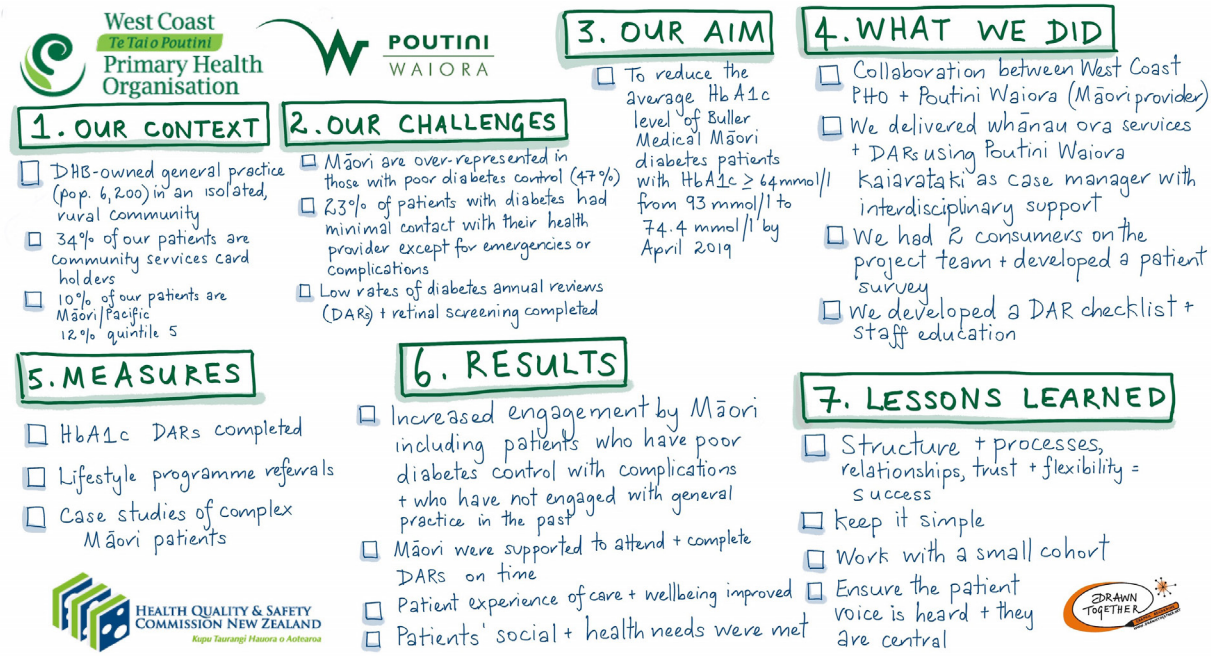
Primary care improvement case study

West Coast Primary Health Organisation: Improving access to care and the journey for Māori and whānau with diabetes

Number 4 in a series of 18

Project overview



Background and context

In 2018 the West Coast Primary Health Organisation (West Coast PHO) completed a Whakakotahi project in collaboration with Buller Health Medical Centre (Buller Medical) and Poutini Waiora (the Māori health care and social services provider for the West Coast). The project focused on improving outcomes for Buller Medical's Māori and Pacific patients with diabetes.

Buller Health Medical Centre is a general practice in Westport that is owned by the West Coast District Health Board (DHB) and works under the Very Low Cost Access (VLCA) scheme.

Among its practice population of about 6,200 patients:

- about a third (2,106 patients or 34 percent) are community service card holders
- 1,315 (22 percent) are high-need patients
- 614 (10 percent) are Māori or Pacific patients
- 744 (12 percent) are classified as quintile 5, meaning they are among the 20 percent of the population that is most socioeconomically deprived.

The patients in this practice reflect typical characteristics of the West Coast population. Compared with the national population as a whole, they:

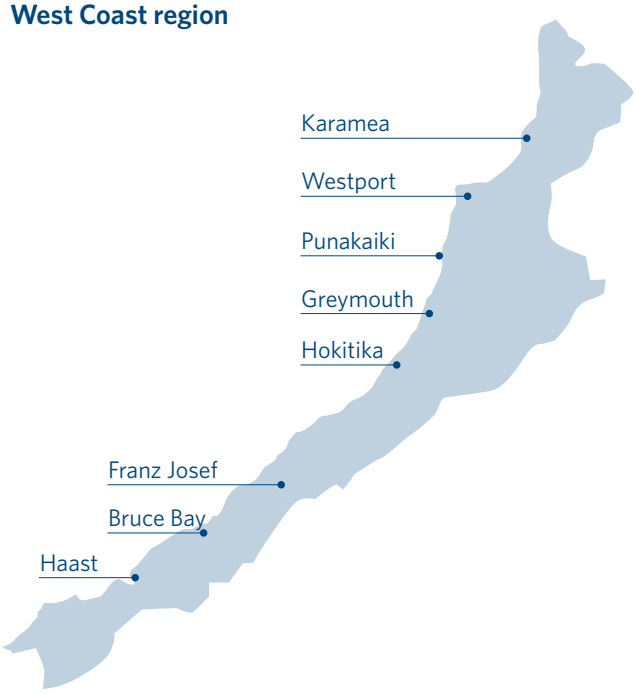
- tend to be older
- are less likely to be Māori or Pacific patients
- experience poverty, poor literacy, unemployment, isolation and difficulties accessing health care
- travel significant distances to reach main centres and health services
- have a high level of disease burden
- experience a transient health care workforce.

Poutini Waiora has been working in partnership with the practice for several years now, seeing its own Māori clients and some from the practice. Most of the holistic care it provides is mobile: it delivers community-based nursing, social services and counselling in whānau homes or other appropriate venues. Poutini Waiora can also provide outreach services to those who are not engaging with the health care system, in order to help improve their access to health care.

This project uses a whānau ora model to provide whatever supports the patient needs to help them manage their conditions.

The overall goal was to achieve equity for Māori in terms of their access to diabetes services and health outcomes.

West Coast region



Diagnosing the problem

1 Problem statement:

A review of West Coast diabetes care against the national standards identified areas for improvement:

- lower than target diabetes annual review (DAR) rates (77 percent)
- inequity among ethnic groups in their engagement with health care (82 percent Māori and 65 percent Indian–Asian patients are engaged)
- a significant number of people (109 patients or 35 percent) with poor diabetes control (HbA1c > 64 mmol/L).

2 How do you know that this is a problem?

Buller Medical baseline data analysis indicated inequities based on ethnicity.

- In total, 312 patients in the practice population had diabetes. Of these, 31 were Māori and one was a Pacific patient.
- Among the total diabetes population, 35 percent had poor diabetes control (defined as HbA1c > 64 mmol/L), at an average of 82.7 mmol/L. In contrast, 47 percent of Māori and Pacific patients had poor diabetes control, at an average of 93 mmol/L.
- Low DAR rates were evident in 76 percent of the total diabetes population, compared with 68 percent of Māori and 73 percent of Indian-Asian patients.
- In total, 24 percent of the total diabetes population was overdue for their DAR, compared with 32 percent of Māori.
- While a significant number of the total diabetes population (35 percent) had poor diabetes control, Māori were over-represented (47 percent of Māori diabetes population).
- Data indicated suboptimal clinical care among the Māori diabetes population: 47 percent elevated HbA1c, 67 percent raised cholesterol – 58 percent on statins; 60 percent elevated blood pressure, 45 percent elevated urine creatinine – 63 percent appropriately medicated.

The (SMART) aim

To reduce the average HbA1c level of Māori patients at Buller Medical with diabetes and an HbA1c above 64 mmol/L by 20 percent – meaning a reduction from 93 mmol/L to 74.4 mmol/L on average – by April 2019.

The measures:

Outcome measures:

- Average HbA1c of total and Māori diabetes population with HbA1c > 64mmol/L
- Number of diabetes annual reviews completed for total and Māori diabetes population.

