

How one AMS is closing the gap—the power of data

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Introduction

An efficient data reporting system is integral to planning, delivering, monitoring and evaluating primary health care services, particularly those that proactively aim to close the gap. While most services periodically report on national closing the gap efforts, real time data management and reporting is required to ensure operational targets are achieved; operations are continually improved; and quality, safety and risk are all managed.

Goondir Health Services, with multiple clinics across 160,000 square kilometers in regional Queensland, has developed and implemented a reporting system that provides clinicians, managers and the executive with up-to-date data that allow quick evaluations and informed clinical and management decisions to be made.

Called the Clinical Performance Dashboard, or **Dashboard** for short, it combines clinical data from the patient record information system, organisational data from the quality management system and financial data into one service planning and management tool.

The Dashboard has been in place now for over 12 months, it has been developed in-house and it has been an ongoing learning process. It reports relevant, current information showing us how we are performing against our goals and targets at the organisational, clinical and individual level.

In this paper the Dashboard will be showcased, the development process explained, and policy implications explored. This paper is in four sections: 1. introducing the dashboard; 2. what we've learnt in the process of building it; 3. what we've learnt doesn't work; and 4. how the Dashboard helps with Closing the Gap.

Introducing the Dashboard

The Dashboard operates at a number of levels, with data tailored to suit multiple audiences. There's a "one page" overview with the high level performance metrics of most interest to executives and the Board (Figure 1).

Figure 1: Managers Snapshot



There's a "detailed view" of each of the 12 key metrics that managers use to plan and evaluate service delivery (Figure 2); behind which lies the actual data and analyses that allow team leaders and clinicians to drill down to what matters for them (Figure 3).

