appointment software programs in Australia, the methods of extracting the monthly measures are varied. APCC reports have been developed by several clinical software companies.

IFA has worked closely with Pen Computing Systems (PenCS), who have upgraded their Clinical Audit Tool (CAT) to include the new APCC Program measures. The upgraded tool (CATv2.4) also gives practices the capacity to electronically submit their monthly data to the secure web portal (please refer to the 'web portal' section (9.12) for further information). If you do not wish to submit measures electronically, or are not currently using the CAT, you will be able to submit measures manually to the web portal.

In addition, an extraction tool was developed by Canning Division during Phase 1 of the APCC Program. Several software providers also have a native APCC report included.

This section outlines the various extraction tools available, details on how the measures are calculated, tips on how to improve data quality and useful resources about the monthly measures.

9.5.1 Extracting measures

The ability to produce accurate reports from clinical software is important and an essential part of prudent clinical management.

The APCC Program has formed Expert Reference Panels comprising experts in particular topic areas to establish a range of quality measures. These measures allow practices to monitor key aspects of their clinical systems and support quality improvement activities within practice.

There are a range of clinical software programs that help GPs and practices manage their businesses. Software programs have varied capacity to produce APCC Program measure reports which has a direct impact on how practices can work with the APCC Program and quality improvement activities. For further information on specific software programs and their capacity to report on APCC Program measures, please visit our website at www.apcc.org.au.

Once generated, these reports present you with information about the overall state of play of your patients with chronic disease. Knowing this for a particular cohort of patients provides you with insights into the mechanisms of care delivery at work within your practice. This can reveal opportunities to enhance earning potential, streamline practice systems, and improve the quality of care that you may have been unaware of.

These reports work by searching the practice's clinical data and calculating the required number and percentages for each of the measures. They also allow practices to generate and view their chronic disease patient registers, so that they can see how individual patients are progressing with regard to the relevant clinical measures. This patient-level information is not submitted to the APCC, but practices have found the ability to view individual patient information in summary format very useful.

The Access and Care Redesign measures are collected manually and then added or calculated in the web portal. Refer to the 'Measures' section in the Access and Care Redesign topic area for details on how to collect these measures. Once the measures have been extracted or collected from your software, they then need to be submitted to the web portal. For further information regarding the submission of measures, please refer to the following section on the web portal (9.11).

9.6 Calculating measures

9.6.1 Access & Care Redesign

Details on how to calculate these measures are listed in detail under the 'Access and Care Redesign' section.

9.6.2 Diabetes

Total number of people on the diabetes register

Search your patient records for all of those patients with a current diagnosis of diabetes. This represents the number of patients on the diabetes register.

Note: In computer-based clinical systems, it is important that these patients are properly coded with a diagnosis of diabetes, otherwise some patients with diabetes may not be recognised by the clinical system. A list of codes and detail on how to add diagnosis can be found in the 'Improving Data Quality' section below (9.7).

Note : You may find that you have fewer patients on the diabetes register than you think. If this is so, ask yourself whether all of your patients are correctly coded as having a diagnosis of diabetes including patients in the following categories:

- patients who are on insulin and other medications used to treat diabetes
- patients who are on blood glucose monitoring or who have had a glucose tolerance test
- patients who have an HbA1c recorded

The percentage of people on the diabetes register whose last recorded HbA1c within the previous 12 months was:

- less than or equal to 7.0%
- greater than 7.0% but less than or equal to 8.0%
- greater than 8.0% but less than 10.0%
- greater than or equal to 10.0%
- not recorded

Using the diabetes register, count the number of patients identified as having an HbA1c of less than or equal to 7.0%, and the number of diabetes patients within the rest of the ranges using the latest HbA1c reading within 12 months of the date when you are measuring. Those patients who have not had an HbA1c reading recorded in the previous 12 months from the date of the reporting should be excluded. Use the total number of patients on the diabetes register to calculate the percentage.

Example

The Practice has 150 patients on its diabetes register.

25 of these patients' most recent HbA1c test done within the previous 12 months was 7.0% or less

Therefore, the percentage is $(25/150) \times 100 = 16.66666\%$

Rounding this off to 1 decimal place this becomes 16.7%.

This calculation will need to be repeated for each of the ranges identified above, with all the ranges adding up to 100%.

The percentage of people on the diabetes register whose last recorded total cholesterol within the previous 12 months was less than 4 mmol/L

Using the diabetes register, count the number of patients identified as having a cholesterol reading of less than 4 mmol/L using the latest cholesterol reading within 12 months of the date when you are measuring. Those patients who have not had a cholesterol reading recorded in the previous 12 months from the date of the reporting should be excluded. Use the total number of patients on the diabetes register to calculate the percentage.

Example

The Practice has 150 patients on its diabetes register.

32 of these patients' most recent cholesterol test done within the previous 12 months was less than 4 mmol/L

The measure for this practice is $(32/150) \times 100 = 21.3\%$

Rounding this off to 0 decimal places this becomes 21%.

The percentage of people on the diabetes register with a last recorded total cholesterol within the previous 12 months

Using the diabetes register, count the number of patients who have had a total cholesterol reading recorded within the previous 12 months. Use the total number of patients on the diabetes register to calculate a percentage.

Example

The Practice has 95 patients on its diabetes register.

45 of these patients had a cholesterol test done within the previous 12 months

The measure for this practice is $(45/95) \times 100 = 47.4\%$; i.e. 47%.

The percentage of people on the diabetes register whose last recorded blood pressure (BP) reading within the previous 12 months was less than or equal to 130/80 mm Hg

Using the diabetes register, count the number of patients whose blood pressure reading was equal to or lower than 130/80, using the last BP reading within 12 months of the date when you are measuring. Those patients who have not had a BP reading recorded in the previous 12 months from the date of the reporting should be excluded. Use the total number of patients on the diabetes register to calculate a percentage.

Example

The Practice has 150 patients on its diabetes register.
53 of those patients had their last recorded BP in the previous 12 months less than or equal to 130/80 mm Hg
The measure for this practice is $(53/150) \times 100 = 35.3\%$, i.e. 35%.

Note: A blood pressure reading less than or equal to 130/80 means that the systolic blood pressure must be 130 mm Hg or lower AND the diastolic blood pressure must be 80 mm Hg or less.

The percentage of people on the diabetes register with a last recorded blood pressure within the previous 12 months

Using the diabetes register, count the number of patients who have had a blood pressure reading recorded within the previous 12 months. Use the total number of patients on the diabetes register to calculate a percentage.

Example

The Practice has 120 patients on its diabetes register.
61 of those patients had a BP measurement recorded in the previous 12 months
The measure for this practice is $(61/120) \times 100 = 50.8\%$, i.e. 51%.

The percentage of people on the diabetes register who have ALL key measurables recorded within the required timeframe AND whose recordings are ALL within the recommended targets:

HbA1c \leq 7% within previous 12 months

Total cholesterol $<$ 4mmol/l within previous 12 months

Blood pressure \leq 130/80 mm Hg within previous 6 months

Albumin -creatinine ratio (ACR) or other urinary Micro albumin test within previous 12 months

Recorded smoking status of Never Smoked or Ex Smoker

Using the diabetes register, count the number of patients who's HbA1c, total cholesterol, blood pressure, ACR and smoking status recordings are all within the specified ranges, within the specified number of months from the date when you are measuring. Those patients who have not had a recording for any one of the measures in the specified timeframe should be excluded. Use the total number of patients on the diabetes register to calculate a percentage.

Example

The Practice has 150 patients on its diabetes register.
45 of these patients have a hba1c, cholesterol, and ACR recorded within the previous 12 months, as well as a BP recorded within the previous 6 months which are ALL within the specified targets.
35 of the 45 patients also have a recorded smoking status of 'never smoked' or 'ex smoker'
The measure for this practice is $(35/150) \times 100 = 23.3\%$, i.e. 23%

The percentage of people on the diabetes register who have ALL key measurables recorded within the required timeframe:

HbA1c recorded within previous 12 months

Total cholesterol recorded within previous 12 months

Blood pressure recorded within previous 6 months

ACR OR other urinary Micro albumin test recorded within previous 12 months

Recorded smoking status

Using the diabetes register, count the number of patients who's HbA1c, total cholesterol, blood pressure, ACR and smoking status have all been recorded within the specified number of months from the date when you are measuring. Those patients who have not had a recording for any one of the measures in the specified timeframe should be excluded. Use the total number of patients on the diabetes register to calculate a percentage.

Example

The Practice has 150 patients on its diabetes register.
56 of these patients' had a hba1c, cholesterol, and ACR recorded within the previous 12 months, as well as a BP recorded within the previous 6 months
49 of the 56 patients also have a recorded smoking status of 'never smoked' or 'ex smoker'
The measure for this practice is $(49/150) \times 100 = 32.7\%$, i.e. 33%

The percentage of annual cycle of care elements recorded for people on the diabetes register

Count the individual elements of the Diabetes cycle of care recorded as completed within the last 12 months (where items are required 6 monthly these should be counted twice). Use the total number of patients on the diabetes register, multiplied by 17 (the maximum elements required for each patient), to calculate a percentage.

These elements are:

BMI - 6 monthly (Weight - 6 monthly, Height - anytime)

BP - 6 monthly

Feet Exam - 6 monthly

HbA1c - 12 monthly

TC - 12 monthly

Trig - 12 monthly

HDL - 12 monthly

ACR or other urinary Microalbumin test - 12 monthly

Diet Review - 12 monthly

Activity Review - 12 monthly

Smoking Review - 12 monthly

Medicine Review - 12 monthly

Self Care Ed - 12 monthly

Eye Exam - 24 monthly

Example

The Practice has 150 patients on its diabetes register.

