Primary care improvement case study

Victory Square Pharmacy: Improving access to health care among opioid substitution treatment clients

Number 6 in a series of 18

Project overview

Everyone should have the same opportunities to be physically well.
Te Pou o Te Whakaaro Nui

Opioid substitution treatment (OST) patients are an ageing population who often have high needs, can be medically complex and may have had negative experiences in the past with health care professionals. Additionally, financial hardship, health literacy and stigma can create barriers to addressing their physical (and often psychological) health issues.

As a community pharmacy that has often daily contact with these patients, Victory Square Pharmacy set out to address these inequities. Our approach was to facilitate engagement with other health providers and empower people on OST to take charge of their physical health and improve their quality of life.

What we discovered early on in the project was that the success of our efforts to improve the physical health and ultimately the quality of life of these patients relied on having effective pathways within the region. The approach to baseline diagnosis and screening procedures such as electrocardiogram (ECG) guidelines and ultrasound guided phlebotomy needed to be consistent for those clients that required it. Addressing these issues would benefit not just the patients in this project, but also all OST patients in the region.

Health Quality & Safety Commission New Zealand
Kupu Taurangi Hauora o Aotearoa

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Background and context

Victory Square Pharmacy is in a residential area that is one of the more socioeconomically deprived areas of Nelson. According to the New Zealand Index of Deprivation,[1] the area surrounding the pharmacy ranks at deciles 8 and 9 (where 1 represents the least deprived areas and 10 the areas with the greatest deprivation). Although our pharmacy is relatively small, we service a high-needs population with multiple co-morbidities, including approximately 1,000 former refugees. We are also the closest pharmacy to a low-cost accommodation facility, Franklyn Village, that houses many people with mental health and addiction issues.

Our pharmacy's clients are registered with doctors and practices all over the Nelson area. The majority of prescriptions, however, come from the three surgeries closest to the pharmacy, two of which are Very Low-Cost Access (VCLA) practices.

The pharmacy maintains an excellent relationship with both our OST clients and the alcohol and other drug (AOD) service. We have worked hard at reducing the stigma these patients have often experienced when receiving their medication. We currently provide an OST service to 30 clients, whose average age is 46 years.

Diagnosing the problem

1 Problem statement

Clients who are prescribed OST for opioid dependence often have co-morbid mental and physical health issues but can find it difficult to access health providers to either diagnose or help with management of their conditions.

2 How do you know that this is a problem? What data did you have to describe this problem?

Our OST population is ageing, with the majority of clients over 45 years of age. We have observed directly that ageing OST clients experience a range of co-morbidities including renal failure, cardiovascular disease, hepatitis C, undiagnosed fractures, cancer, hormonal issues, respiratory disease, rheumatoid arthritis and dental problems. The following are some of the issues we have identified as contributing to the problem.

- Health care providers often do not follow local or national guidelines, resulting in inappropriate treatment.
- They may not follow titration protocols for beta-blockers and ACE inhibitors, so optimisation of medicines is poor.
- Health care providers may fail to contact or follow up patients after they diagnose new conditions or patients experience acute injury, leading to delays in monitoring and treatment.
- Some OST clients are unwilling to engage in regular health care because they have experienced stigma in the past or are in debt at their general practice.
- Health care providers may be reluctant to manage pain in OST clients.
- Health care providers may not screen symptomatic OST clients, even when clinically indicated; for example, not screening for spirometry in a breathless patient who has previously smoked.

1 https://healthspace.ac.nz/health-stories/population-information/

In New Zealand Te Pou o Te Whakaaro Nui,[2] the 'backbone' of Equally Well, produced an evidence summary of the physical health of people with a serious mental illness and/or addiction in June 2014. Its suggested areas for action include:

- making effective monitoring and screening procedures for physical health part of the quality frameworks for mental health and addiction services
- developing guidelines on the roles and responsibilities of health professionals in monitoring, screening and ongoing management of the physical health of this group, particularly the complementary roles of primary and secondary services.

Internationally, studies have shown that the ageing process is accelerated by at least 15 years in OST patients, with the result that they present with health conditions typical of older patients in the general population.[3] In an interview-based review of 123 patients, the Scottish Drugs Forum report highlighted the need to better manage the physical health of older people with drug problems. The table below indicates the co-morbidities that the report found among this group.