Figure 2: Detailed View

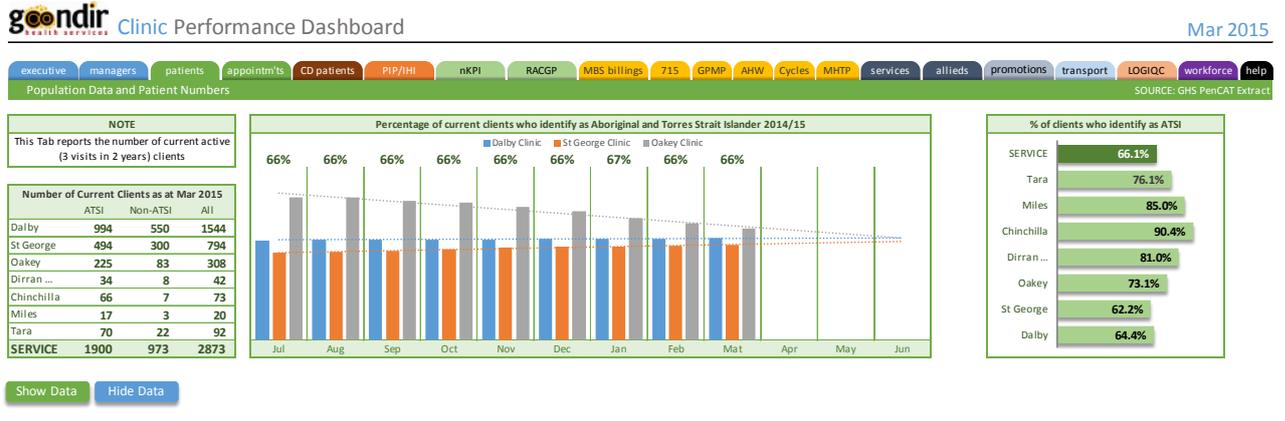
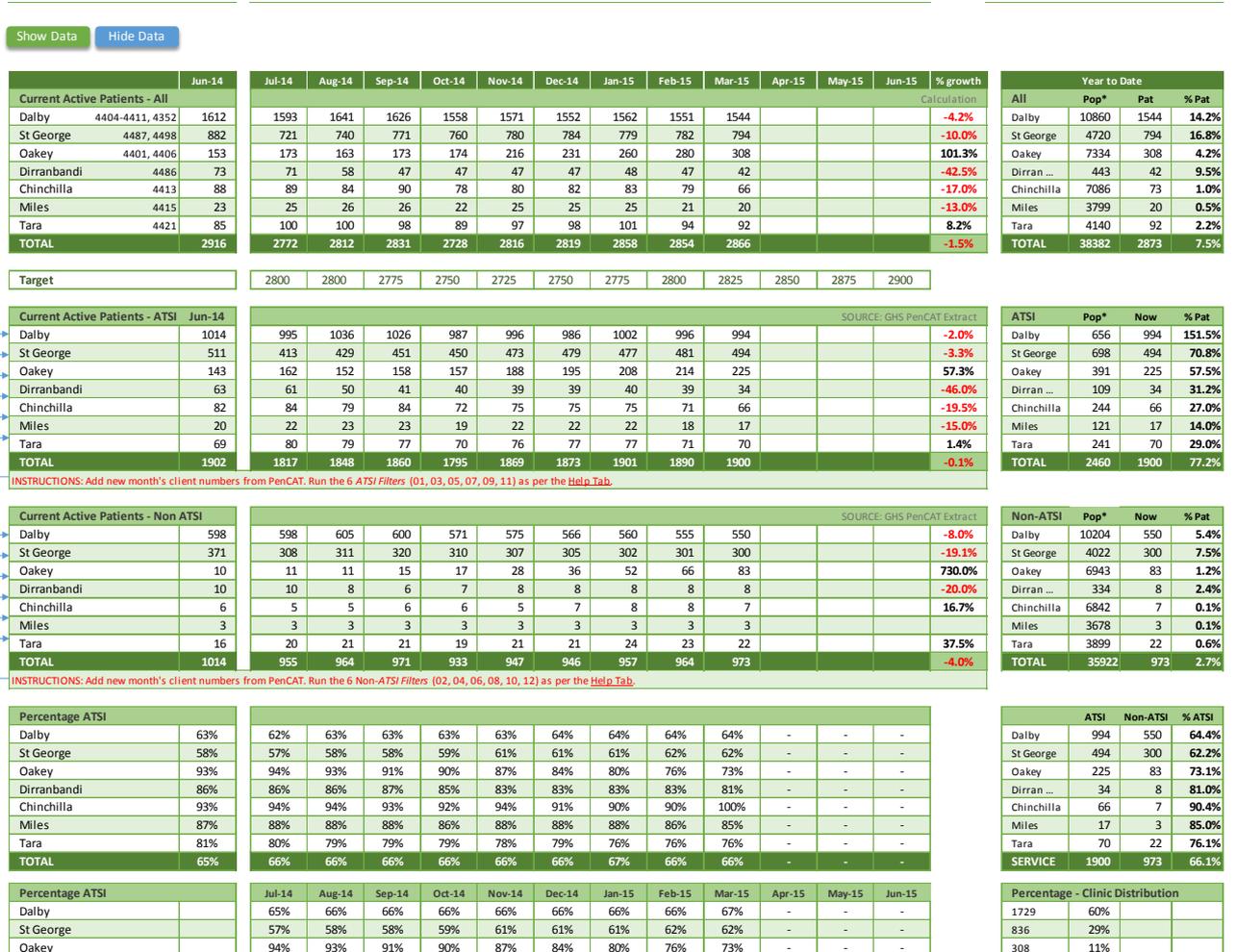


Figure 3: Data View



What we've learnt

Measure what matters: The first thing we've learnt is that not every metric that can be measured needs to be measured.