There are 1,500 elements that have been recorded for these patients within the last 12 months.

The measure for this practice is $(1500/(17*150)) = (1500/2550) \times 100 = 58.8\%$, i.e. 59%

The percentage of people on the diabetes register who are aged greater than or equal to 55 AND who are currently prescribed Aspirin

Using the diabetes register, count the number of patients who are 55 years of age or above. Of these patients, count the number who are currently prescribed Aspirin. Use the total number of patients on the diabetes register to calculate a percentage.

Example

The Practice has 150 patients on its diabetes register.

70 of these patients are aged 55 or over.

63 of the 70 are also currently prescribed aspirin

The measure for this practice is $(63/150) \times 100 = 42\%$

The percentage of people on the diabetes register who have had an urinary ACR OR other urinary Micro albumin test result recorded within the previous 12 months

Using the diabetes register, count the number of patients who have had a urinary ACR or other urinary Micro albumin test result recorded within the previous 12 months. Use the total number of patients on the diabetes register to calculate a percentage.

Example

The Practice has 150 patients on its diabetes register.
72 of these patients have had an ACR or other urinary Micro albumin test result recorded within the previous 12 months.
The measure for this practice is $(72/150) \times 100 = 48\%$

The percentage of people on the diabetes register who are recorded as receiving an Influenza vaccine within the previous 12 months

Using the diabetes register, count the number of patients recorded as having had an influenza vaccine within the previous 12 months. Use the total number of patients on the diabetes register to calculate a percentage.

Example

The Practice has 150 patients on its diabetes register.
85 of these patients have had an influenza vaccination within the previous 12 months.
The measure for this practice is $(85/150) \times 100 = 56.6\%$, i.e. 57%

The percentage of people on the diabetes register who are recorded as receiving a Pneumococcal vaccine

Using the diabetes register, count the number of patients recorded as having had a pneumococcal vaccine at any time in the past 5 years, or have had two vaccines at any time. Use the total number of patients on the diabetes register to calculate a percentage.

Example

The Practice has 150 patients on its diabetes register.
69 of these patients have had a Pneumococcal vaccine within the last 5 years or two Pneumococcal vaccines at any time.
The measure for this practice is $(69/150) \times 100 = 46\%$

9.6.3 CHD

Total number of people on the CHD register

Search your patient records for all those patients with a current diagnosis of CHD or IHD, which is the number of patients on the CHD register.

Note: In computer-based clinical systems, it is important that these patients are properly coded with a diagnosis of CHD or IHD; otherwise some patients with CHD may not be recognised by the clinical system.

The percentage of people on the CHD register whose last recorded blood pressure (BP) reading within the previous 12 months was less than or equal to 130/80 mm Hg

Using the CHD register count the number of patients whose blood pressure reading was at or below 130/80 mm Hg, using the last BP reading within 12 months of the date when you are measuring. Those patients who have not had a BP recorded in the previous 12 months from the date of the reporting should be excluded. Calculate as a percentage of the total number of patients on the CHD register.

Example

The Practice has 120 patients on its CHD register.
53 of those patients have their last recorded BP in the previous 12 months at or below 130/80 mmHg
The measure for this practice is $(53/120) \times 100 = 44.1\%$, i.e. 44%.

Note: A blood pressure reading at or below 130/80 mmHg means both a systolic blood pressure below, or equal to, 130 AND a diastolic blood pressure below, or equal to 80.

The percentage of people on the CHD register with a last recorded blood pressure within the previous 12 months

Using the CHD register, count the number of patients who have had a blood pressure reading recorded within the previous 12 months. Use the total number of patients on the CHD register to calculate a percentage.

Example

The Practice has 120 patients on its CHD register.
72 of those patients have a BP measurement recorded within the previous 12 months
The measure for this practice is $(72/120) \times 100 = 60\%$

The percentage of people on the CHD register who are currently prescribed an Anti-Platelet Agent

Using the CHD register, count the number of patients recorded as being prescribed an anti-platelet agent. Calculate as a percentage of the total number of patients on the CHD register.

Example

The Practice has 120 patients on its CHD register.
50 of those patients are recorded as currently prescribed an anti-platelet agent.
The measure for this practice is $(50/120) \times 100 = 41.6\%$, i.e. 42%.

Percentage of patients with CHD who are on a statin

Count the number of patients on the CHD register who are currently prescribed a statin and calculate as a percentage of the total number of patients on the CHD register.

Example

The Practice has 120 patients on its CHD register.
37 of those patients are recorded as taking a statin
The measure for this practice is $(37/120) \times 100 = 30.8\%$, i.e. 31%.

Note: When searching for statins on a computer system, ensure that drugs included in the search are only statins (HMG co-A reductase inhibitors) as some systems have a category for 'lipid lowering drugs' which includes drugs other than statins (e.g. fibrates).

Note: There is emerging evidence for the benefit of statins for all CHD patients regardless of starting cholesterol level. Patients who do not have a cholesterol level sufficiently raised to merit the prescription of a statin according to PBS guidelines (in current guidelines this is < 4 mmol/L) can still receive a statin but would have to pay for it privately. We suggest that you consider statin therapy for all patients with CHD, for any potential cost to become an issue for individual patients to decide upon.

The percentage of people on the CHD register whose total cholesterol within the previous 12 months was less than 4mmol/l

Using the CHD register, count the number of patients identified as having a cholesterol reading of less than 4 mmol/L, using the latest cholesterol reading within 12 months of the date when you are measuring. Those patients who have not had a cholesterol reading recorded in the previous 12 months from the date of the reporting should be excluded. Use the total number of patients on the CHD register to calculate a percentage.

Example

The Practice has 127 patients on its CHD register.

30 of these patients' most recent cholesterol test done within the previous 12 months was less than 4 mmol/L

The measure for this practice is $(30/127) \times 100 = 23.6\%$, i.e. 24%

The percentage of people on the CHD register with a last recorded total cholesterol within the previous 12 months

Using the CHD register, count the number of patients who have had a total cholesterol reading recorded within the previous 12 months. Use the total number of patients on the CHD register to calculate a percentage.

Example

The Practice has 127 patients on its CHD register.

55 of these patients have had a cholesterol test recorded within the previous 12 months

The measure for this practice is $(55/127) \times 100 = 43.3\%$, i.e. 43%

The percentage of people on the CHD register who are currently prescribed an Angiotensin Converting Enzyme (ACE) Inhibitor OR an Angiotensin Receptor Blocker (ARB)

Count the number of patients on the CHD register who are currently prescribed an ACE inhibitor or ARB. Calculate as a percentage of the total number of patients on the CHD register.

Example

The Practice has 127 patients on its CHD register.

70 of these patients are currently prescribed an ACE Inhibitor or ARB.

The measure for this practice is $(70/127) \times 100 = 55.1\%$, i.e. 55%

The percentage of people on the CHD register whose recorded smoking status indicates they are non smokers (i and ii)

i) Never Smoked

ii) Ex Smoker

iii) Current Smoker

iv) Not Recorded

Using the CHD register, count the number of patients whose current smoking status indicates that they have never smoked, or are an ex smoker. Those patients who have not had their smoking status recorded should be excluded. Use the total number of patients on the CHD register to calculate a percentage.

Example

The Practice has 120 patients on its CHD register.

61 of those patients are recorded as having never smoked or as an ex smoker.

The measure for this practice is $(61/120) \times 100 = 50.8\%$, i.e. 51%.

The percentage of people on the CHD register whose recorded smoking status indicates they are a current smoker OR ex smoker AND who have had their smoking status assessed within the previous 12 months

Using the CHD register, count the number of patients whose current smoking status indicates that they are a current smoker, or are an ex smoker. Of these patients, count the number who have had their smoking status assessed within the previous 12 months. Use the total number of CHD patients who are a current smoker or ex smoker to calculate a percentage.

Example

The Practice has 120 patients on its CHD register.

49 of those patients are recorded as being a current smoker or as an ex smoker.

40 of these 49 have had their smoking status assessed within the previous 12 months.

The measure for this practice is $(40/49) \times 100 = 81.6\%$, i.e. 82%.

The percentage of people on the CHD register who have had an Myocardial Infarction (MI) OR Acute Coronary Syndrome (ACS) recorded within the previous 12 months

Using the CHD register, count the number of patients who have had a MI or ACS within 12 months of the date when you are measuring. Those patients who have not had a MI or ACS recorded in the previous 12 months from the date of the reporting should be excluded. Use the total number of patients on the CHD register to calculate a percentage.

Example

The Practice has 120 patients on its CHD register.
Of these 120 patients, 4 have had an MI or ACS in the previous 12 months
The measure for this practice is $(4/120) \times 100 = 3.3\%$, i.e. 3%

Note: It is important to track the incidence of new cases - i.e. patients who have non-fatal heart attacks after the start of the collaborative work and make sure they are coded as having an MI or ACS.

The number of deaths that were recorded within the previous calendar month where the person had a diagnosis of CHD

Count the number of deaths recorded in the last calendar month where the patient had a diagnosis of CHD.

Example

12 patients were recorded as deceased during the last calendar month.
3 of these 12 had a diagnosis of CHD.
The measure for this practice is 3.

The percentage of people on the CHD register who satisfy criteria and targets for ALL of the following CHD Measures:

Blood Pressure \leq 130/80 mm Hg within previous 12 months

Anti-Platelet Agent prescribed

Cholesterol $<$ 4 mmol/l within previous 12 months

ACE/ARB prescribed

Using the CHD register, count the number of patients who are prescribed an anti-platelet and ACE/ARB, and whose blood pressure and total cholesterol recordings are both within the specified ranges, within the previous 12 months from the date when you are measuring. Those patients who have not had a recording for any one of the measures in the specified timeframe should be excluded. Use the total number of patients on the CHD register to calculate a percentage.