Condition	Percentage of older people with drug problems
Depression	95.1
Anxiety	88.6
Chronic pain	52.8
Other mental health	52
Heartburn–reflux	50.4
Constipation	38.2
Asthma	27.6
Arthritis	24.4
High blood pressure	21.1
Bronchitis	16.3
Diarrhoea	16.3
Chronic obstructive pulmonary disease	14.6
Heart disease	12.2

2 Te Pou o te Whakaaro Nui. 2014. *The Physical Health of People with a Serious Mental Illness and/or Addiction:* An evidence review. Auckland: Te Pou o te Whakaaro Nui.

3 Matheson C, Liddell D, Hamilton E, et al. 2017. *Older People with Drug Problems in Scotland. A mixed methods study exploring health and social support needs*. Glasgow: Scottish Drugs Forum.

3 What was the baseline data?

In its evidence review, Te Pou o te Whakaaro Nui[4] found:

- **66 percent** of premature mortality for people experiencing mental health and addiction issues is due to **preventable and treatable** physical health conditions
- people who experience mental health and addiction issues are **3 times** less likely to survive colorectal cancer and **2.5 times** less likely to survive breast cancer than other patients
- some medications for psychiatric and addiction treatment contribute to poorer health outcomes, including cardiometabolic issues (particularly weight gain) and poor oral health
- **75 percent** of people who receive opioid substitution treatment are likely to have hepatitis C
- **70 percent** of people accessing addiction services have a mental health need.

4 What is the significance of this problem in your specific locality and/or practice?

Fifty-eight percent of OST clients in the Nelson–Marlborough region are over the age of 45 years. In the six months before this project started, Victory Square Pharmacy had seen:

- one client with severe cardiac issues that would have been mismanaged if we had not advocated for appropriate clinical management
- a client with respiratory issues, who often presented as very breathless in the pharmacy yet had not had any spirometry testing done
- poorly managed renal disease
- lack of follow-up after a hepatitis C diagnosis
- fractures where pain is untreated
- infections such as cellulitis
- lack of information and management of hormonal issues such as early menopause in women and low testosterone in male clients
- poorly controlled rheumatoid arthritis
- dental problems
- mental health issues, including anxiety and depression.

4 Te Pou o te Whakaaro Nui 2014, *op. cit.*

The (SMART) aim

This project aimed to improve access to ECG and blood test screening and management from 27 percent to 80 percent of OST patients at Victory Square Pharmacy by February 2020.

The measures

Outcome measure:

- The percentage of OST patients requiring an ECG who had one completed in the last 12 months.

As the baseline measure, the prediction was that less than 50 percent of clients on OST would have had an ECG in the last 12 months. Health Connect South data confirmed:

- 17 patients were on a dose above 100 mg and 6 were on less than 100 mg
- of these 23 patients, 6 patients had received a recent ECG meaning that only 27 percent of patients had received an ECG
- 10 patients had received an ECG more than two years ago (among whom it was more than five years for two patients and more than three years for five patients)
- 6 had no ECGs on the system and of these 3 were on more than 100 mg methadone.

To obtain the information needed to show whether an ECG had been done in the last 12 months, we first included it in the monthly survey questions, but quickly discovered that this method was problematic. Because the questionnaires were anonymous, we were unable to identify which clients had received an ECG. In addition, with limits to their memory recall, clients had trouble remembering when any ECG had occurred.

Following this experience, to collect reliable data, we decided to use Health Connect South to establish both baseline data and whether the number of completed ECGs for the clients had improved since the start of the project.

Process measures:

- Percentage of patients surveyed who scored 6 or more (on a scale of 1–10) in response to the question: How in control do you feel about your health?
- Percentage of patients surveyed who scored 6 or more (on a scale of 1–10) in response to the question: How comfortable are you asking questions/advice of your health care provider?