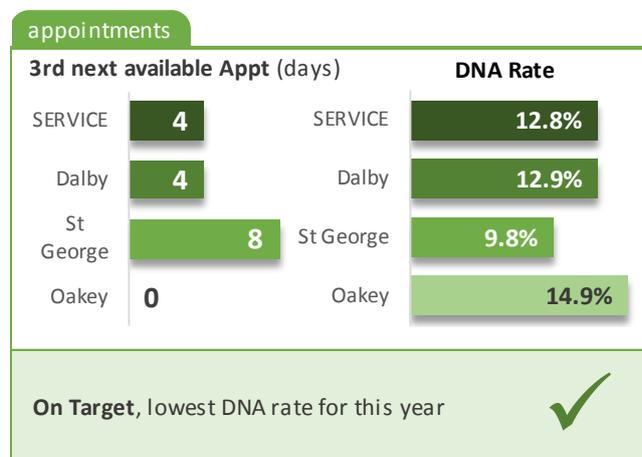
Selecting the right metrics to include in the Goondir Dashboard has been a slow and iterative process. In earlier versions the data we mapped proved to be either irrelevant or confusing to viewers both up and down the management ladder.

We have learnt to be highly selective in determining which metrics earn a spot on our dashboard. And while the process of choosing has been more or less trial and error, three questions have proven useful in determining what to measure: which KPI do we want to monitor; where does the most reliable data come from; and exactly what metric measures performance?

In the end, we have come to realise that if we can't explain in a few words how every metric on our dashboard connects to our organization's objectives and action plans ... it's not for the dashboard.

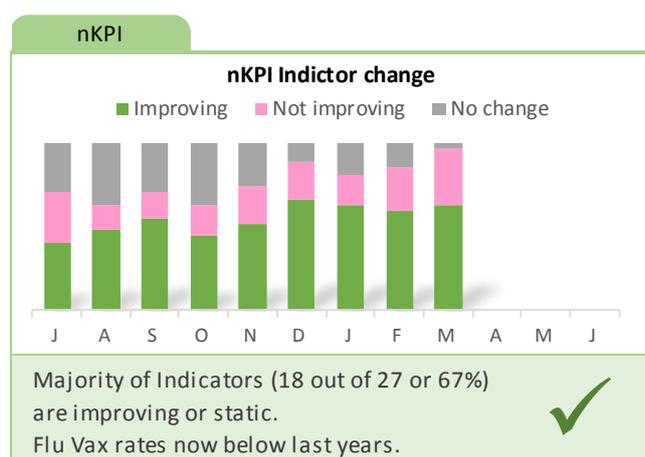
For example, with appointments, it soon became apparent that while we could measure how many patients booked an appointment, how many showed up, how many didn't, how many walked-in without an appointment, how many cancelled, how many we cancelled and how many rescheduled, the two metrics that really mattered were how many days patients had to wait to be seen - the 3rd Next Available Appointment - and the DNA Rate or Did not Attend rate (Figure 4).

Figure 4: Appointments data



Another example is our nKPI dataset. As an AMS we have 27 national key performance indicators that we report to Canberra every month. So what is the key metric for managers when it comes to the nKPIs? It's how many of the 27 are improving, how many aren't and how many are static. So our Dashboard snapshot shows us just this data, visually over time (Figure 5).

Figure 5: nKPI data



Visual is vital: Another key thing we've learnt at Goondir is that the Dashboard needs to look simple and be easy to read.

The experts say that when people are given the chance to see data as a picture versus a table, they can focus on what the data is saying. This is the underlying reason why our dashboard uses simple bar graphs and line graphs ... they are clear and people intuitively know how to read them.

When designing our dashboard, we have embraced the use of colours, shapes and lines and other point and click elements that years of internet surfing have taught us all. And we've learnt to avoid things like cute symbols, 3D graphic treatments, and distracting colour.

Figure 1 may look like a complex colour scheme on first viewing, however at Goondir we've come to recognise that data about patients is presented using a green palette, data about disease uses a brown/orange palette, MBS data is always yellow and service statistics are grey/blue.