Example

The Practice has 120 patients on its CHD register.

50 of these patients had a BP and cholesterol reading recorded within the previous 12 months, which are BOTH within the specified targets.

41 of the 50 patients are also currently prescribed an anti-platelet agent and ACE/ARB.

The measure for this practice is $(41/120) \times 100 = 34.2\%$, i.e. 34%

9.7 Improving data quality

You need to be aware of the importance of data quality and may be familiar with the term RIRO – Rubbish In, Rubbish Out. The information available on your clinical software system can be an invaluable tool in assisting patient care and streamlining practice systems. However, for this data to be useful you must keep your clinical database accurate and up to date.

Below are some questions to consider about the quality of your data and some ideas on how you can use this data to improve your practice systems.

What is a disease register and how do I create one?

A disease register is simply a list of people who share the same condition. Registers create themselves automatically when you use your clinical software correctly. If you code conditions for your patients correctly (see more information below of diagnosis coding) you can then get your computer to print a list of all people who have that particular condition, which is your register.

What is diagnosis coding?

When you wish to enter a diagnosis (or condition or reason for visit) into the patient notes, you should choose an item from the list provided in your software package rather than entering a free text description. Choosing from the list is known as 'coding' your diagnosis, because you are assigning a standard disease code to the patient. The benefit of using codes is that it allows you to locate all patients

who have the same condition easily i.e. all patients with type 2 diabetes. Using a free text description means that it is not possible to find a cohort of patients easily as they are likely to have many different descriptions for the same condition.

Each clinical software package has a coding system built in. Some well known systems include:

- ICPC - International Classification of Primary Care
- ICD10 - International Classification of Diseases Version 10
- SnoMed - Systematized Nomenclature of Medicine
- Docle - Doctor Command Language

Why archive inactive/deceased patients?

It helps you accurately determine the number of patients under your care. Knowing this figure is very useful in business planning. Archiving also prevents patients you are no longer concerned with appearing in the reports and skewing the numbers. Be prepared for this to be a large task initially, as there is every chance it has never been done before in your practice. Archived records can be easily recovered in the future, should this be required.

What are HL7 pathology results and how do I get them?

HL7 is a format for the transfer of electronic results to your practice and it replaces the older PIT format. The advantage of HL7 results is that once you have reviewed the incoming result, a copy of its contents is distributed throughout the patient's electronic record. In other words, if a result contains an HbA1c value, this is automatically placed in the correct field in the patient's diabetic record. It saves you the trouble of manually transferring the result value to the correct place in the patient notes. You can ask each pathology laboratory to send your results in HL7 format.

Where should I enter information in my clinical software so that it is properly collated by APCC reports?

If you are entering a diagnosis, use the coded list. (See 'What is diagnosis coding?' above). If you are entering any numerical information, it should go into the correct field i.e. blood pressure goes in the BP field, INR goes in the INR field, etc. If you suspect the APCC data is not being counted correctly in your APCC report, contact your software vendor for assistance in checking this.

Note: the questions below have been framed in relation to diabetes data, however you can take a broadly similar approach with the CHD data

The number of patients with diabetes reported is much lower than I expected

- Check that all GPs know how to correctly enter a coded diagnosis in your clinical software.
- Check that all patients known to have diabetes are diagnosed as such.
- Search for patients who might be diabetic but not coded as such, i.e. patients with an HbA1c test in the past 12 months, patients prescribed

insulin or lipid lowering medication. Also consider patients with polyuria, polydipsia, retinopathy, foot ulcers, unexplained weight loss etc.

- Check your paper records to see if patients are able to be transferred to your electronic notes

The number of diabetics reported is close to my expected figure, but BP, Cholesterol and HbA1c percentages are low

- Check that GPs know how to enter blood pressure and test results in the recommended fields, and that they do not just jot them in progress notes where they cannot be counted.
- Check your paper records to see if these values are available for transfer to your electronic notes.
- Ensure pathology results are transmitted in HL7 format.
- Ensure all GPs at the practice have a uniform understanding about when blood testing is warranted.
- Recall patients and begin testing and recording these values.

9.7.1 Other data issues to consider

You can consider the following questions to improve your practice systems and patient care:

- Are we recording information properly?
- Is our recall system working?
- Is our delivery of care sufficiently methodical or do gaps exist in our systems?
- Are we setting ourselves up for a high future workload for patients with acute diabetes/CHD by constantly missing opportunities to intervene early?
- What happens in your practice when a patient with diabetes/CHD walks in?
- Do you manage these patients according with a set plan, known by all GPs, nurses and staff?
- Does the plan include clinical and billing items so that uniform care is delivered to each patient, and the practice does not miss claiming payments for work done?

9.8 Codes

The following list is a comprehensive overview of codes that have been used by many of the software programs in Australian General Practice to construct and validate their registers. The list is not exhaustive and there may be additional codes that practices or Divisions may wish to build in to local templates. Some clinical software systems may not have all disease codes available.

Coronary Heart Disease

Acute coronary insufficiency
Acute coronary syndrome
Acute myocardial infarction
AMI
AMI (Acute Myocardial Infarction)
Angina
Angina pectoris
Angina pectoris - Prinzmetal
Angina pectoris - unstable
Angioplasty
Angioplasty - coronary
Angioplasty - coronary (with stent)
Anterior myocardial infarct
Anterolateral myocardial infarct
Atherosclerotic heart disease
Balloon coronary angioplasty
Blockage Coronary Artery
Bypass - coronary
CABG
CABG (Coronary Artery Bypass Graft)
Coronary
Coronary Angiography and Stent
Coronary artery balloon angioplasty
Coronary artery bypass graft
Coronary artery disease
Coronary artery disease - Rehabilitation
Coronary artery endarterectomy
Coronary artery spasm
Coronary artery stent
Coronary artery surgery
Coronary heart disease
Coronary insufficiency
Coronary Occlusion
Heart attack
IHD
IHD (Ischaemic Heart Disease)
Inferior myocardial infarction
Ischaemic heart disease
Myocardial Damage
Myocardial infarct
Myocardial infarction
Myocardial infarction - anterior

Coronary Heart Disease cont.

Myocardial infarction - anterolateral
Myocardial infarction - inferior
Myocardial infarction - posterior
Myocardial infarction - posterior
Myocardial infarction - subendocardial
Myocardial infarction - superior
Myocardial Infarction - with ST elevation
Myocardial Infarction - without ST elevation
Myocardial insufficiency
NSTEMI
NSTEMI (Non-ST-Elevation Myocardial Infarction)
Occlusion - Coronary Artery
PCTA
Percutaneous transluminal angioplasty
Posterior myocardial infarct
Posterior myocardial infarct
Preinfarction syndrome
Prinzmetal angina
STEMI (ST-Elevation Myocardial Infarction)
Stent - coronary artery
Superior myocardial infarct
Surgery - Coronary artery
Surgery - Coronary artery balloon angioplasty
Surgery - Coronary artery bypass graft
Surgery - Coronary artery endarterectomy
Surgery - Coronary artery stent
Unstable Angina
Unstable Angina - High risk
Unstable Angina - Low risk
Unstable Angina - Moderate risk
Variant angina

Other codes - not to be included in CHD

Angiogram - Coronary
Antiangina agent prescription
Coronary angiogram
Family History - Ischaemic Heart Disease
Fear of heart attack
Fear of myocardial infarction
Heart attack fear
Phobia - heart attack
Prescription - Angina pectoris
Spiral CT angiogram-Chest
X-ray - Coronary angiography

Coronary Heart Disease cont.

MI
Acute myocardial infarction
AMI (Acute Myocardial Infarction)
Anterior myocardial infarct
Anterolateral myocardial infarct
Heart attack
Inferior myocardial infarction
Myocardial infarction
Myocardial infarction - anterior
Myocardial infarction - anterolateral
Myocardial infarction - inferior
Myocardial infarction - posterior
Myocardial infarction - posterior
Myocardial infarction - subendocardial
Myocardial infarction - superior
Myocardial Infarction - with ST elevation
Myocardial Infarction - without ST elevation
NSTEMI (Non-ST-Elevation Myocardial Infarction)
Posterior myocardial infarct
Posterior myocardial infarct
STEMI (ST-Elevation Myocardial Infarction)
Superior myocardial infarct

ACS
Acute coronary syndrome
Unstable Angina
Angina pectoris - unstable

Diabetes

Type II
Diabetes Mellitus - NIDDM
Diabetes Mellitus - Type II
NIDDM
Non insulin dependent
Non insulin dependent diabetes mellitus
Type 2
Type II

Type I
Diabetes Mellitus - IDDM
Diabetes Mellitus - Type I
IDDM
IDDM (Insulin dependent diabetes mellitus)
Insulin dependent
Insulin dependent diabetes mellitus
Juvenile onset
Juvenile Onset Diabetes
Type I

Undefined Diabetic
Diabetes
Diabetes - controlled
Diabetes - Unstable
Diabetes Mellitus
Unstable Diabetes

Note: In Genie if the Diabetic box is ticked and the patient is not coded as Type I or II then they are deemed as Undefined

Diabetes Related Conditions
Diabetes with Vascular Changes
Arteritis - Diabetes Mellitus
Diabetic Endarteritis
Diabetic Peripheral Vascular Disease
Diabetic Vasular Disease - Peripheral
Acidosis - Diabetic ketoacidosis
Coma - Acidotic - Diabetes mellitus
Diabetes Eye Care
Diabetes review
Diabetic coma - Ketoacidotic
Diabetic Diet Management
Diabetic Foot
Diabetic Foot Care
Diabetic Gastroparesis
Diabetic Gastroparesis

Diabetes cont.