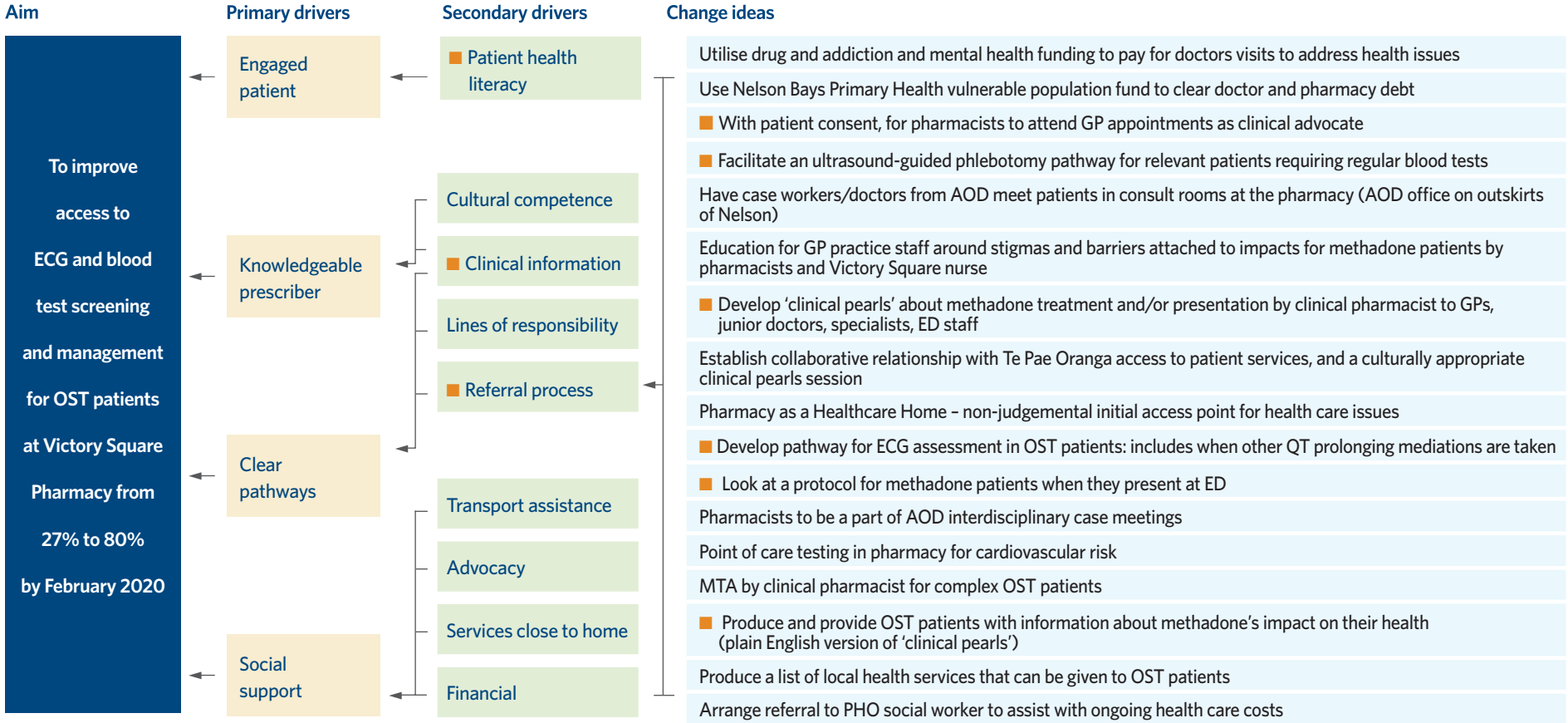
Balancing measures:

- Staff time (as a measure of stress levels) – the time needed for staff to work on the project and how that impacts on an already busy workload
- Staff satisfaction – our goal was to maintain staff satisfaction with the project, which started from a baseline of high staff satisfaction at the start of the project
- Financial costs of the project – our goal was to remain within the budget allocated and to have no cost over-runs for the project.

Drivers of change

Because we had numerous change ideas, we decided on priority areas to concentrate our efforts on, basing our choices on the ideas that we as a team thought would have the 'biggest' impact on or greatest benefit to clients in the timeframe of the project.

Driver diagram



■ Priority areas identified

AOD alcohol and other drug

ECG electrocardiogram

ED emergency department

GP general practitioner

QT

OST opioid substitution treatment

PHO primary health organisation

What we did

1 Were there any ethical considerations to be aware of?

Many addiction clients have stigma and privacy issues that become a particular concern for them when taking part in a project such as this. It was important for us to be open with them about the information we would be collecting and how that could be shared in various ways. Reassuring them that we would keep their information anonymous and gaining permission from each patient involved were other important ethical practices that we followed.

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

> ***As soon as someone hears the word 'methadone', the whole way they treat you changes.***
>
> **Consumer**

The patient story is an important way of identifying the gaps that they experience – helping us to identify the barriers and understand the complexity of the issues. An experienced consumer was an integral member of our team from the beginning. As health professionals we sometimes place an 'educated lens' on what we think the solution to a particular problem could be or how it should be approached. Having a client as our consumer representative who was open, engaged and willing to share their experiences, as well as to give critical feedback, allowed us to focus on areas that would most benefit clients in a format they would understand.

Co-design had added benefit for the consumer client in that it empowered them in their own health care and gave them a sense of ownership. Because they had weekly contact with the rest of the team in overseeing the OST project, the consumer was able to engage regularly with the improvement team and observe how we were tracking.