Layer the data: One of the biggest lessons we've learnt is that presenting all the data at once means none of it is truly understood or useful for decision making.

To avoid being overwhelmed by the data we've learnt to present the key numbers in a visually simple format - the Managers Snapshot (figure 1) - and allow users to drill down to the details should they want to or need to (figures 2 and 3).

This view (Figure 1) is where the managers always start each month. At a glance we can see that for March, 10 out of the 12 high level metrics were on track and what we're doing to address those that are not.

This quickly gets us all onto the same page. But once we're on the same page, we all have unique questions about what we see. So the Dashboard is created so that we can interact with it to get the answers we seek.

Using intuitive graphic elements like the tabs at the top of each metric or the menu bar at the top of the screen we can go from the big picture to more detail, usually including data on how we are performing on the metric over time.

In this figure (Figure 2) we are looking at the second level of data relating to the patient demographics. One thing we track is the percentage of our clients who identify as Aboriginal and/or Torres Strait Islander. Here we see that the percentage for the service is 66.1%, but that it varies across our communities and it also varies over time. We see that the percentage is slowly increasing for the Dalby and St George Clinics, and significantly decreasing for the Oakey Clinic.

At the third level, after clicking on the "Show Data" button, (Figure 3) we see that over 77% of the number of Aboriginal and Torres Strait Islander people in our catchment are clients of the service and we see the growth stats, or shrinkage for each community.

This way, the data doesn't get in the way of the message and the data that can help us make better decisions is only 1-2 clicks away.

Keep it current or don't bother

One of the concerns the Dashboard is designed to address is the "always backward looking" reporting mechanisms we traditionally used. As an AMS we measured and reported lots of things including OSR data, nKPI data, ACIR data, but it was always periodical and always backward looking. And while we always met our reporting obligations, this data was not all that useful for service delivery or strategic planning, as often it wasn't representative of or relevant to our current situation.

So now we collect and report all key metrics monthly instead of six monthly or quarterly.

A key benefit of the Dashboard is we no longer get stressed or have to shut down the clinic to prepare our funding based performance reporting. A task that used to take two people a week to do - finding and preparing six months' worth of data for a report - is now done by one person in one day.

And it's less stressful for another reason. We know the data is accurate. Another issue faced by Goondir in the days before the Dashboard is the completeness, accuracy and veracity of operational data. Now, with monthly data collections and reporting we are more confident that the data is accurate - not that we don't still have issues with data entry consistency and data cleansing!

What doesn't work

The flip side of these insights as to why our Dashboard works is a list of mistakes to avoid. Here are six.

Starting off with too much complexity

It's easy to get overly ambitious and want to provide highly detailed, real-time dashboards covering every business challenge and offering lots of drill-down options. We have learnt to not spend weeks or months coming up with a "perfect" dashboard. Instead, we work in short cycles of prototype, test, and adjust. Our cycle is monthly.

Using metrics no one understands

The way you show and label metrics might make sense to you, but are they meaningful to others? Your metrics can be so familiar to you that you don't take the step to validate them with others.

Cluttering the dashboard with low-value graphics

Resist the temptation to make your dashboard too flashy or over-designed, with gauge-like graphics and widgets. Keep your dashboard simple in its visual appeal.

Waiting for complex technology

There are programs and systems out there that promise to do it all and do it instantly. And they don't do it all ... or at least they don't do exactly what you want, and they can be expensive. Our Dashboard is just an Excel Spreadsheet with external links to data sources, a few macros and a bit of VBA code. It didn't cost us anything extra.

Underestimating the need to maintain the dashboard

Rolling out a dashboard is not a once-and-done exercise. If you don't check in with your audience to make sure the metrics are relevant and the data is updated, it won't get used. Goondir's Dashboard changes every month, new or different datasets in response to new questions being asked and new, clearer ways of presenting the data.

Failing to match metrics to the goal

Dashboards are stronger when they connect to larger objectives. Don't fall into the trap of creating dashboards that don't reflect how key metrics impact the success of the organization as a whole.