Diabetic Glomerulosclerosis
Diabetic Hypoglycaemic Coma
Diabetic Ketoacidosis
Diabetic Ketoacidotic coma
Diabetic Nephropathy
Diabetic Neuropathy
Diabetic Precoma
Diabetic Retinopathy
Diabetic Retinopathy
Diabetic Retinopathy - Background
Diabetic Retinopathy - Non Proliferative
Diabetic Retinopathy - Proliferative
DKA (Diabetic Ketoacidosis)
Gastroparesis - diabetes mellitus
Gastroparesis - diabetes mellitus
Keto-acidotic diabetic coma
Review - diabetes mellitus
Nephropathy - Diabetes mellitus
Neuropathy - diabetic
Prescription - Hypoglycemic
Prescription - Insulin

Other Diabetic Codes that will not be included in DIAB definition

Background Retinopathy
Borderline Diabetic
DI (Diabetes Insipidus)
Diabetes - Gestational
Diabetes Assessment
Diabetes Insipidus
Diabetes Insipidus - renal
Diabetes Mellitus - Borderline
Diabetes Mellitus - Family History
Diabetes Mellitus - Gestational
Diabetes Mellitus - Pre
Diabetes Mellitus - Preventive care
Family History - Diabetes Mellitus
Feet Check
FH of Diabetes mellitus
Gestational Diabetes
Impaired Fasting Glucose
Impaired Fasting Glycemia Not Yet Diabetic
Insulin preparations prescription
Intercapillary glomerulosclerosis
Kimmelstiel Wilson disease
Kimmelstiel Wilson syndrome
Nephrogenic diabetes insipidus
Pre diabetes
Prediabetes
Preventive care - Diabetes mellitus
Renal diabetes insipidus
Retinopathy - background

9.9 Medications: Anti-platelets, Statins, & ACE/ ARBs

Anti Platelets

Aspirin Generic Names:

Aspirin
Aspirin/Dipyridamole
Aspirin/Citric Acid/Sodium Bicarbonate
Aspirin/Citric Acid/Sodium Bicarbonate/Sodium
Aspirin/Glycine
Dipyridamole/ Aspirin
Salicylates

Clopidogrel Generic Names:

Clopidogrel

Statins

Lipid Lowering - Statins Generic Names:

Amlodipine besylate/ Atorvastatin
Atorvastatin
Atorvastatin/Amlodipine
Ezetimibe/Simvastatin
Fluvastatin
HMG-CoA reductase inhibitors
Pravastatin
Pravastatin Sodium
Rosuvastatin
Simvastatin

ACE / ARBS

ARB Class:

Cardiovascular System > Antihypertensives >
Angiotension II Antagonists > All

Alpha-blockers (quinazoline ARB derivatives)
Alpha-blockers (benzenesulfonamides)
Candesartan Cilexetil
Candesartan Cilexetil, Hydrochlorothiazide
Eprosartan Mesylate
Eprosartan Mesylate, Hydrochlorothiazide
Irbesartan
Irbesartan, Hydrochlorothiazide
Losartan Potassium
Olmesartan medoxomil
Olmesartan medoxomil, Hydrochlorothiazide
Telmisartan
Telmisartan, Hydrochlorothiazide

ACE Inhibitors Class:

Cardiovascular System > Antihypertensives > ACE
Inhibitors > All

Angiotensin converting enzyme inhibitors

Captopril

Enalapril Maleate

Enalapril Maleate, Hydrochlorothiazide

Fosinopril Sodium

Fosinopril Sodium, Hydrochlorothiazide

Lisinopril

Perindopril Arginine

Perindopril arginine, Indapamide hemihydrate

Perindopril Erbumine

Perindopril erbumine, Indapamide hemihydrate

Quinapril

Quinapril, Hydrochlorothiazide

Ramipril

Ramipril, Felodipine

Trandolapril

Trandolapril, Verapamil

9.10 Resources for monthly measures

There are many resources available to assist you with collecting your monthly measures.

Resources are available to assist with the collection of monthly measures on our website at www.apcc.org.au/user_guides.html including:

- How to guides for extracting and submitting Program measures
- access and care redesign– templates and information on how to collect the monthly measures
- chronic disease - calculators if you need to collect the measures and manually work out the percentages
- specific information about various software packages.

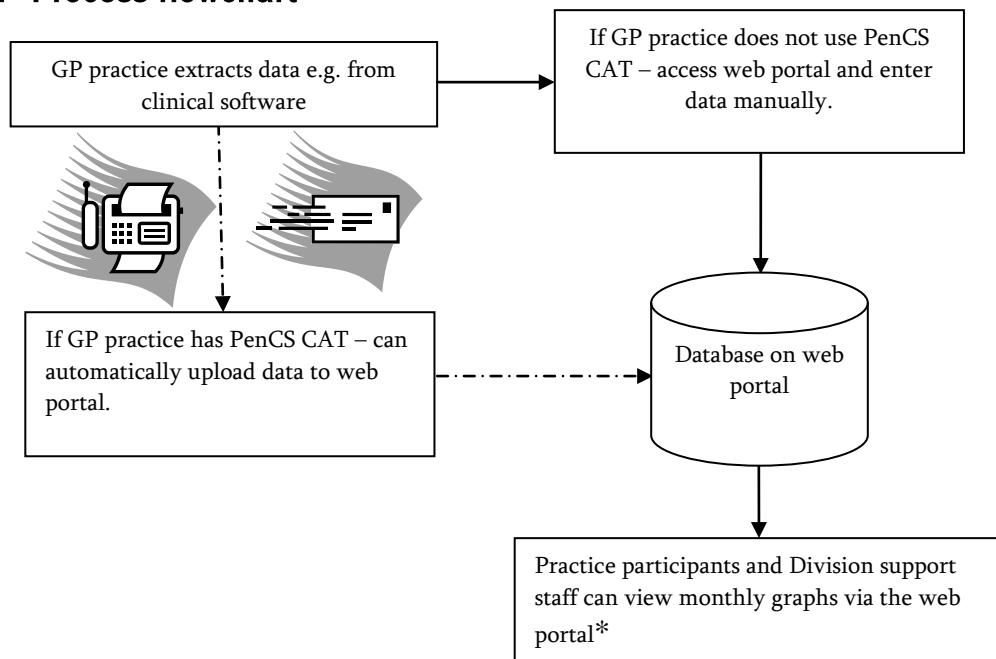
9.11 Web portal

This section provides detailed step-by-step instructions for submitting measures (including PDSAs) onto the web portal.

The web portal provides a secure, password protected APCC data reporting facility. You will also be able to use the web portal to submit monthly data, enter PDSAs, view your practice graphs, and search for Program resources.

Further information and online help is also available from the APCC website www.apcc.org.au.

9.12 Process flowchart



9.13 Accessing the web portal

This section provides instruction for participants to:

Log on to the web portal and

Submit monthly measures electronically with the Pen CAT

Step 1 - What you will need

1. Your email with your user name, password and practice token
2. Internet connectivity (the faster the better!)
3. Pen CAT installed

Step 2 - Logging on to the web portal

1. Using your web browser, navigate to:
<https://portal.improve.org.au/programs/personal/pages/default.aspx>
2. The following dialogue box should appear



3. Please enter
 - 'improve\' + your **username**. Please note that the '\' is a backslash and not a '/' forward slash, and
 - Your password (provided in an email from IFA.)

If you want to you can check 'Remember my password' for subsequent visits.



4. Click 'OK' and you should be directed to the following web page:

The screenshot shows the 'My Site' web portal for APCC Australian Primary Care Collaboratives. The page has a header with the APCC logo and navigation tabs for 'My Site', 'My Practice', and 'PDSAs'. The main content area is titled 'My Site' and contains a 'Welcome!' message, a 'Basic Search' field, and an 'Advanced Search' section with various filters like 'All of these words', 'The exact phrase', and 'Any of these words'. On the right side, there are 'Quick Links' for 'Manual Measures Entry Form' and 'Edit Your Personal Details', and a 'Personal Details' table with fields for Name, Preferred Name, WorkPhone, and WorkEmail.

You are now logged into your personal 'My Site' within the web portal. We'll be introducing features over time, but at the moment you'll be able to:

- View your practice reports
- Edit your personal and practice details which will allow IFA to better manage your participation
- Enter your Improvement Model ideas and subsequent PDSAs
- Search for Program resources

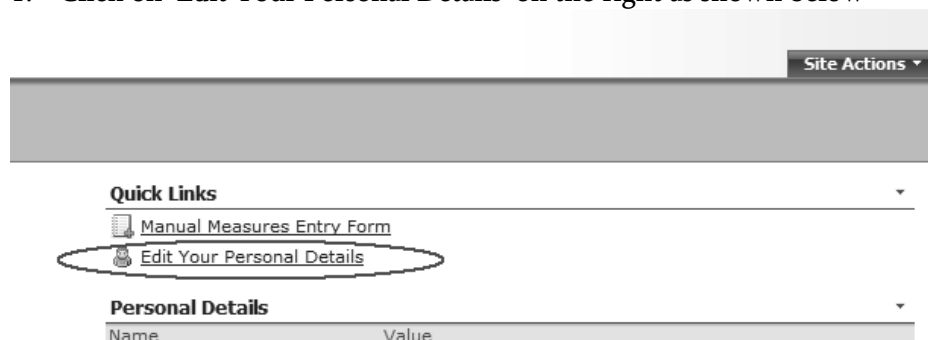
If you look around this page, you'll notice tabs in the top left corner under the APCC logo and simple navigation links on the left hand side. In the centre of the page there's a search function and on the left hand side, a summary of your details. Only you, and staff that are required to have access to your personal information for the purposes of managing your involvement in the Program, will have access to this area. Your details are not visible to other users and will remain confidential.