Process measures:

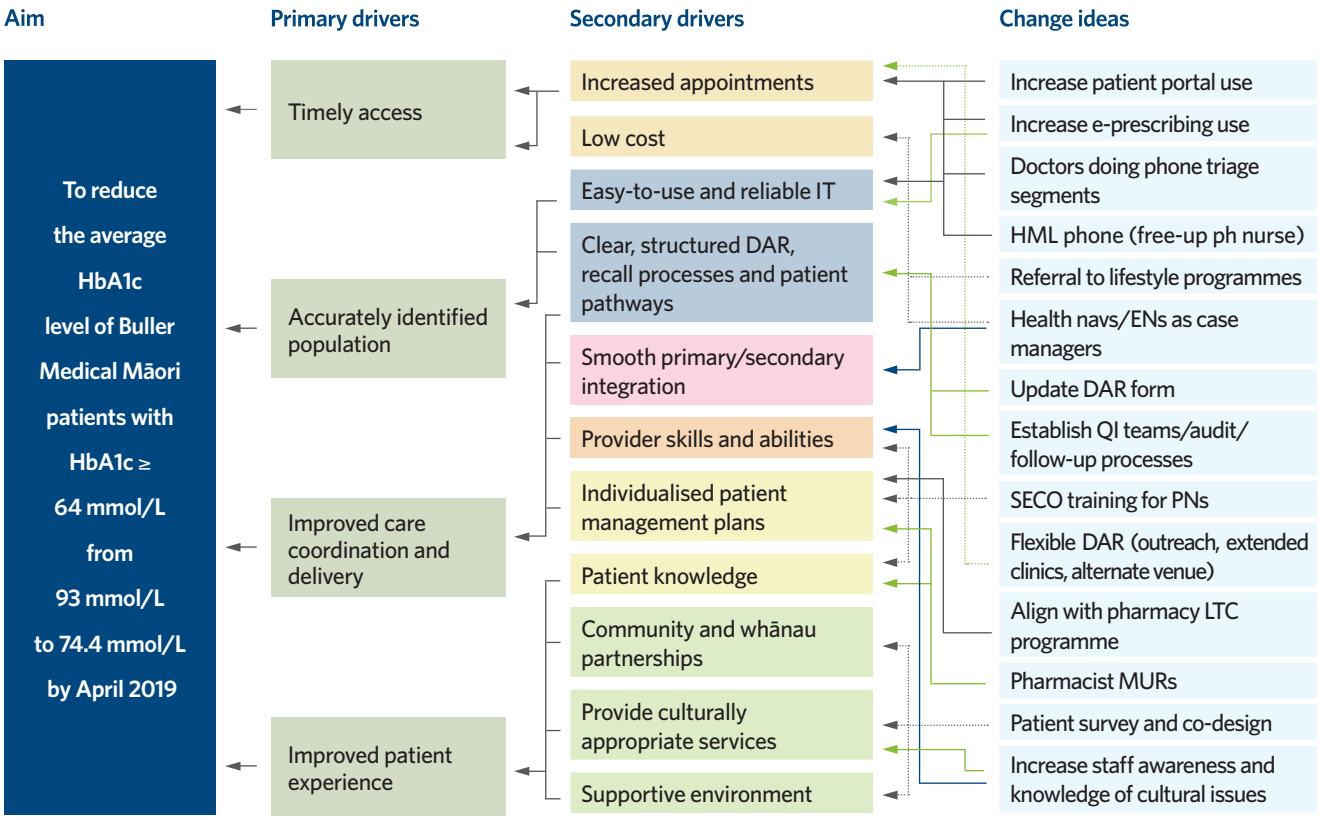
- Overdue diabetes annual reviews
- Referrals to lifestyle education classes
- Attendance at lifestyle education classes
- Wraparound services and/or referrals generated.

Final evolution of the project has led to additional measures:

- Access to general practitioner (GP) in the last 18 months before June 2019 compared with access after June 2019
- Qualitative data – patient experience of care.

Drivers of change

Driver diagram



The primary drivers are all chosen from the themes in the affinity diagram (see 'What did we do?' section below). They are about improved access, integration and patient experience of care – which they receive on time.

The secondary drivers are some of the identified triggers or actions that are needed to achieve the primary drivers. The change ideas were ideas or initiatives that could be implemented to drive change towards the secondary drivers. In the next section, we describe the change ideas that we have tested and implemented so far. The use of health navigators or enrolled nurses as case managers was the change idea that had the most significant impact on the success of the project, which we adapted for the kaiarataki (health navigator) and Poutini Waiora to implement.

Note	
DAR	Diabetes annual review
ENs	Enrolled nurses
Health navs	Health navigators
HML	Homecare Medical
LTC	Long-term condition
MURs	Medicines use reviews
ph nurse	Phone nurse
QI	Quality improvement

What did we do?

The first thing we did was collect baseline data. To gain the voice of the consumer, we surveyed 34 randomly selected patients. This worked well and they were keen to be involved.

Poutini Waiora provided weekly diabetes clinics at Buller Medical for Māori and Pacific patients. The kaiarataki takes a lead role in the patients' care by measuring height, weight and blood pressure, conducting foot checks and assessing what other support would be useful. The kaupapa Māori nurse provides diabetes and other clinical care, with additional support from Buller Medical's diabetes nurse specialist and a GP as needed.

Were there any ethical considerations to be aware of?

One ethical consideration involved the practice consenting to share its patient register information with Poutini Waiora. The existing partnership with Poutini Waiora working alongside the practice team has enabled Poutini Waiora to provide outreach services to Māori who have been having difficulty accessing services. Patients are able to consent or decline to have their information shared or to work with Poutini Waiora.

The team

Pauline Ansley – clinical manager, West Coast PHO and project lead (pictured)
Fiona Menzies – diabetes nurse specialist
Dianna MacLean – kaupapa Māori nurse (pictured)
Yvonne Stephens – kaiarataki (pictured)
Dr Stu Mologne – GP
Yvonne Brazil – consumer (pictured).

Other acknowledgements:

Dr Andre Bonny – West Coast PHO medical officer
Lynley Pratt – practice nurse
Deb Biddulph – enrolled nurse
Deb Weaver – enrolled nurse
Dr Greville Wood – GP
Whakakotahi diabetes project team
Jane Cullen – Health Quality & Safety Commission.

Organisations involved:

- West Coast PHO
- Poutini Waiora
- Patients/consumers
- West Coast DHB.

Skill sets on the team:

- Quality improvement advisor and PHO clinical manager
- Frontline staff
- GPs
- Practice nurses
- Kaiarataki
- Kaupapa Māori nurse
- Diabetes nurse specialist.

Teamwork lessons or tips: Provide project staff with protected time:

- to meet and work on the project
- for weekly case reviews.

What aspects of the project were co-designed with consumers?

Capturing the patient experience

- Consumers were involved from the beginning of the project to inform us about their experience and their needs.
- Consumers attended the Whakakotahi regional stakeholder meeting. Two were local diabetic patients, including one who is the chair of a local consumer working group.
- Two Māori consumers were on the project team and involved in plan–do–study–act cycles (PDSAs).
- We conducted a survey asking 34 patients about their DAR experience at the beginning of the project.
- We continued to gather patient feedback after the intervention.

In addition:

- our project team included a Māori consumer, who attended regular project team meetings and tested PDSAs
- we surveyed patients receiving the service to get their feedback after intervention. They told us they wanted more information on diet, medication, exercise, foot care and diabetes.

As we have dietitians and lifestyle programmes available and did some work on improving referrals to these, we chose medications as a starting point among the subjects patients wanted information on and investigated various sources of medication information available. We tested these with the Māori consumer on our project team, including from the perspective of health literacy. The consumer's feedback led us to choose the Health Navigator New Zealand information to use for patient education at annual reviews (and as needed).

What QI tools did you use, that you would recommend?