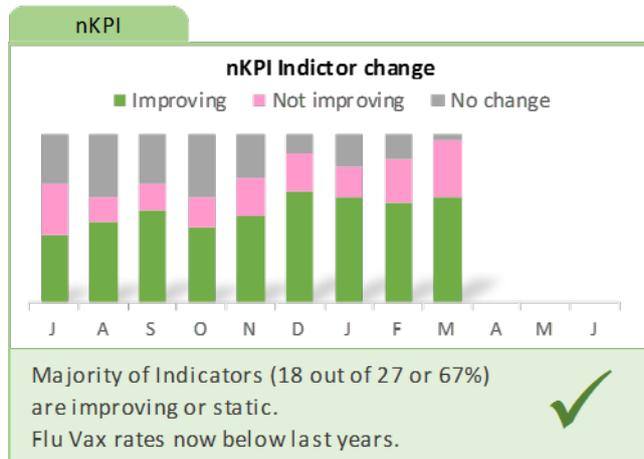
How data helps close the gap

All of this data has to serve a purpose. In Goondir's case, this purpose is to provide services that improve the health outcomes we achieve for our patients and our community. What follows is a step by step example of how we can use the data in the dashboard to inform service delivery.

We start with the nKPI data (Figure 5).

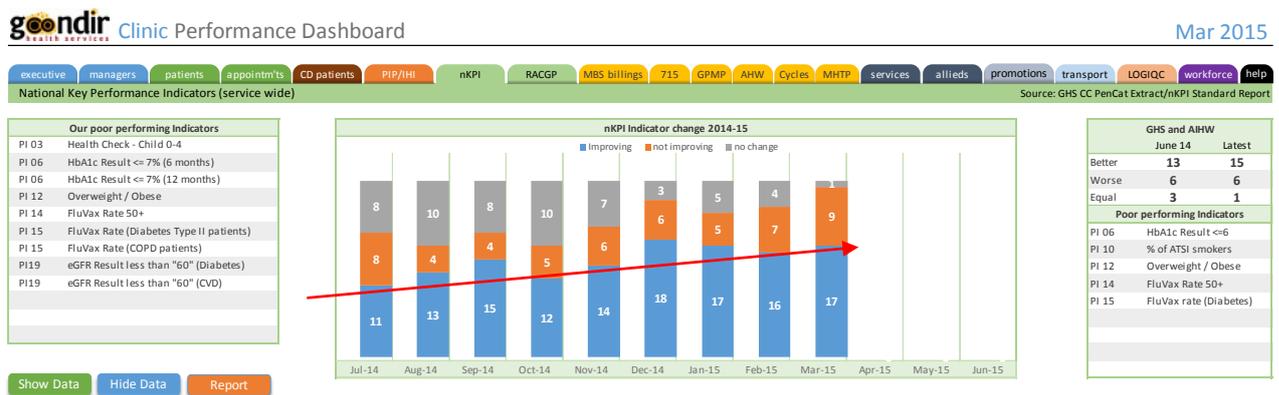
These are our 27 reportable key performance indicators. All AMS in Australia report on these to the Australian Institute of Health and Welfare, who periodically produce reports showing how we are closing, or not closing the gap nationally.

Figure 5 nKPI data



When we drill down to the detailed data view (Figure 6) we can see that the trend is positive. Over time (this financial year) the number of improving indicators is steadily increasing (as indicated by the arrow).

Figure 6: nKPI Detailed data



The Dashboard also identifies which of our indicators - locally (the left hand list) and nationally (the right hand list) - are performing poorly. With this information we can go back into the patient records, identify exactly those patients who are making our numbers go down ... extract the patients as a list ... and ask the clinicians to recall them for follow-up.