The search function is like many others that you may have seen. Regardless of how much experience you may have you should find this really easy.

When you first access your 'My Site' we ask that you update your personal details.

Step 3 - Update Your Personal Details

1. Click on 'Edit Your Personal Details' on the right as shown below



2. You will be directed to the following screen where you can update your personal details

The screenshot shows the 'Edit Details' form. At the top, there are buttons for 'Save and Close' and 'Cancel and Go Back'. Below these are several input fields for personal information, each with a 'Show To' dropdown menu. The fields are: Title, First name (with a note 'Name as it appears on formal travel documentation'), Preferred First Name (marked with an asterisk), Surname (with a note 'Name as it appears on formal travel documentation'), and Preferred Surname. The 'Show To' options are: Everyone, Only Me, and Everyone.

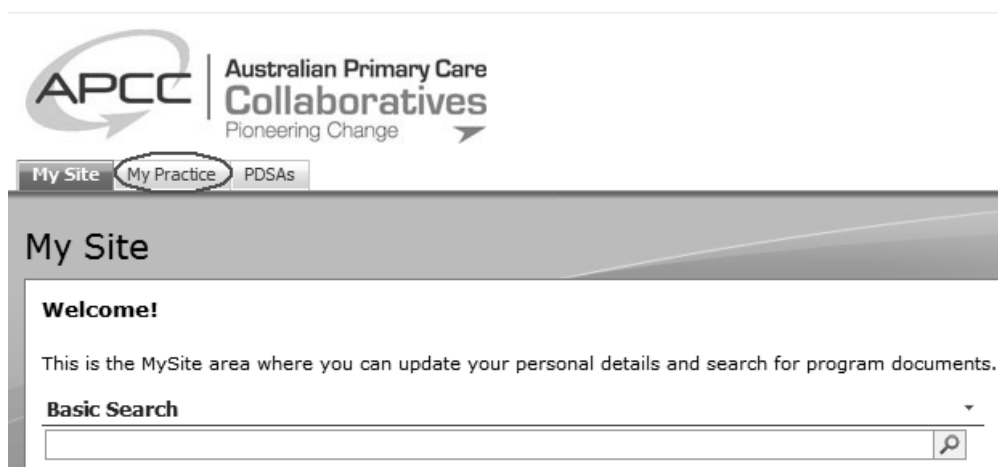
Providing accurate personal details will help us better manage your participation in the Program and all details are confidential.

Once you've completed updating your personal details you can click on 'Save and Close' as shown below. Alternatively 'Cancel and Go Back' if you have no changes. Clicking on either option will take you back to your 'My Site'.

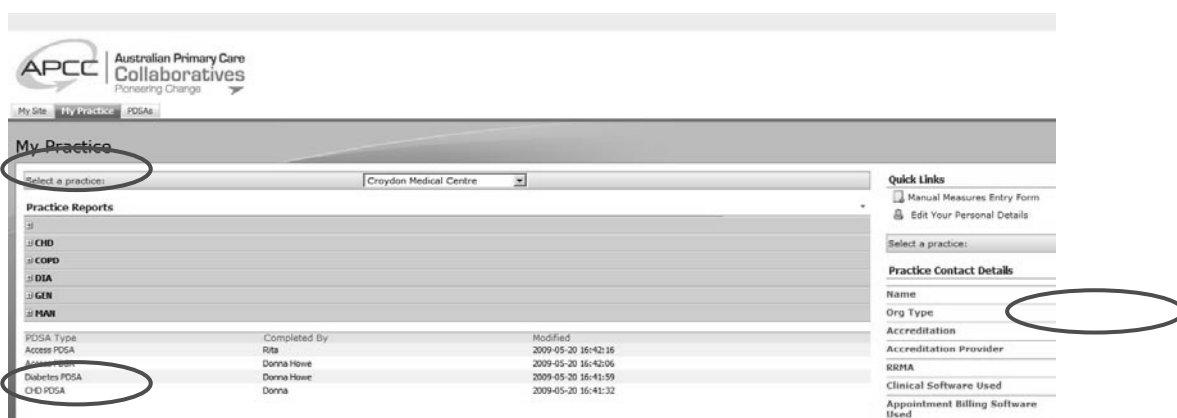
This screenshot is identical to the previous one, but the 'Save and Close' button is circled in red to indicate the next step in the process.

Step 4 - Your Practice

1. If you click on the tab titled 'My Practice' you'll be directed to a page with information about your practice.



2. In this area, which can be seen by all members from your practice that are users of the web portal, you will be able to access information about your practice.



This includes:

- Practice Report – in the central part of the page
- PDSA submissions – below Practice Reports, and
- Practice details – on the right hand side of the page.

This is where you'll be able to track activity and progress of your practice.

3. Update your practice details.

If you click on 'Edit' you'll be able to update your practice details. Anyone at the practice (that has been enabled as a web portal user) can do this and it only needs to be done once.

Select an entity: Sample Practice 1

Practice Contact Details	
Name	Sample Practice 1
Contact Name	Mr. Test User
Email	testuser1@improve.org.au
Phone	08 8888 8888
Fax	08 8888 8887
Mobile	0412 345 678
Address 1	123 Test St.
Address 2	
Suburb	Testville
State	SA
Post Code	5432
Country	Australia

[Edit..](#)

You can nominate a key contact person for your practice and other important information.

4. Check your practice's reports

Click on the cross hair of any of the measurement groups and the area will expand and show more reports.

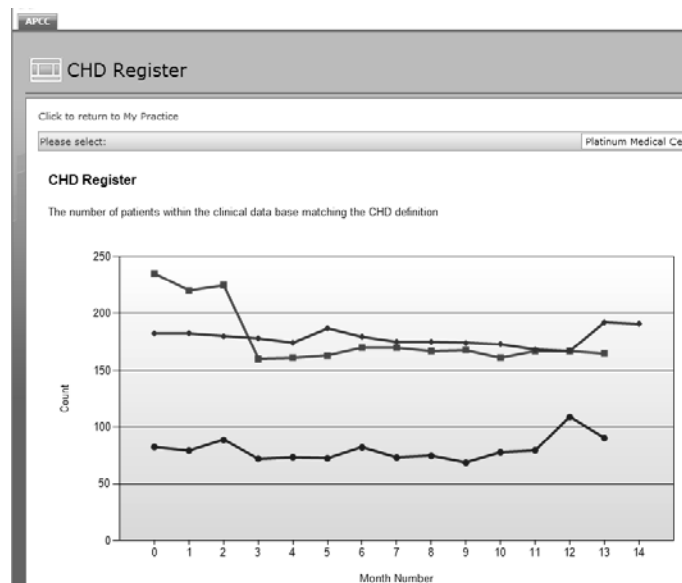
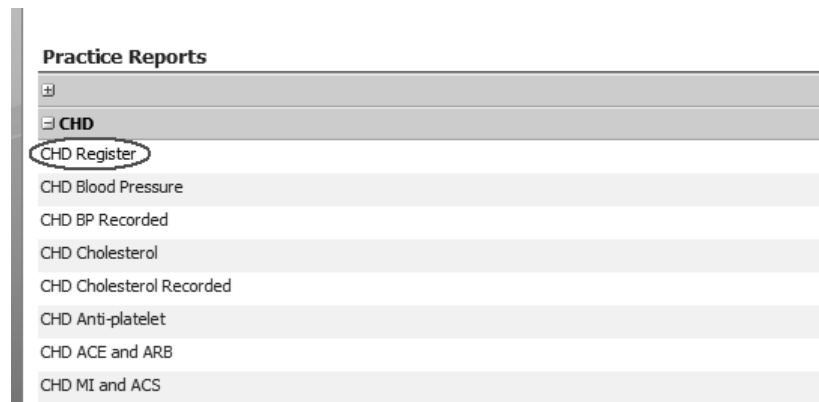
My Site My Practice PDSAs

My Practice

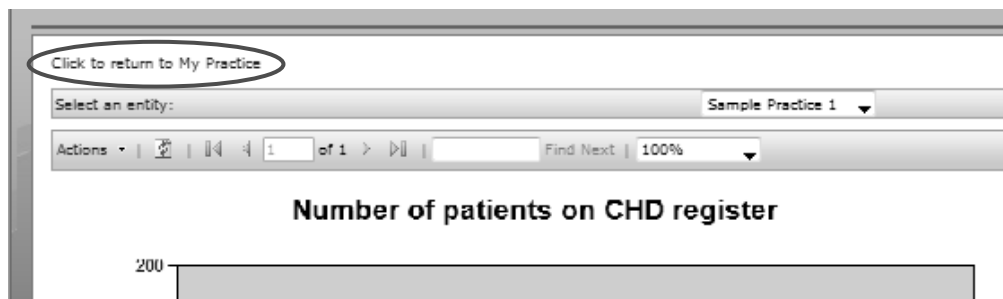
Practice Reports

- CHD
 - CHD Register
 - CHD Blood Pressure
 - CHD BP Recorded
 - CHD Cholesterol
 - CHD Cholesterol Recorded
 - CHD Anti-platelet
 - CHD ACE and ARB
 - CHD MI and ACS
 - CHD Smoking Status
 - CHD Smoking Status Assessment
 - CHD Death
 - CHD All Measures
 - CHD All
 - CHD Statin
- COPD
- DIA

- Click on a report and it will display the results. For example, here we are interested in the CHD Register Measure.