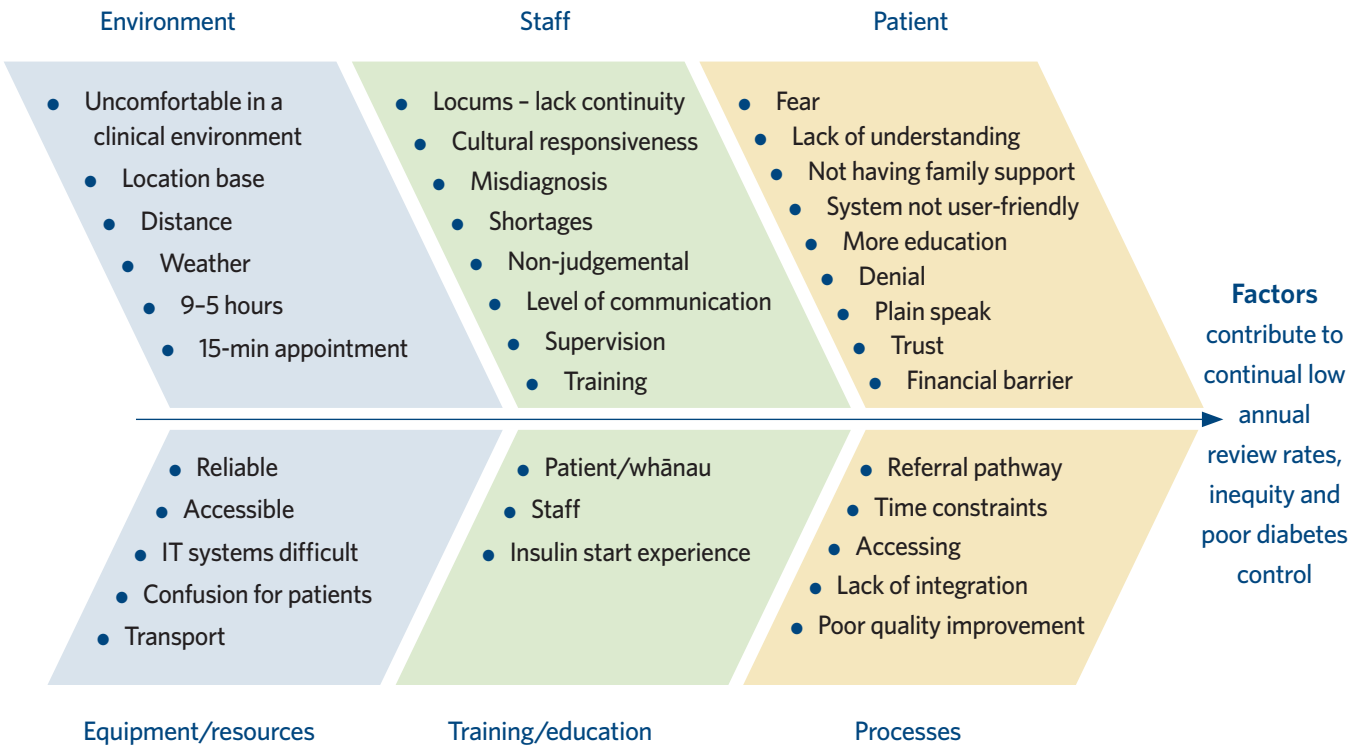
- Team including multidisciplinary team members and patients
- Experience-based co-design
- Fishbone (Ishikawa) cause and effect diagram
- Affinity diagram
- Driver diagram
- Run charts

At a stakeholder workshop, we used the following quality improvement tools to help identify the problem.

Diagnosing the problem: Fishbone cause and effect diagram

To develop this fishbone cause and effect diagram, workshop participants identified factors that contribute to the continuing trends of low annual review rates, inequity and poor diabetes control.

Potential causes



Using the fishbone helped us to identify the factors contributing to the poor DAR rate.

Affinity diagram

We used the factors identified in our fishbone to group together in an affinity diagram under the following themes.

- **Improved care coordination and delivery**
  - Wraparound services
  - Quality of appointment
- **Timely access**
  - DARs completed on time
- **Improved patient experience and relationships**
  - Continuity of care with the same clinician
  - Education packages provided
  - Lifestyle opportunities discussed and referred
- **Accurately identified population.**

Finally, we used the affinity diagram to develop our primary drivers for our driver diagram and theory of change.

What changes did you test that worked?

- Improved DAR form (see Appendix 2)
- E-prescribing (still a work in progress)
- Change ideas – see below.

Change idea: Diabetes medication patient information leaflets

For more details, see 'What aspects of the project were co-designed with consumers?' above.

Change ideas related to increasing lifestyle programme referrals

- Staff received education on the referrals programme and how to refer.
- We provided a laminated prompt sheet of the lifestyle programmes and their criteria to attach to clinicians' computers and make available throughout the hospital departments.
- There were several dietetic programmes available which were previously selected by staff. We changed this so the referral went to the dietician who met with the client to choose the programme they preferred.
- The PHO updated and improved its website information about the lifestyle programmes and added a self-referral form to make the programmes more accessible. This change saw an increase in the number of self-referrals to lifestyle programmes.
- We offered referrals to Living Well with Diabetes courses at retinal screening clinics. The PHO retinal screening service completes retinal screening every two years for 92–95 percent of West Coasters with diabetes. The screening visits provided a prime opportunity to offer this course, achieving 30 referrals at one clinic. (Clinics only occur in Buller twice a year.)

Change idea: Increase the availability and visibility of promotional materials at the practice

Buller Medical displayed promotional materials prominently as a way of encouraging patients to sign up for a lifestyle programme.

Change idea: Poutini Waiora DAR model

The major change idea that worked well was to focus on the Māori cohort of patients with diabetes and working with Poutini Waiora to deliver wraparound services and diabetes annual reviews to those who consented to this. This model represents a new approach to delivering the DAR for Māori. It draws largely on the services of the kaiarataki to engage with Māori patients, support their access to the general practice team, provide elements of the DAR and help patients access or deliver appropriate follow-up care. Previously nurses and GPs had delivered all diabetes care.

For a detailed description of the model, see Appendix 3.

Change idea: Health literacy and diabetes SECO training

- From this project we began safe, effective clinical outcomes (SECO) training on diabetes and health literacy for practice nurses and continue to use it.
- Spread: We completed SECO clinics on diabetes and other long-term condition (LTC) cases with Greymouth Medical Centre nurses and two other general practices. For four years we have been conducting specialist SECO clinics for rural nurses, which cover complex cases, including LTCs and diabetes.

Highlights

The main highlights of this project were that it addressed equity and drew a positive response from patients.

We found a model that works for Māori. The Poutini Waiora model of care involves providing wraparound support to help Māori with diabetes deal with complex life circumstances that impact on their health, wellbeing and ability to self-manage, and in that way to improve their overall outcomes. With this model, we have been able to engage people with complex personal backgrounds who have poor diabetes control with complications and who typically don't access services (except for acute or emergency health care).

Narrative patient feedback has been positive. These patients appreciate the wraparound support, which builds relationship and trust and allows flexibility and outreach home visits where needed. The positive feedback from patients has been inspirational for the staff providing the service.

Another highlight that contributed to the success of the project was engaging a GP for the weekly case reviews and oversight of patient care.

Key challenges during the project

The conventional model of long-term care management in general practice, although serviceable for some people, is not as effective as it could be due to the many influences that make it more difficult to deliver planned, proactive care in a sustained way. These influences include:

- limits to data collection and interpretation when the practice is already at capacity
- limited access to patient information
- difficulties with finding time for meetings and other aspects of the project
- limited sample size, which in turn limits the strength of the evaluation
- ongoing funding issues. As the work continues and expands to other long-term conditions and other centres, resourcing for time and the workforce has been an issue. We have put this issue to the Alliance Leadership Team, which has led to the adoption of the model of care as a strategy for addressing equity and long-term conditions, with support to resource this work.