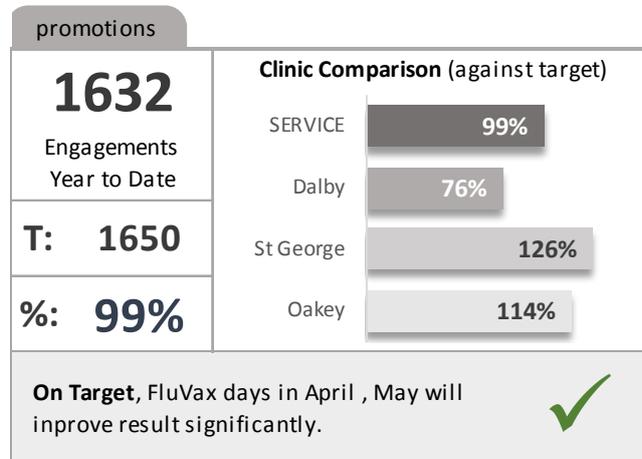
Some of our poor performing indicators relate to healthy lifestyle choices being made by our patients - being overweight, smoking, high HbA1c rates. So to address these issues we need to look at two aspects of our service delivery. Firstly, our health promotions data, to make sure we are delivering the right message to the right people, and secondly, our service data, to make sure our chronic disease patients are getting appropriate, targeted advice and support to improve their lifestyle choices.

Looking at health promotions through the dashboard

At the top level (Figure 7) we see that we are on track with the number of promotions and even the number of people we are engaging with - 99% of target achieved, year to date.

But a deeper look (Figure 8) at data mapped on the detailed data tab of the Dashboard shows that only 8% of our promotions have had a chronic disease focus.

Figure 7: Health Promotions data



So to address this issue we could run some chronic disease specific promotions around obesity, smoking and diet for diabetics. The dashboard shows us that even though we are meeting our targets, we are not as well targeted with our promotions as we could be.

But how do we focus these promotional activities to reach the right people?

Figure 8: Health Promotions detailed data

Events by Program Analysis			
Program	Number		%
Chronic Disease	123		8%
Immunisation	356		22%
SEWB	126		8%
Specific Issues	236		14%
Children's Health	293		18%
General	498		31%

Chronic disease prevalence rates

One Dashboard dataset that can help is our mapping of the prevalence of key chronic diseases in our communities. This data (Figure 9) shows us that the prevalence rate for Type II Diabetes amongst our patients is highest in Dirranbandi, followed by Chinchilla and Tara.

Figure 9: Chronic Disease Prevalence Rates

Prevalence of Key Chronic Diseases per ATSI community				
	D Type II	COPD	CVD	MH
Dalby	6.7%	2.7%	3.8%	13.0%
St George	8.5%	6.3%	5.9%	8.1%
Oakey	9.3%	3.6%	5.3%	6.2%
Dirranbandi	29.4%	8.8%	8.8%	2.9%
Chinchilla	12.1%	7.6%	12.1%	6.1%
Miles	5.9%	0.0%	0.0%	5.9%
Tara	10.0%	5.7%	4.3%	15.7%

The 'redder' the cell, the higher the prevalence of the chronic disease.
The 'greener' the cell, the lower the prevalence rate.

If we were to focus health promotion activities in these three communities we may make a difference, and spending limited resources in these communities makes sense.

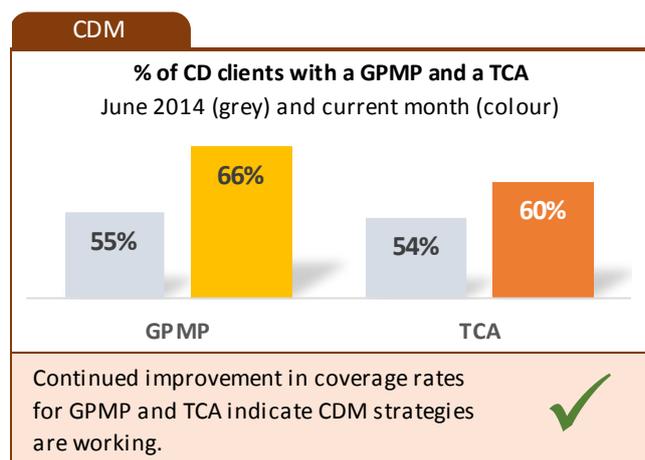
Now, thanks to the Dashboard, we know where to focus our health promotion activities to gain the best outcomes, but we still have current patients with high HbA1c numbers and patients who are overweight and smoking. To look at why this might be we now look at our Chronic Disease data.