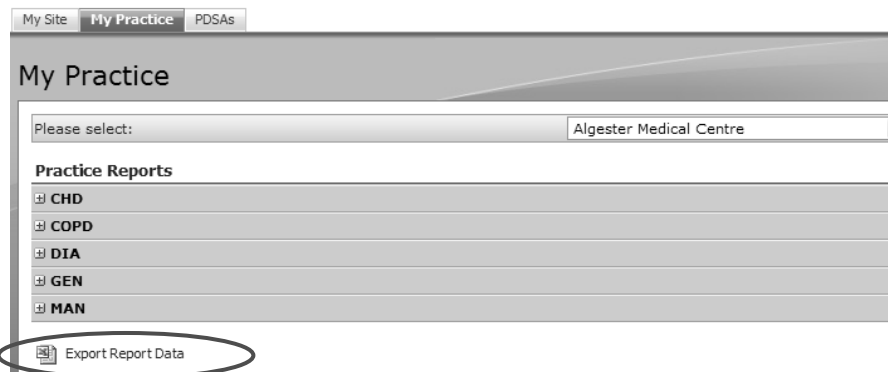
- To return to your My Practice site please click on 'Click to return to My Practice'



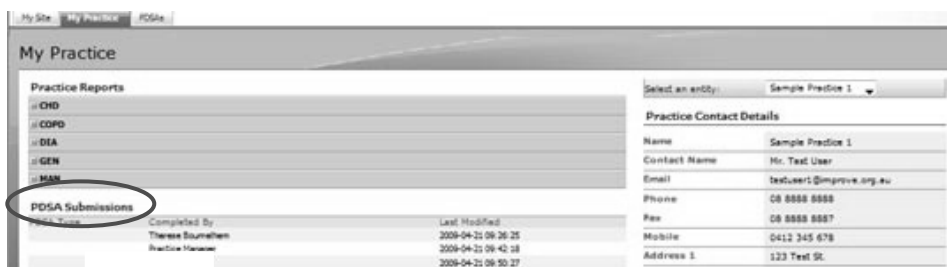
- Click on other reports to see different charts. Please remember that initially, some of these charts will not have data to report on so they will be blank. As data is submitted it to the data base, reports will be populated.

The time taken from when you submit data to when it appears in your practice reports is about 30 minutes.

- You can see your results in tabular format by clicking on the 'Export report data' link. From here you can export your data to excel, or other formats.



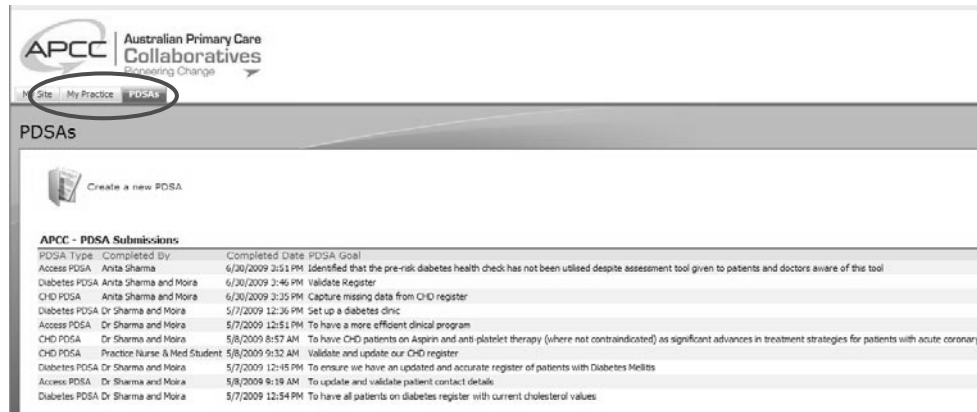
- In the PDSA area you'll find PDSAs recently completed or underway at your practice.



These and other practice PDSAs can be accessed from the PDSA tab.

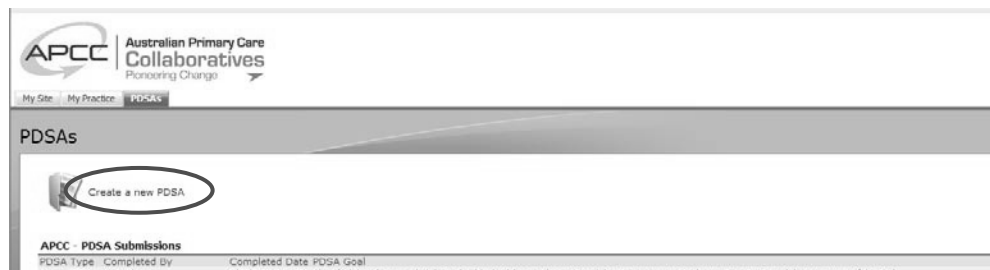


Click on the PDSA tab and you'll be directed to the following page.



In this area you will be able to view PDSAs submitted by the practice and create new PDSAs.

To create a new PDSA, click on the 'Create a new PDSA' link.



You will then be directed to the following page.

Save and Close | Print View

Model for Improvement

Practice Name:

Completed By:

Division Name:

PDSA Type:

PDSA Change Principle:

The 3 Fundamental Questions

1. What are we trying to accomplish?
By answering this question you will develop your GOAL for improvement

2. How will we know that a change is an improvement?
By answering this question you will develop MEASURES to track the achievement of your goal

3. What changes can we make that will lead to an improvement?
By answering this question you will develop the IDEAS that you can test to achieve your goal

Idea 1

Cycle 1

Show/Hide

Add PDSA Cycle

Add more ideas

The PDSA form is similar to the one currently used but with some improvements.

When you first create a new form, you'll need to fill in mandatory fields before you can save it. These include 'What' and 'Who'. You'll be able to see these if you expand the first PDSA cycle. As shown below:

The 3 Fundamental Questions

1. What are we trying to accomplish?
By answering this question you will develop your GOAL for improvement

2. How will we know that a change is an improvement?
By answering this question you will develop MEASURES to track the achievement of your goal

3. What changes can we make that will lead to an improvement?
By answering this question you will develop the IDEAS that you can test to achieve your goal

Idea 1

Cycle 1 Show/Hide

Plan: *what, who, when, where, predictions & data to be collected*
⊙ 'Plan' Help

What: *

Who: *

When:



You'll see in this area that you can add PDSA cycles as you build on your tests to validate your idea.

In the following screen shot you will see how you can:

- Submit your PDSA cycle by checking 'PDSA Cycle Complete'. This will lock away the cycle and record it against your complete cycles for the month. You will not be able to change the PDSA after submitting.
- Add a PDSA cycle by clicking on 'Add a PDSA Cycle'. This will add another cycle which you can expand and work by checking the 'Show/Hide' box.
- Add more ideas by clicking on 'Add more ideas'. This is a new idea within the same Improvement Model base on 'What are we trying to accomplish?' You may have other ideas that emerge after testing some earlier ideas!

PDSA Cycle Complete
This will lock the PDSA from editing

- Add PDSA Cycle
- Add more ideas

 Save and Close |  Print View

If you've completed the 'What' and 'Who' boxes you can 'Save and Close' at any time.

9.14 Submitting monthly measures electronically with the PEN CAT

Step 1 - Saving your Practice Token

1. Please have the document titled 'User Guide – APCC Report and Submission' handy. This can be found on the APCC website at <http://www.apcc.org.au/PenCAT.html>. You can refer to this if you need more detailed instructions.



PCS CLINICAL AUDIT TOOL
USER GUIDE – APCC REPORT AND SUBMISSION



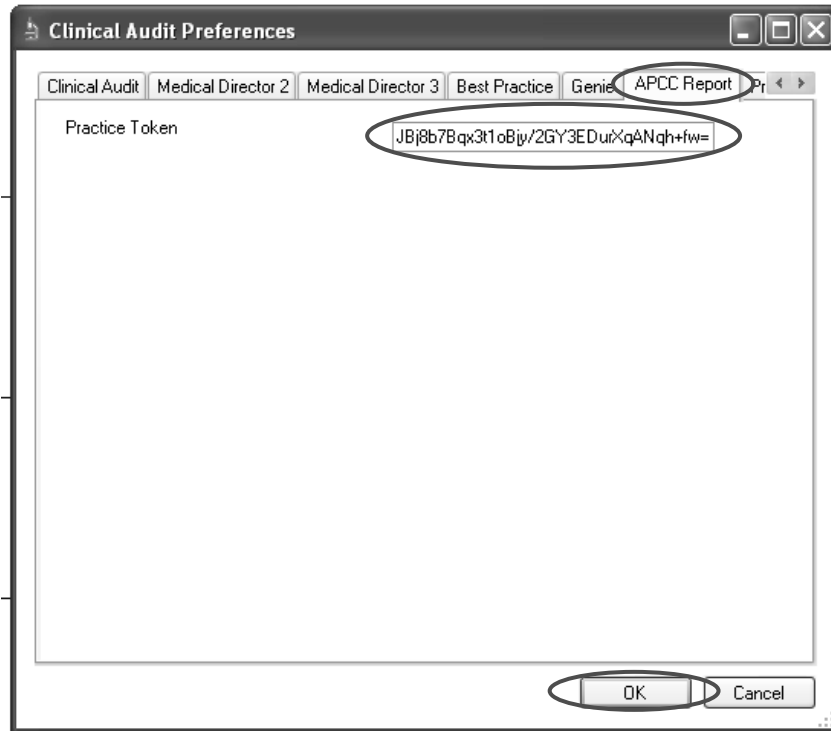
PEN COMPUTER SYSTEMS PTY LTD

2. Open CAT and enter your practice token code in the Practice Token Field (as described in the following pages or on page 9 of the CAT user guide). We recommend copying your token from the email you received at the practice and pasting it into the space in CAT.

To do this - click edit and then preferences.



Copy and paste the token into the textbox under the 'APCC Report' tab and click OK.