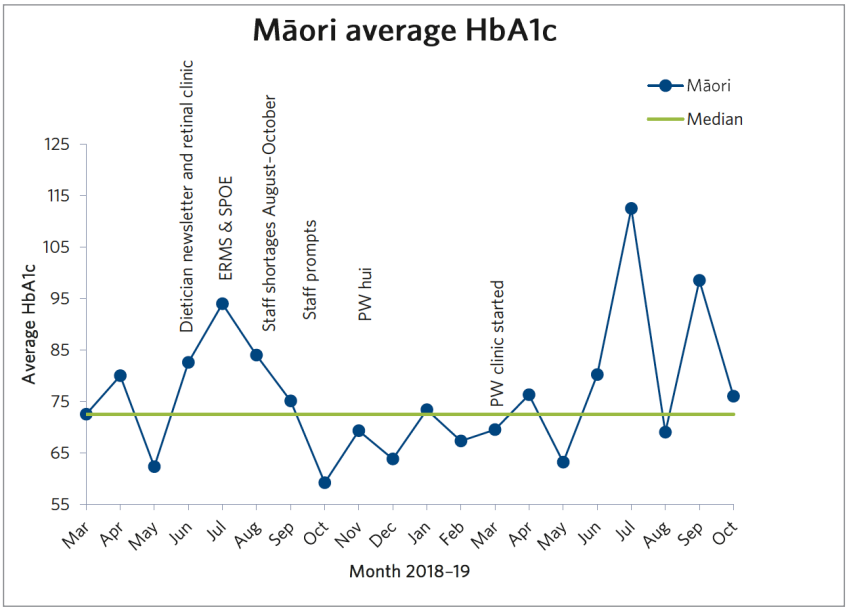
The results

1 What outcome measures improved?

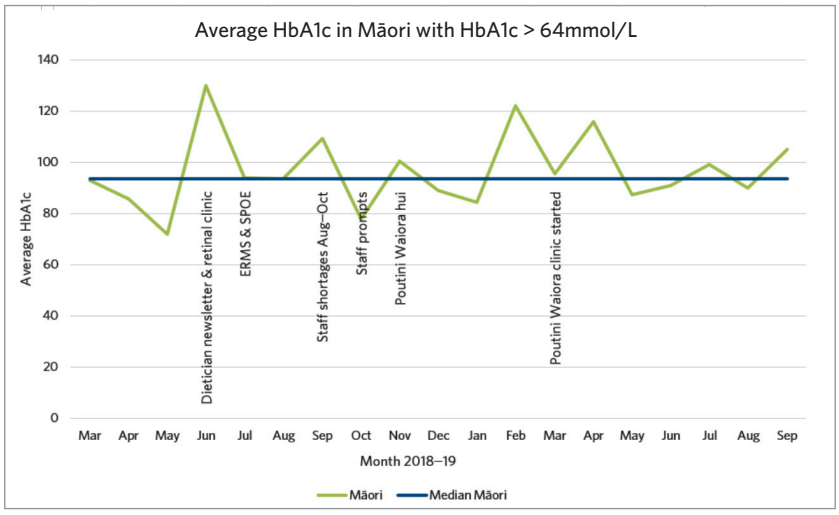
The average HbA1c measurement was initially from the 15 Māori with an HbA1c above 64 mmol/L. Later we expanded our work to include a cohort of 32 patients with diabetes, with a focus on Māori (31 Māori and 1 Pacific patient were involved), and monitored all patients within this cohort, including those with HbA1c above 64 mmol/L. The results from both the larger group (full cohort) and the group with poor diabetes control are presented here for comparison.

Among the full cohort of Māori with diabetes, the median HbA1c at the start of the project was 72.5 mmol/L.

Note: The result for each month is usually based on monitoring of just 1 to 12 people, so one person with a poor HbA1c greatly affects the result.



Note	
ERMS	Electronic record management system
PW	Poutini Waiora
SPOE	Single point of entry



Note	
ERMS	Electronic record management system
PW	Poutini Waiora
SPOE	Single point of entry

Among the group of Māori with poor diabetes control:

- the median was 93.6 mmol/L at the start of the project
- the goal was 74.6 mmol/L (a reduction of 20 percent).

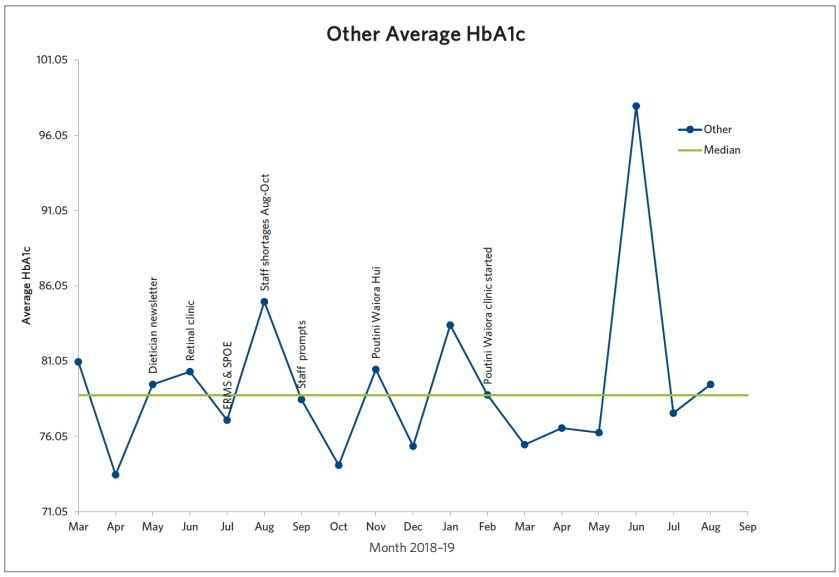
Note: The result for each month is usually based on monitoring of just 1 to 6 people so one person's measurement can greatly affect the results.

We will keep monitoring as HbA1c changes slowly. The goal is to reduce the equity gap.

2 What equity measures improved?

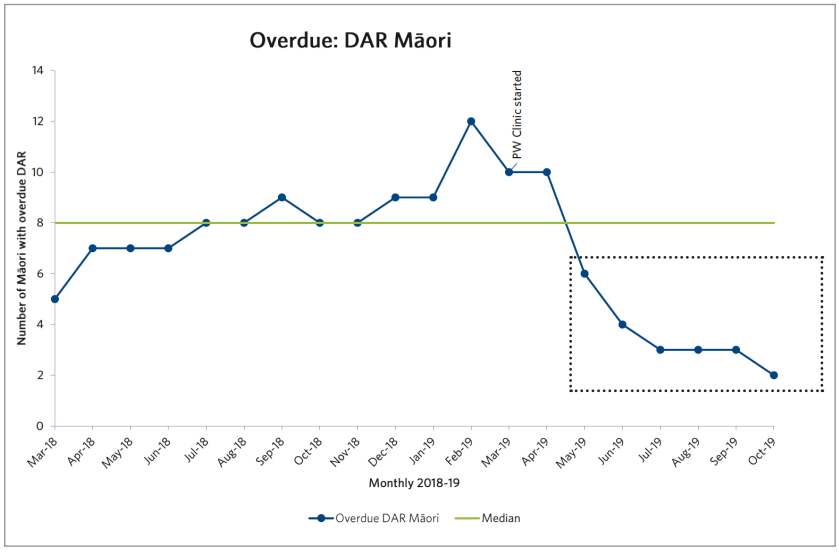
Among the 'Other' (non-Māori) population:

- the median HbA1c was 79 mmol/L at the start of the project
- the original goal was to reduce HbA1c from 83 to 74 mmol/L (a 10 percent reduction).



Note	
ERMS	Electronic record management system
SPOE	Single point of entry

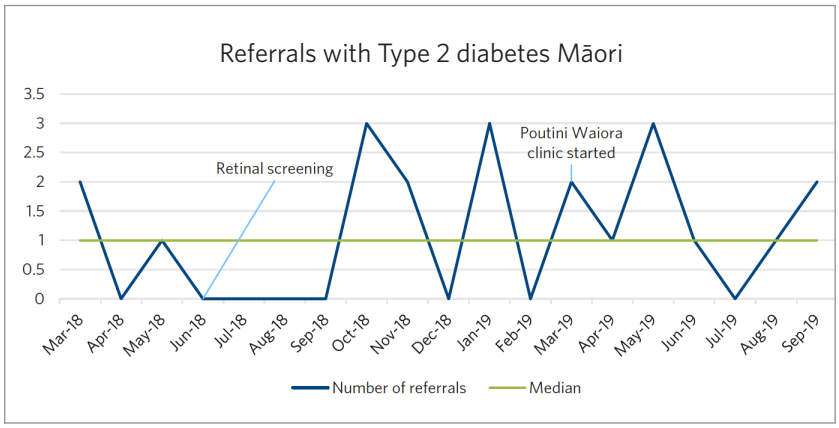
Another measure of equity is the number of overdue DARs for the cohort of 32 patients in this project. The next graph shows an improvement, with the number of overdue DARs falling from 10 to 2 since the clinic started (six data points above or below the median signal a 'shift').