Chronic disease patients

This is mapped in the Dashboard and at the top level we see that on our key indicators we are doing okay - the proportion of patients with a current GPMP and a TCA are increasing (Figure 10).

These chronic disease management plans and team care arrangements support patients with chronic diseases to maintain a better diet, to undertake more exercise, to stop smoking.

Figure 10: CD Patient data



But the results aren't there in the nKPIs. The patients represented in these graphs have their GPMP and allied health appointments, but they are still overweight, eating poorly and still smoking. There must be another cause.

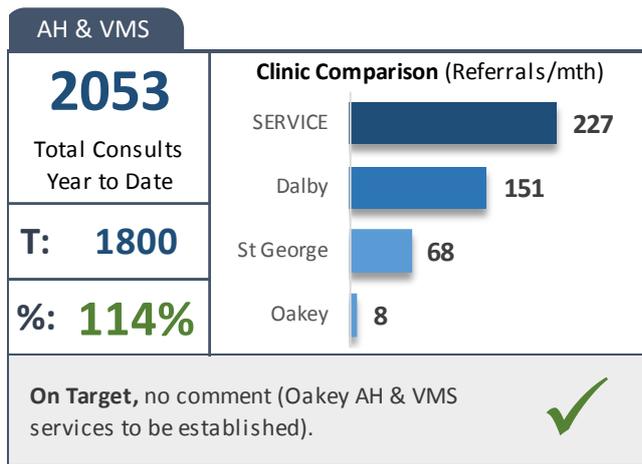
Who delivers our chronic disease support?

In a mainstream medical service most chronic disease support is delivered by allied health professionals. This is the medical model supported by Medicare, who fund doctor referrals to allied health professionals. If we look at our data on allied health referrals (Figure 11) we see that we are, again, doing okay.

In fact we are exceeding our targets for the number of referrals. But still our patients are not improving their health.

What else could we be doing?