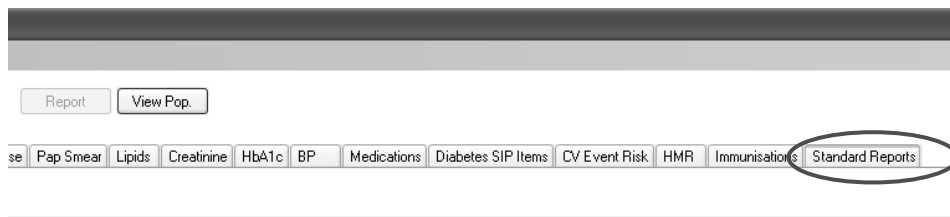
Remember: Putting the token in only has to be done once. You can now close CAT or if you are ready to submit your APCC measures please continue to 'Step 2 - Submitting APCC Reports'.

Step 2 - Submitting APCC Reports

1. Ensure CAT is open.
2. If you use CAT already the settings in Preferences should be OK for a 'collect' to take place. If not consult the guide titled 'User Guide – Installation and Configuration' (from Page 16). A link to this document can be found at <http://www.apcc.org.au/PenCAT.html>. **Now Click 'Collect'**.



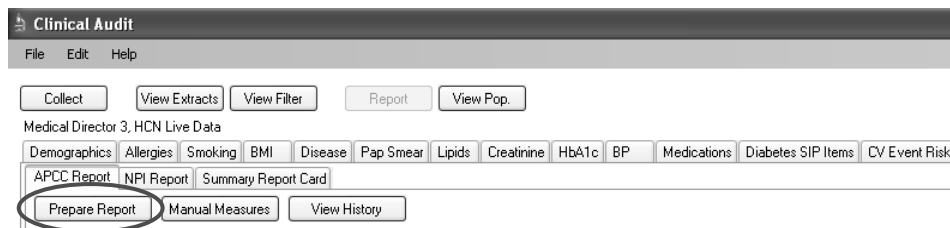
3. Click on the 'Standard Reports' tab on the right.



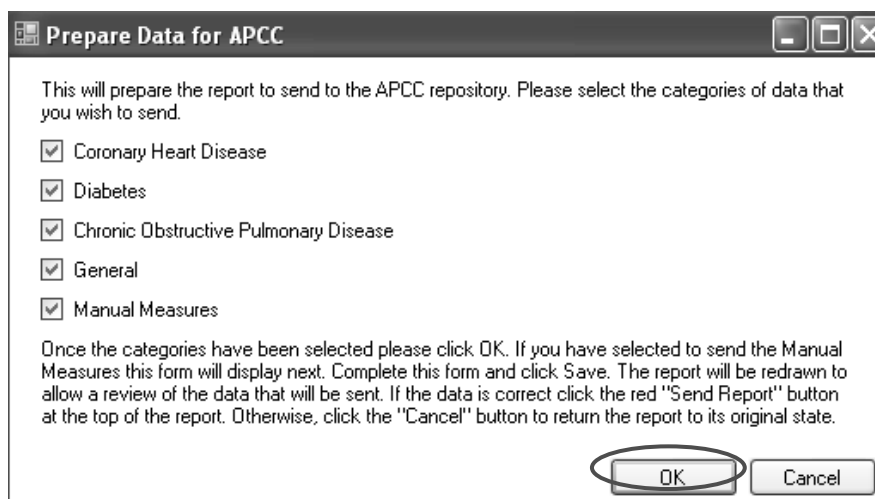
4. Then click on the 'APCC Report' tab on the left.



5. You should see your APCC report on the page. Click on 'Prepare Report'.



6. Now choose which measures you want to submit and click 'OK'.



- Now you need to fill in your practice's details. These will save and be there next time you submit data. So in future you only need to edit details as they change e.g. your practice hires a nurse who takes appointments. The section in the red square includes the access measures. **Please click 'Save' once it is filled in.**

Manual Measures

Please enter the Manual Measures for the APCC report:

MAN-001	Is the practice using an 'Open Access' system?	<input type="radio"/> Yes <input checked="" type="radio"/> No
MAN-002	The number of days until the GP 3rd Available appointment.	2.00
MAN-003	Is there a practice nurse who takes appointments?	<input type="radio"/> Yes <input checked="" type="radio"/> No
MAN-004	The number of days until the Practice nurse 3rd available	0.00
MAN-005	The number of patients whose appointment demands were unmet.	45
MAN-006	Average patient satisfaction score.	1.00
MAN-007	The number of full time equivalent GPs at the practice.	1
MAN-008	The number of full time equivalent practice nurses employed at the practice.	1
MAN-009	Is this practice an Aboriginal Medical Service?	<input type="radio"/> Yes <input checked="" type="radio"/> No
MAN-010	Is the Practice accredited?	<input type="radio"/> Yes <input checked="" type="radio"/> No
MAN-011	Accreditation Provider (if the Practice is accredited)	Other
MAN-012	Does the practice have a practice wide, systemised register for the following?	
	CHD	None
	Asthma	None
	Any Mental Health	None
	Other (comma separated values)	
	Hypertension	None
	Diabetes	None
	Osteoporosis	None
	Paper	gfdg
	COPD	None
	Diabetes Risk	None
	Any Cancer	None
	Electronic	hfeigh
MAN-013	Does the practice have a practice wide, systemised recall/ reminder system for the following?	
	CHD	None
	Asthma	None
	Any Mental Health	None
	Other (comma separated values)	
	Hypertension	None
	Diabetes	None
	Osteoporosis	None
	Paper	hgteegh
	COPD	None
	Diabetes Risk	None
	Any Cancer	None
	Electronic	gfd

Save Cancel

- You will now see your APCC Report back on the screen. Now click 'Send Report'.

Clinical Audit

File Edit Help

Collect View Extracts View Filter Report View Pop.

Medical Director 3, HCN Live Data

Demographics Allergies Smoking BMI Disease Pap Smear Lipids Creatinine HbA1c BP Medications Diabetes SIP It

APCC Report NPI Report Summary Report Card

Send Report Cancel

- All you need to do now is click OK. A prompt and a message will tell you if your data submission was successful or not. If successful the web portal will have graphs in your practice site!

9.15 Advice and Help

Your Division has been trained in how to use the web portal and will be an important local contact if you need any assistance. 'How to' guides are also available on the APCC website (http://www.apcc.org.au/Web_Portal.html). User guides for the Pen CAT can also be found at the APCC website (<http://www.apcc.org.au/PenCAT.html>).

10 Patient Self-Management

10.1 What is self-management?

Every individual with a chronic condition manages their condition on a day to day basis. Some people manage this much more effectively than others. Evidence has shown that what we do as health professionals is crucial to a patient's ability to self-manage their health.

10.2 Definition of self-management

The following definition of self-management is based on a comprehensive literature review of over 400 articles by Gruman and Von Korff¹. Self-management involves the person with the chronic disease engaging in activities that protect and promote health, monitoring and managing symptoms and signs of illness, managing the impacts of illness on functioning, emotions and interpersonal relationships, and adhering to treatment regimes².

There are a number of key elements to this definition that enable us to develop a practical concept of self-management. These elements suggest that self-management:

- entails engaging in activities that promote health
- involves monitoring and managing signs and symptoms
- entails dealing with the effect of a chronic condition on physical ability, personal well being and interpersonal relationships
- involves following a treatment plan.

Kate Lorig, who with her partners at Stanford University has developed a range of self-management courses³, states that self-management is also about:

'... enabling participants to make informed choices, to adapt to new perspectives and generic skills that can be applied to new problems as they arise, to practise new health behaviours, and to maintain or regain emotional stability'

The evidence indicates that good self-management can:

- improve quality of life
- support behaviour change
- decrease use of health care services.

¹ Gruman J, Von Korff M, (1996), Indexed Bibliography on Self-Management for People with Chronic Disease, Center for Advancement in Health: Washington DC.

² Ibid. p.1.

³ Lorig K, (1996) 'Chronic Disease Self-Management: A Model for Tertiary Prevention. (Perspectives on Chronic Illness: Treating Patients and Delivering Care)', American Behavioral Scientist 39(6): 678(8).

10.3 Working in partnership

Self-management is not an alternative to medical care. Optimal management of chronic disease involves both effective clinical management and self-management practice.

To support self-management healthcare professionals need to:

- take into consideration the individual with the chronic condition, and their family
- have an holistic approach that acknowledges the medical and psychosocial components of a condition
- aim to empower the individual through proactive and adaptive strategies

Four other elements have been proposed as being important when working with patients to support self-management⁴:

- Collaboratively defining the problem: enabling the patient to define their problems in conjunction with their health professionals
- Targeting, goal setting and planning: targeting the issues that are of greatest importance to the patient and health care provider, setting realistic goals, and developing a personalised care plan, i.e. a plan that is tailored to the patient's needs. Programs are successful if the process is guided by a consideration of the patient's readiness to change and self-efficacy
- Self-management training and support services: programs that include instruction on disease management, behavioural support programs, physical activity and interventions that address the emotional demands of having a chronic condition are relevant
- Active and sustained follow-up: evidence shows that reliable follow-ups at regular intervals, initiated by the provider, lead to better outcomes

10.4 Principles and concept of self-management

Self-management involves the individual with the chronic condition working in partnership with their carers and health professionals so that they can:

- know about the condition(s) and various treatment options
- be actively involved in decision making in relation to the treatment and management of their condition
- follow the treatment plan developed with their health care providers
- monitor their symptoms and take appropriate action to manage and cope with the symptoms
- manage the physical, emotional and social impact of the condition(s) on their life
- adopt a lifestyle that promotes health and does not worsen symptoms

⁴ Wagner et al. (1996)

Supporting effective self-management involves health professionals working in partnership with individuals and their carers to:

- identify underlying worries or concerns
- jointly define the problems
- give specific information
- agree on short term goals
- provide access to education and support for self-management
- provide active and sustained follow-up


10.5 What support already exists?

A range of resources that support self-management and behavioural change already exist. Examples include group education programs, rehabilitation courses and health promotion activities. Ensuring good access to information about the available resources and services facilitates the selection of choices that best suit the needs and preferences of individuals.