Note	
DAR	Diabetes annual review
PW	Poutini Waiora

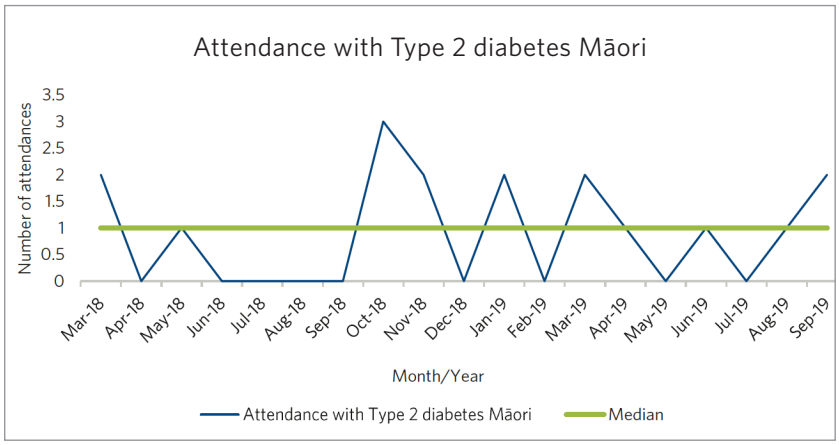
3 What process measures improved?

Although the numbers are small, referrals for lifestyle change for Māori with type 2 diabetes have become more consistent and increased from 8 in 2018 to 12 in 2019.



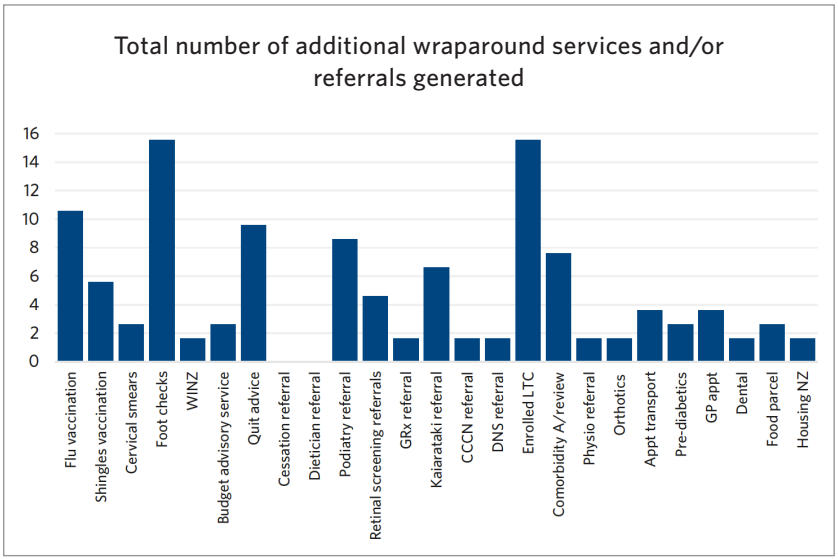
The graph below shows Māori with type 2 diabetes are generally attending the lifestyle advice sessions provided.

Note: No dietitian was available to provide a session in July.



The next graph shows the number of different wraparound services patients accessed and/or received referrals to. It is based on data for 15 people who have been seen to date out of the cohort of 32 Māori and Pacific patients with diabetes.

Some of these indicators are under-reported such as GP appointments, Work and Income, food parcels. Brief advice, cessation referrals, dietitian referrals and referrals to the Green Prescription exercise programme are offered and declined, or under-reported.



Note	
Appt	Appointment
CCCN	Complex Clinical Care Network
DNS	Diabetes nurse specialist
GP appt	General practitioner appointment
GRx	Green Prescription
WINZ	Work and Income

Balancing measures were not established although patient satisfaction was self-reported in the patient surveys.

Qualitative narrative data

The kaiarataki is gathering qualitative data. See the case studies in Appendix 6.

4. Challenges

Challenges we faced during the project included:

- difficulties with maintaining momentum (through lack of protected time and practice engagement barriers)
- funding and resourcing the model
- being unable to give protected time for practice staff to work on the project
- ongoing staff shortages (especially during winter crisis) and turnover of long-term nursing workforce
- gaining sponsor and manager support and senior staff turnover – three managers during the project
- achieving buy-in from wider team
- IT issues – just collecting data was a challenge.

This project would not have been possible without the involvement of Poutini Waiora and its model of care. Because of the practice environment and constraints, the practice itself was unable to test any real change to models of care.

5 Is there evidence that the knowledge of quality improvement science in the team or in the wider organisation improved?

Through this project, the project team leader has gained much greater knowledge of quality improvement science and has been able to apply that knowledge to other projects and teach workstream members and other teams to increase awareness of quality improvement methods. Team members have been able to apply their learning in working with PDSAs.

6. Successes during the project

- **Poutini Waiora saved the day!**
- **Engaging GP for weekly case reviews**
- Team inspired
- Positive patient feedback
- **Continuity of care**, holistic wraparound support improving **patient wellbeing and independence**
- Engaged some difficult-to-engage patients
- **Reduction in overdue DARs**
- **Spread** of the model to Reefton and Greymouth (see 'Post-project implementation' below for more details)
- **Spread** of the model to other LTCs
- Alliance Leadership Team support for the model for high-need groups and addressing diabetes in workstreams
- Support from pharmacy management, DHB, general practices, other health professionals and patients.

Highlights are the single point of entry for lifestyle referrals (to dietitian and Green Prescription) and the medication leaflets. Here we acknowledge the Health Navigator website (www.healthnavigator.org.nz/medicines) and the kaiarataki as case lead, in contrast to the usual general practice model of service delivery.

Post-project implementation

1. **Have the successful changes been embedded into day-to-day practice? How have you managed this?**
   - Continuing work on staff level of engagement, spreading and sustaining the changes
   - Ongoing work – system level and process changes
   - Ongoing funding issues relating to resource for workforce capacity
   - The project has spread to Greymouth, where a team is undertaking a highly successful project adapted from this work. The team consists of a pharmacist, GP, nurse practitioner, kaupapa Māori nurse and kaiarataki, as well as a diabetes nurse specialist when needed. The nurse practitioner reports **all** patients who have been seen are now regularly engaging with their GP and HbA1c has improved by 18 percent on average among all patients seen.
2. **How did you communicate your progress and results to others?**
   - Regular updates to the PHO clinical governance/board, local diabetes team
   - Presentation to the Alliance Leadership Team
   - Communication packages to the general practice team and Buller workstreams
   - Presentation at Health Quality & Safety Commission Quality Improvement Scientific Symposium 2019.

Future direction

Enablers

- Provide health navigator and other roles with appropriate training and enough allocated time for consultations to deliver appropriate services.
- Allocate time for GP (or nurse practitioner or clinical nurse specialist) and nurse to conduct weekly case reviews.
- Investigate the potential for including a pharmacist in the multidisciplinary team case review. When a pharmacist was part of the LTC management team's weekly reviews for medication and clinical services, Greymouth saw a reduction in polypharmacy.
- Explore a telehealth role.
- Investigate options and ways of collaborating to support equity and increase the number of Māori in the workforce of the practice, PHO and/or Poutini Waiora.
- Explore the potential for developing a qualification and career pathway for health navigator role (Health Workforce New Zealand).
- Increase specialist-level support (as current level is insufficient).
- Gain support from clinical board, Alliance Leadership Team and Alliance Support Group for improving diabetes and LTC management services throughout the sector.

Next steps

- In seeking support for addressing the gaps in the 20 diabetes standards review, we made a presentation to the Alliance Leadership Team on 27 June 2019. Findings on the diabetes standards self-assessment apply equally to other disease states and long-term conditions too.
- We asked the Alliance Leadership Team to endorse the expansion of the model to other LTCs; and to support training (as health coaches) and use of health navigator, kaiarataki and health care assistant roles to lead the LTC model, targeting high-need, complex conditions and others who need this level of support.
- Focus on wraparound services, social support and lifestyle/behaviour change using best practice and techniques (for example, acceptance and commitment therapy, motivational interviewing techniques, health literacy).