Figure 11: Allied Health Referrals



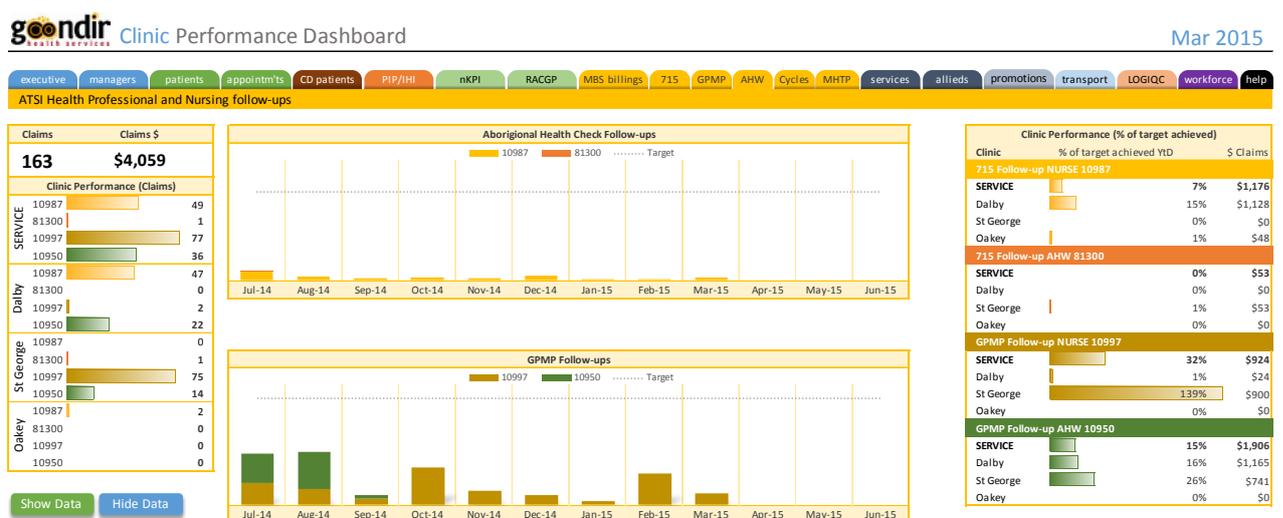
Aboriginal Health Workers

To answer this question we can ask if we are making the most of our Aboriginal Health Workers. Are they the patient's advocate? Are they effectively supporting Aboriginal and Torres Strait Islander patients to improve their health?

And more specifically, how many Aboriginal Health Worker follow-up Medicare Items have been claimed? These Medicare Items are designed to support Indigenous patients through referral to indigenous health workers, on the basis that an Indigenous patient is likely to listen to someone who is more like them.

This data is mapped in the Dashboard and one look tells the story, and demonstrates the power of the dashboard (Figure 12).

Figure 12: AHW and Nursing follow-ups



The visual impact of there being little or no data shows immediately we have an issue to address.

And it's not about having lazy or ineffective Aboriginal Health Workers. It's about our clinical systems. How we perhaps are referring our Indigenous patients to young, thin and very white exercise psychologists and dieticians and wondering why they are not taking the advice being offered and getting better.

Conclusion

The Clinic Performance Dashboard was developed to overcome service coordination and delivery challenges in a multidisciplinary clinical setting working with 1,900 Aboriginal and Torres Strait Islander patients, many diagnosed with multiple chronic diseases.

The Dashboard helps management define what is important, educates staff about the things that matter, sets goals and expectations for clinics, teams and individuals, helps the executive sleep at night because they know what's going on, encourages action to be taken sooner rather than later to address issues and problems, communicates progress and success. Most importantly, the Dashboard provides a "place", a common interface for interacting with and analysing important organisational data, and places the patient and the community at the centre of all health services activities.

Policy recommendations

1. An efficient data reporting system is integral to planning, delivering, monitoring and evaluating primary health care services, particularly those that proactively aim to close the gap.
2. Real time data management and reporting is required in primary health care services to ensure operational targets are achieved; operations are continually improved; and quality, safety and risk are managed.

Presenter

Garry Hansford is the Service Planning Manager at Goondir Health Services, an Aboriginal Community Controlled Health Service (ACCHS) providing primary health care to the local Aboriginal and Torres Strait Islander (ATSI) communities from Oakey in the south-east of Queensland to St George in the south-west of Queensland. Goondir has five full-time doctors working from three full-time clinics and a mobile outreach facility, over 30 clinical staff and a client base of almost 2,000 ATSI patients. As the Service Planning Manager, Garry has developed and implemented a reporting system that provides clinicians, managers and the executive with up-to-date data that allow quick evaluations and informed clinical and management decisions to be made. Where once the organisation relied on multiple data sources and anecdotal advice to guide service planning, the reporting system, called The Dashboard now provides clear evidence which can be accessed by staff, managers and the executive to inform decision-making that can lead to effective service delivery and improved health outcomes. Garry's background lies in community engagement and project management, and while he is not a clinician, he has worked in the health sector at both strategic and operational levels since 2009 and on the Darling Downs since 1995. His passion, sadly, is data, and his previous achievements include the publication of the first Darling Downs and South West Queensland Health Atlas, a project undertaken while he was the data and Planning Manager for the Darling Downs South West Queensland Medicare Local.