Some examples of resources and support available to general practice include:

- Divisions of General Practice
- Enhanced Primary Care MBS item numbers for care planning and case conferencing
- chronic disease item numbers for GP Management Plans and Team Care Arrangements
- nurse item numbers
- SIP and PIP payments
- SNAP program
- Quit programs
- buddy schemes
- in-house group disease specific education
- Stanford self-management courses
- peer support self-help groups
- disease-specific rehabilitation programs
- home medicine review
- community health centre or local government programs
- health consumer non-government organisations (e.g. Diabetes Australia, Heart Foundation)
- Life scripts program: <http://www.agpn.com.au/site/index.cfm?display=5267>

Examples of self-management education interventions⁵

	Type of intervention	Examples
Individual 	Face to face consultation	Flinders University model of clinician-administered support
	Telephone coaching	Coaching patients On Achieving Cardiovascular Health (COACH) program
	Internet individual course	NSW Arthritis Foundation course
	Internet group course	UK National Health Service's Expert Patients Programme online
	Group: ongoing cycle	Rehabilitation programs
	Group: formal/structured	Stanford University program
	Written information	Non-government organisation publications
Population	Television/multimedia, social marketing	Back pain beliefs campaign; Quit anti-smoking campaign

10.6 Care planning

Care planning yields many benefits, especially if suitable patients are targeted and robust arrangements are in place with contributing providers.

Documented benefits and outcomes include:

- it helps to coordinate services and treatment for the care of your patient
- it is useful for recording comprehensive, accurate and up to date information about your patient's condition and treatment
- it enables GPs to take a proactive role in managing patient health care
- it enables evolution from episodic, acute management towards a structured proactive and preventative approach., thereby reducing your patient's need for multiple ad hoc visits to your practice
- it encourages your patient to take responsibility for their own care

⁵ Jordan JE, Osborne RH, (2007), 'Chronic disease self-management education programs: challenges ahead', *Med J Aust* 2007;186 (2): 84-7.

- it promotes teamwork within your general practice and with other services and health professionals
- most importantly, it has a positive impact on patient care, outcomes and quality of life.

Note: this list was developed by Eyre Peninsula Division of General Practice to meet guidelines set down by Australian Department of Health and Ageing (May 2007).

A number of the Sharing Health Care projects worked with Divisions to improve self-management for patients, particularly in the use of self-management care planning.

Example

The 'Good Life Club' in Victoria supported people over 50 with diabetes by providing:

- individual telephone counselling by practice nurses and allied health professionals to support behaviour change
- Club activities, eg walking groups, using the internet, healthy shopping
- newsletters
- information website

There are also several examples from within Phase 1 of the APCC Program where practices have developed local programs and initiatives to further engage with patients and promote self-management.

Example

Several Wave 3 practices from Phase 1 of the Program developed various types of education resources to engage and encourage their patients to manage their chronic disease.

Some of the outstanding educational resources include the implementation of Lifescripts, accessible CHD and diabetes clinics, patient education sessions held at the practice and hand-held records (in conjunction with action plans) which include current BP, weight, BMI, cholesterol, HbA1c, creatinine clearance, smoking status and a record of the last time the patient saw an ophthalmologist.

A Queensland practice developed a magnet for CHD patients and their families which provided information about how to successfully and safely manage their chest pain.

Example

Chest Pain/Tightness Management

If you experience chest pain/tightness you should:

1. Sit down and take your GTN spray or anginie under you're your tongue.

Rest & Wait 5 Minutes

2. If chest pain/tightness persists repeat the

Rest & Wait 5 Minutes

3. If chest pain/tightness is still present call 000 for the ambulance and repeat the above step.

If the chest pain/tightness resolves after the recommended actions, please see your GP within 24hours.



EVERY MINUTE COUNTS!

Courtesy of Pacific Family Medical Practice, Sunnybank Hills, Qld

Example

A South Australian practice wanted to improve patient understanding of how diet affects diabetes and developed a strategy to improve diet. The practice replaced commercial magazines in the waiting room with health and lifestyle magazines, healthy eating recipe books and other publications which prompted patients to reconsider their lifestyle habits with good ideas.

Example

A practice in the Northern Territory wanted to encourage patients with diabetes and coronary heart disease to take charge of their health. After watching the Motivational Interviewing CD in the Lifescripts pack, the practice nurse tried the technique out on a couple of patients. She found the technique to very effective and a good tool to assess where patients are at with their issues (such as smoking and weight loss)

The practice commented that the use of motivational interviewing, combined with the proactive recall of patients and the use of Lifescripts, has allowed patients who attend this practice to take an active ownership of their disease.

Example

A Brisbane practice organised an educational supermarket tour to support patients to make diet and lifestyle changes. Starting from a list of patients who were identified for a diabetic review, the GP then selected those individuals and invited them to attend the supermarket tour which was conducted by an accredited dietician. Everyone was delighted with the tour and the support they received.

Through the process of organising and running the tour, the practice has compiled a list of hints:

- send a letter of invitation to selected patients - often a phone call is necessary to convince patients to attend
- utilise a smaller supermarket where the majority of patients have easy access
- organise the tour for the early morning to avoid crowds in the supermarket
- request that the supermarket turn down their filtered music whilst the tour is held so that patients can hear the dietician
- arrange for a 'healthy shopping guide' from Diabetes Australia to be given to each participant to enable the patient to develop and continue their own care of their diabetes
- where possible, have the GP attend the tour. This shows patients that the practice has a team approach to their care and the GP can observe what the patients choose to eat.

The encouragement and facilitation of self-management at the practice level is an essential component of the systematic approach to chronic disease management promoted by the APCC Program. As participants, you will be encouraged to embrace self-management principles for people with CHD and diabetes. Divisions and practices will be encouraged to develop local initiatives, engage with local stakeholders, develop patient-focused services and prioritise patient information and self-management education.

10.7 Patient and carer involvement in health care delivery

Involving people more actively in their own individual care is a key component of establishing good self-management. A related issue is involving consumers in decisions about the broader delivery of health care in their area. Many Divisions are increasingly looking to involve consumers in policy decisions and programs.

It is important to emphasise that involvement is not just for closer scrutiny of services. Greater involvement of patients, carers and the public in planning and delivering health and social care will result in mutual benefit to patients, carers and providers alike.

Potential benefits for patients and carers may include:

- better quality services that are more responsive to the needs of patients, leading to better outcomes of care and improvements in health and well-being
- policy and planning decisions that are more patient focused
- improved communication between organisations and the communities they serve
- greater ownership of local health services, and a stronger understanding of why and how they need to change and develop

In any redesign program, obtaining the patient's view is vital. Only the patient can really tell us what it is like to experience the care that is being provided by a variety of organisations. Carers are also in a unique position to inform services of the patient and carer experience. Patients and carers have a complete view of the path of care, whereas clinical staff may only work within a section of that journey. While clinical staff often have ideas about what might improve the quality of care, the views and experiences of patients and carers are crucial for informed decision-making. For example, their views may confirm the change you are considering. Or, where there are several options, their views can enlighten decisions and choices.

During your involvement in the APCC Program, you may want to consider:

- What involvement do our patients/consumers currently have at this level?
- What are the areas in which we could engage patients/consumers?
- What might the benefits be to us and the patients/consumers?

Due to the importance of involving patients in the design and delivery of care, this concept will feature in each of the APCC topic areas.

10.8 Further reading and resources

For further reading and resources please visit the following websites:

The IHI website has tools for self management

<http://www.ihl.org/IHI/Topics/PatientCenteredCare/SelfManagementSupport/Tools/>

Department Human Services, State Govt. Victoria: Self Management Mapping Guide

Http://www.health.vic.gov.au/pcps/downloads/self_management_guide.pdf

COACH Program – coaching patients on achieving cardiovascular health

<http://www.australianunity.com.au/au/lifeplus/20070301/coach.asp>

Phone coaching for people with diabetes and heart failure

<http://www.health.wa.gov.au/healthyathome/phonecoaching/index.cfm>

Overview of the Flinders University model of self management

<http://www.health.vic.gov.au/archive/archive2005/patientneeds/march/march-c2.pdf>

The ‘Flinders Model’ of Chronic Condition Self-Management

http://som.flinders.edu.au/FUSA/CCTU/self_management.htm

Power point presentation: Patients as effective collaborators in managing chronic conditions

www.health.vic.gov.au/diabetes/downloads/42self_management.ppt

Chronic Disease Self Management Special Interest Group:

<http://www.chronicillness.org.au/sig/self.html>

Chronic condition self-management support for chronic care collaborative teams

www.health.nsw.gov.au/health_pr/chronic_care/ccc/resources/sm02.doc

Managing my heart health (MMHH) – resources for people with or a high risk of coronary heart disease

http://www.heartfoundation.org.au/Professional_Information/Clinical_Practice/CHD/Pages/default.aspx

Template resource:

http://www.heartfoundation.org.au/document/NHF/MMHH_AtAGlance_2007_web_BnW.pdf

Department of Health & Ageing Sharing Health Care Initiative (SHCI)

<http://www.health.gov.au/internet/main/publishing.nsf/Content/chronicdisease-sharing.htm>

‘GPMP and TCAs made easy’ for Chronic Disease Management Eyre Peninsula Division of General Practice

<http://sgrhs.unisa.edu.au/CDSM/Guides/gpmp%20and%20tca%20made%20easy.pdf>

Health Coaching Australia

<http://www.healthcoachingaustralia.com/index.htm>