- Focus on the structure around the programme, which has proven to work with a previous mental health/LTC project and Whakakotahi.
- Undertake modelling (calculations and number crunching) based on full-time equivalent staff and throughput to see if failures stack up against successes. Patients should be no worse off under the new model than the conventional model, which is not working as well as it could.
- You can't measure what didn't happen – for example, no myocardial infarction, no complication occurred.
- Evaluate the effect of having a nurse practitioner or clinical nurse specialist rather than GP as case lead.
- Include prediabetes at Buller Medical (completed and sustained).
- Expand to the private practice in Westport, expand to Māori with all LTCs (completed and sustained).
- Expand to Greymouth Medical (completed and sustained).
- Recruit nurses specialising in LTCs.
- Develop a health coach (navigator) qualification through Health Workforce New Zealand.
- Provide training in acceptance and commitment therapy, motivational interviewing and health literacy.
- Given about 13.5 percent of the PHO population are currently enrolled in its LTC programme, consider ways to extend its reach as LTCs increase among the West Coast population (with about 20 percent of people predicted to experience them in the future).

Summary and discussion

Benefits of this model

- This model supports LEAN thinking. That is, it enables best use of physical and workforce resources, which may ultimately reduce the number of presentations to other parts of health and/or social services.
- It is proactive rather than reactive, so it is best for the patient as well as providing better value and return for the system.
- Including laypeople in this model in an appropriate way allows the time to provide for patient needs and to more effectively work with them on interventions that help improve their circumstances and potential health outcomes.
- Even if the patient's clinical prognosis doesn't change, they may benefit from other interventions in the model and in ways that extend beyond health (an interagency approach). Such benefits may include improvements in their wellbeing, self-management and quality of life.
- Where patients choose not to engage, we can measure their outcomes to see if potential failures stack up against successes. That is, as long as patients are no worse off than they would be under the conventional model and the overall outcome is cost-effective, then this is a gain.
- Having a model based on a multidisciplinary team will relieve pressure on our conventional GP-dependent models, increasing the potential for continuity of care and sustainable services (by relieving pressures on, for example, time, workforce, GP and practice nurse appointments and system pressures).
- The Ministry of Health provides capitation funding to enable population health care and to subsidise patient care. Using a lower-cost workforce to manage the supportive aspects of patient care has the potential to reduce overall costs.

- The model is health literacy in action and supports equity.
- This work will support many of the indicators in the System Level Measures Framework plan.

Staff feedback on how the model is working has been overwhelmingly positive. Staff see this as a good project that is providing sound proactive management, with a multidisciplinary health team providing holistic wraparound wellness support to those who need it most.

1. What were the lessons learnt?

- Co-design at the beginning was empowering and added value.
- A structured approach and adequate time to coordinate care are needed.
- Multidisciplinary and inter-organisational teamwork is very valuable.
- We learnt how to carry out data collection with timeframes and measures.
- Availability of resources and support is essential.

Lessons on process:

- Keep it simple, go slow (while maintaining progress).
- Learn to approach change methodically.

Lessons on people:

- Involve the most influential people – kaiarataki, kaupapa Māori nurse, diabetes nurse specialist and GP.
- The kaiarataki role – involving continuity of care, a structured approach and time to provide wraparound care – is central to success.
- Patient stories motivate people.
- Going through medicines and health information in a way patients understand (developing health literacy) makes a big difference.

2. What would you recommend to a team somewhere else that wants to take on a similar project?

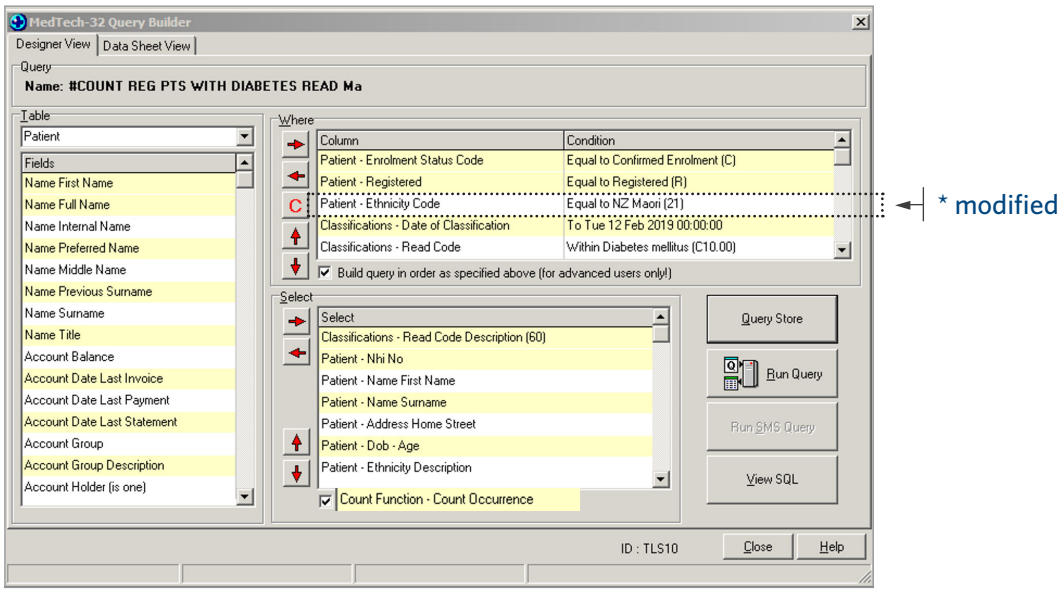
The lessons learnt are all important, but a key factor was having a dedicated GP for case reviews and spread of the initiatives.

3. Are there any future steps or ongoing work that you are intending to continue with on this project topic?

- Continue to promote the model of care for resourcing to expand it to Māori with other LTCs, to other centres and to those in high-need groups who are not accessing services.
- Continue with PDSAs as identified to improve the quality of the service.

Appendix 1: Query Builder

Using the Query Builder tool in MedTech, we identified all patients with a diabetes classification (by ethnicity). This screen shot is modified to identify just Māori* for the adapted part of the project.



Prediabetes lists were also obtained on the whole practice population and on Māori and Pacific patients.

Further query builds identified the 109 patients with an HbA1c > 64mmol/L (by ethnicity). Aware that the small Pacific population is also at risk, we used a query build to identify Pacific patients with diabetes whose last HbA1c was greater than 64 mmol/L and the date of their last diabetes annual review. One patient met these criteria.

1 **Operational definition: Average HbA1c of all patients (and Māori) with a classification of diabetes with HbA1c > 64mmol/L, who have had an HbA1c test in that month**

The query build was run each month and results cross-referenced with the baseline list of 109 patients whose HbA1c was greater than 64 mmol/L. All patients who were not on the baseline list were eliminated. The average HbA1c of those within the cohort was calculated and recorded in a run chart by ethnicity (Māori or Other). Our data source was MedTech Query Builder.

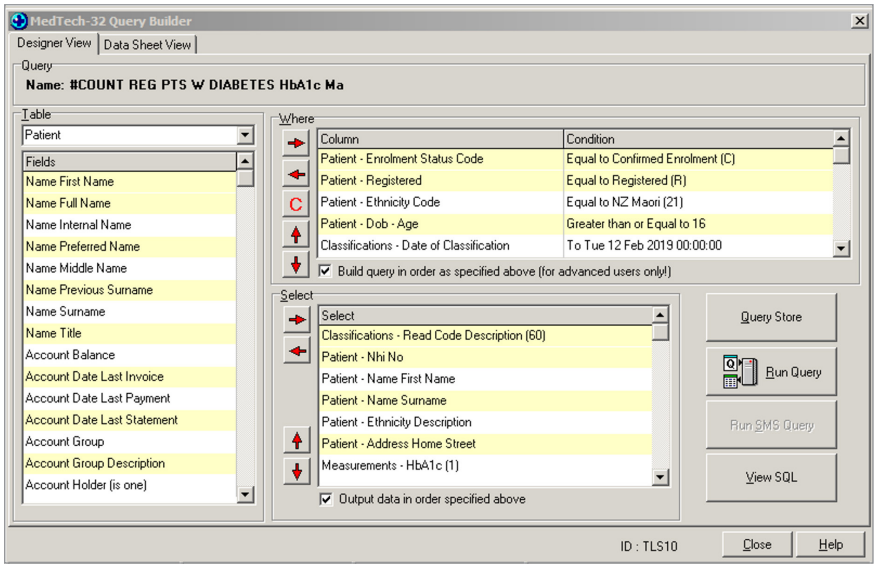
This measure was thought to monitor the process improvement of our service rather than improvement of specific patients. However, as the project faced a number of barriers and constraints within the whole practice population, this data and several of the other measures within the project were not useful. The data is still being monitored, but with the focus on Māori and Pacific patients.

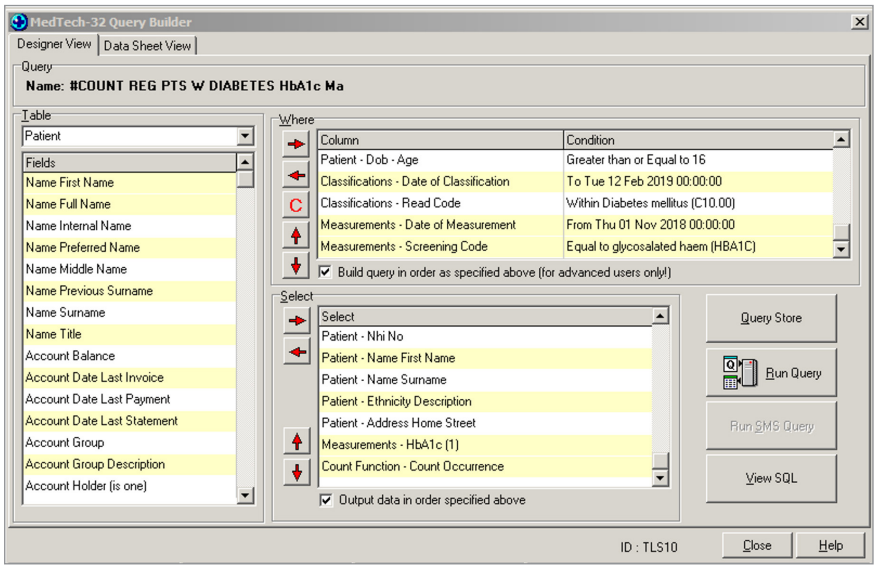
It is still too early to see whether the collaboration with Poutini Waiora has had any impact on clinical results such as HbA1c. However, we anticipate that some patients who weren't taking their medications because they couldn't afford them have benefited. With support from Poutini Waiora, they are likely to have accessed financial support, reduced stressors and addressed health issues, including taking medications. (See Appendix 6 for case studies with qualitative results.)

Collecting the data

- Run MedTech query to collect Hba1c of all diabetes patients at the beginning of each month for the preceding month, changing the month and extending the date of classification to the end of the period. (Hba1c was collected from the patient inbox.)
- Export to spreadsheet. Remove duplicates and calculate count, mean and standard deviation. Add to monthly table and insert into run chart.

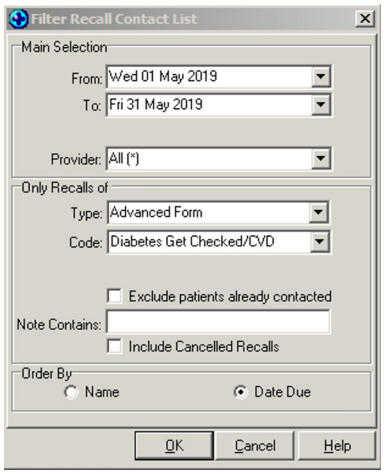
We collected this data also for the 12 months before starting the project to give us a baseline.



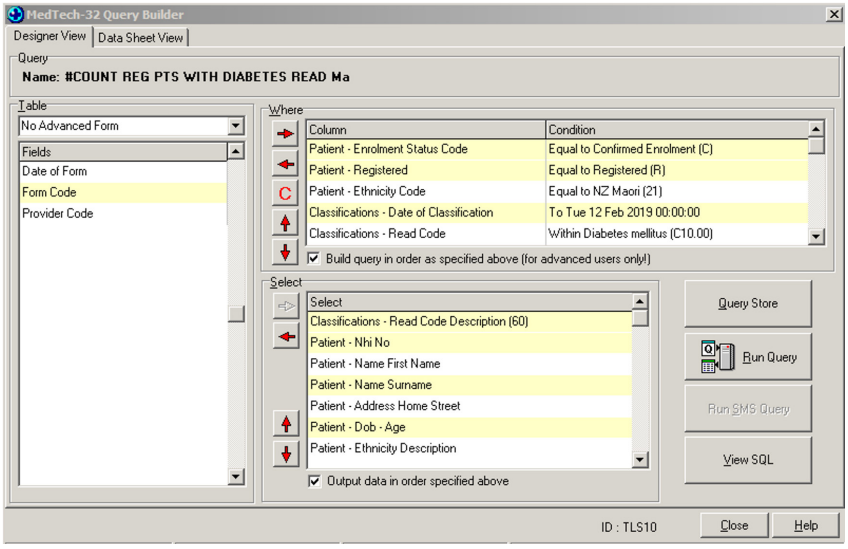


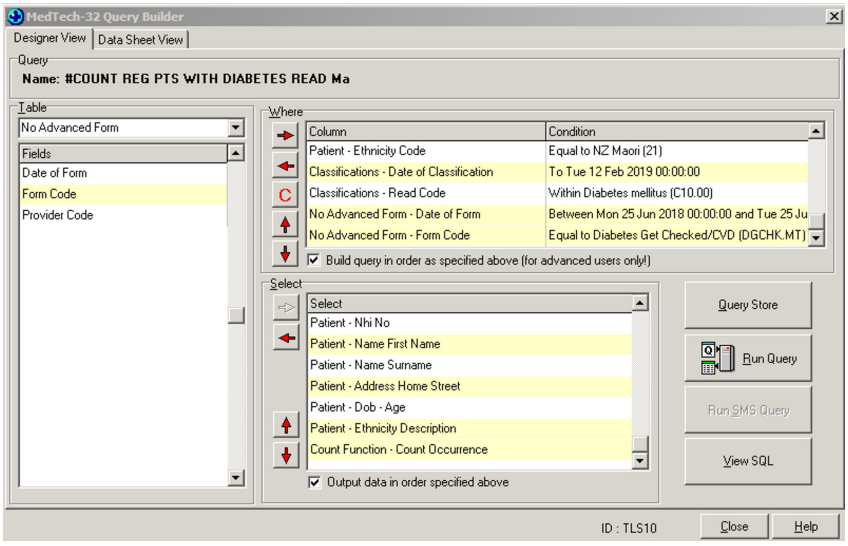
2 Operational definition: Number of diabetes annual reviews completed for all patients (and Māori) with diabetes

We used the recall system to identify those patients on recall for their diabetes Get Checked visit in the year ahead. This was a fraught method as the practice uses creative processes with its recall system, moving patients recalls to a variety of categories such as trying to synchronise medication, patient was seen by GP and no Get Checked done, or when bloods are due. But this method gave us the closest estimate of how many patients were due each month.



We used a query build to identify how many patients had not had a diabetes Get Checked advanced form completed in the last year.





Collecting the data

We used PHO diabetes Get Checked claims to measure how many patients (and Māori patients specifically) had had a review completed within the month. Results were entered into the monthly table and run chart.

We collected data from Karo reports for the 12 months before starting the project to give us a baseline (including by ethnicity) of how many people had had a DAR in the last 12 months.

3 Operational definition: Number of patients (and Māori) with diabetes referred to PHO lifestyle programmes and number attending lifestyle programmes

Collecting the data

We used the PHO Green Prescription database and dietitians' data to identify the number of referrals to lifestyle programmes and the number of those (including the number of Māori specifically) who attended. Results were entered into the monthly table and run chart.

Appendix 2: Patient information sheets and DAR form

Many different patient information sheets on diabetes, eye care, foot ulcers, neuropathy and related topics are available from the Health Navigator website: www.healthnavigator.org.nz/medicines.

The DAR advanced form is available here (MS Word, 1.7MB) (updated in Dec 2019).

Appendix 3: Poutini Waiora model

Objective

To work with the population of Māori people at Buller Medical who are living with diabetes to improve their experience of care and help them to self-manage their health.

Key priorities

- Use a whānau ora model of care with an emphasis on health literacy.
- Use a quality improvement methodology to measure improvement and evaluate the effectiveness of the project.
- Work collaboratively to keep the patient at the centre of care and provide the appropriate care and support.

Plan

- Use an interprofessional approach to manage diabetes reviews, involving, for example, kaiāwhina, kaupapa Māori nurse, diabetes nurse specialist, GP and practice nurse, as needed.
- Develop a model for implementing diabetes reviews for Buller Medical Māori patients.

Roles and functions within the model

- **Kaiarataki**:
  - Administration (for example, Karo lists, recalls, query builds, retinal screening, bloods, appointments); screening; immunisations; patient dashboard; LTC enrolment status; outreach; medication leaflets; referrals and follow-up
  - DAR – height, weight, blood pressure, BMI, foot check; lifestyle intervention, education and social support; follow-up; care plan
  - Motivational interviewing, acceptance and commitment therapy, health literacy in action
- **Kaupapa Māori nurse**: MedTech; medication, bloods and tests review; red flags; repeat script; specialist letters; classifications update; medication leaflets; LTC enrolment; referrals; care plan
- **Diabetes nurse specialist**: for complex patients; resource person; teaching
- **General practitioner**: where clinical professional need; weekly case reviews with team; care plan; teaching
- **Specialist**: if needed
- Potential for **pharmacist** role for medication reviews and input into weekly case reviews.

Appendix 4: Poutini Waiora whānau assessment form

The kaupapa Māori nurse in the Poutini Waiora Greymouth team developed the whānau assessment form for use at the clinics in Greymouth – as an improvement on the Buller project. A further suggested improvement has been to include te reo Māori where possible.

The form is available for download here (MS Word, 136KB).

Appendix 5: SQL queries for measures

Measure name	SQL query:
Average HbA1c for Māori patients who have diabetes	Download here (MS Word, 25KB)
Average HbA1c for all patients who have diabetes	Download here (MS Word, 25KB)
Prediabetes with HbA1c 41–49 mmol/L	Download here (MS Word, 25KB)

Appendix 6: Patient case studies

Case study 1, January 2018–June 2019

Before joining the programme

- Patient had mental health problems and anxiety – was secluded and had a record of 'did not attend' appointments (DNAs), wouldn't engage, wouldn't answer phone or respond to texts, had mobility and weight issues, had lots of whānau issues affecting her attendance.
  - Hospital admissions: 2
  - Emergency department presentations: 5
  - GP presentations and contacts: 18
  - District nursing presentations: Nil
  - DNA: 4
  - DAR: overdue 1 year+
  - Other: 4
- She was referred to Poutini Waiora for support.

Experience with the programme from May 2019

- Poutini Waiora made home visits and patient completed survey about this experience.
  - Poutini Waiora contacts: 8 (including DAR)
  - DNA: 2
  - GP review with Poutini Waiora: Multiple

Significant patient outcomes

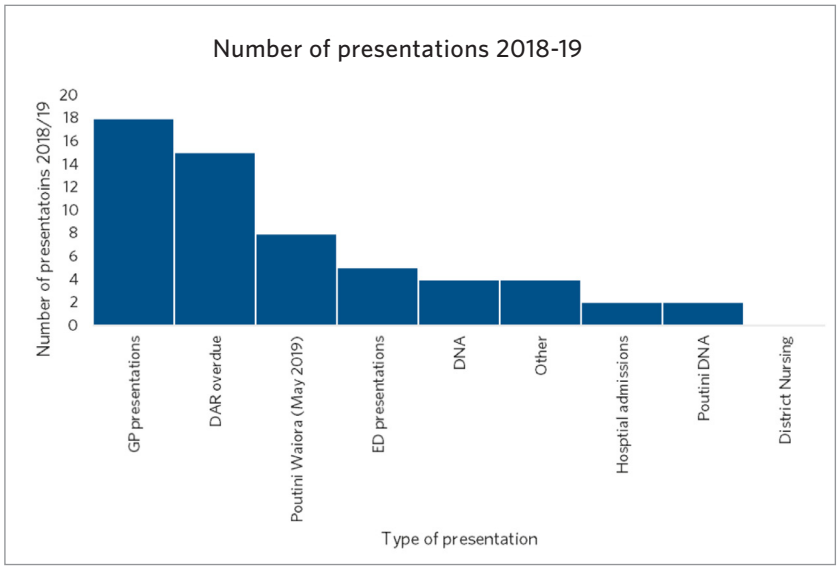
The patient:

- has consented to be interviewed about her experience with the project
- has self-increased insulin to improve blood glucose levels, is engaging with Poutini Waiora and is answering calls and text messages
- has decreased hours with mental health services since gaining support from Poutini Waiora and reports improved wellbeing
- Patient declined assistance with one issue saying she could now organise it herself.
- has gained support to get orthotics and got shoes for walking – comfortable for walking outside now
- attended physio, now has taxi chits and a mobility parking sign
- is beginning to increase in independence and self-care with tasks
- after never attending retinal screen before, attended a clinic and is on recall in six months due to changes to the retina
- now phones to cancel appointments rather than just DNA.

*Refer graph on following page

Patient feedback

- 'Very comfortable... full review.'
- 'Poutini is all about whānau and from previous experience there was little or no care. Poutini offers so much support.'
- 'Because of PW I now manage my diabetes so much better and happier to do so.'
- 'It impacted me in a more positive light, therefore my whānau is greatly impacted.'
- 'Nothing could be improved. PW has been extremely supportive in my mental and physical health.'
- 'Medication sheets were helpful and easy to understand.'



Note	
DAR	Diabetes annual review
DNA	Did not attend appointment
ED	emergency department
GP	general practitioner.

Case study 2, January 2018–June 2019

Before joining the programme

- Multiple health issues, as well as anxiety and stress issues
- Wound complications, ACC, DNAs, ophthalmology, podiatry needs
  - Hospitalisations: 3
  - Emergency department presentations: 10
  - GP presentations and contacts: 51+
  - District nurse presentations: 74
  - Diabetes nurse specialist presentations: 7, as well as 30+ contacts
  - Specialist presentations (any): 8
  - DAR: overdue
  - DNA: 4–5
  - Other services: ophthalmology – DNA, podiatry (5 + 1 DNA)

Experience with the programme from May 2019

Poutini Waiora has been seeing patient since May 2019, with two contacts.

Significant patient outcomes:

The patient:

- attended retinal screening (whereas previously usually DNA)
- has National Travel Assistance (vouchers) reduced to single source of supply
- is due for surgery but did not attend as unwell; surgery rescheduled
- is agreeing to attend appointments, is engaging
- is taking insulin now – self-adjusting, having hypos, having dietary education, with partner also beginning to engage
- is not happy with past experiences with health services – says they don't listen

- is happy with the new model and support being provided, trust building, relationship building
- has consented to be interviewed about the project
- was at the point of giving up but is now persisting – will be a long process of support.

Some other examples

- **Background:** Patient was not taking meds, unable to afford script, only eating once a day as only got $25 per week for food.
  Interventions: Work and Income assistance, food parcels, linked with community garden, script obtained, quit smoking brief advice. Patient 'stoked'.
- **Background:** Solo mother, previously with another practice on the West Coast where she had frequent DNAs, had poor diabetes control, irregular medication use, financial stress and debts, incorrect Ministry of Social Development entitlements, poor diet, poor housing, poorly controlled diabetes and dental needs.
  Interventions: Food parcel, budget advice appointment made and attended – ongoing support, dental – completed, seeking suitable housing, education, support offered with community garden, guided supermarket tours, sharing shed. Engaging with Poutini Waiora, has appointment with ophthalmology this week. Getting health screenings done, booked for LTC enrolment, screenings and repeat medications. Taking medications now. Has consented to be interviewed. Referral for brief intervention counselling done. On Housing NZ wait list. Patient cried, happy to ask Poutini Waiora for help, happy to be used as a case study, wants to prove that she can be in control of her life.

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