3 How did you involve consumers in co-design? What processes did you use?

Consumers helped co-design the questionnaires and the information sheet that were used with the client group. Most importantly they were happy to share their stories with various groups as a means of effecting change in the system.

We captured client experience stories through survey (in both online and paper-based form) and used them to highlight gaps in the system and generate ideas for improvement. Our 'aha' moment was realising that we were wrong in our assumption that client engagement was low due to potential stigma and accessibility issues. Instead, we discovered that health care providers had no formal process or pathway around regular ECGs, access to screening and diagnostics (ultrasound guided phlebotomy) for those requiring these services. The following cases highlight the issues.

Case studies

Case of a 61-year-old male

Medicines: Methadone 140 mg daily on site, diazepam 40 mg OD on site, thiamine 150 mg daily, multivitamin daily, zinc 50 mg daily, sertraline 50 mg daily.

- History of substance and alcohol use.
- Shuffle and stumbling gait and falls – parkinsonian like symptoms?
- Early stage dementia? Montreal cognitive assessment (MOCA) conducted 14 March 2019 at AOD review = 16/30.
- Minimal influence of alcohol at time of MOCA (supported by a carbohydrate-deficient transferrin (CDT) test value of 0.6, showing no evidence of recent excessive drinking).

Actions:

- Organised and attended appointments with him at AOD service and his general practitioner (GP), where thiamine and multivitamins were prescribed (as above) and led to small improvement.
- ECG sighted from October, which showed prolonged QT.
- Engaged with community nurse – change in GP, housing application.
- X-ray organised, which showed a comminuted shoulder fracture. Pain relief prescribed (paracetamol and ibuprofen).
- CT scan organised, confirming non-specific reduction in density of periventricular white matter – compatible with small vessel ischaemia.

Case of a 57-year-old female

Fibromyalgia, obesity. Chronic pain – three knee replacements (second replacement in one knee from infection) and needing surgery in right ankle from collapse, with paracetamol and as needed ibuprofen as only pain relief for this. 12 regular medications. ACC sensitive claims patient.

QT prolonging medicines: quetiapine 200 mg, venlafaxine 150 mg, methadone 100 mg.

- No ECG in past two years.
- No cardiovascular risk, renal function or diabetes tests in more than two years.
- Clinical pharmacist undertook patient consultation and medication review.
- Recommendations made to GP, double appointment booked, and pharmacist attended appointment with the patient with her consent.
- Discovered no communication links between GP and AOD service.

Actions:

- Lab results done.
- Booked to see AOD clinician and attended – ECG done.
- Appropriate options for pain relief started and patient finding relief; referral to physiotherapy services.

Case of a 52-year-old female

Medicines: Methadone 100 mg on site three times weekly, multiple medications for chronic conditions.

- Membranoproliferative glomerulonephritis causing renal function decline, requiring monthly blood tests. MedLab only permitted three attempts to get blood from a vein. After that, she is required to have a finger pricked and to sit while blood drips into tube. Often, she will have to return to repeat test as finger has been squeezed too hard and sample is haemolysed.
- 'For years I have had problems with finding a vein and the MedLab will only try three times to get me. So, it becomes frustrating when I really need to get one.'

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

We found it useful to capture the consumer experience through surveys and conversations as discussed above. Appendix 5 gives the full story of our consumer representative on the project, which we used along with other client stories as 'evidence' for the need to change the ultrasound guided phlebotomy protocols, in response to the district health board's (DHB's) position that it had no problem with its guidelines.

> ***I'd just like it reduced so that it was maybe just a 10 year difference [life expectancy] between us and them.***
>
> **Consumer, responding to the information that the life expectancy of addiction clients is 25 years lower than that of other people**

What changes did you test that worked?

- In-house presentations to GPs, AOD service and other relevant services about the project, physical health effects of methadone and methadone interactions
- Educating GPs and AOD service about QTc risk factors of methadone and how that is additive with other medications that the client may be taking (view downloadable methadone drug interactions table in MS Word format here)
- Facilitating the development of a pathway for ECG assessment in OST patients that includes when they are taking other QT prolonging medications (see Appendix 3)
- Liaising with health pathways team to load protocols onto Health Pathways portal
- Pathway for ultrasound guided phlebotomy in progress
- Developing 'clinical pearls' for health professionals (see Appendix 1)
- Developing a patient-friendly version of 'clinical pearls' to help empower clients when discussing their health (see Appendix 2).

The results

1 What outcome measures improved?

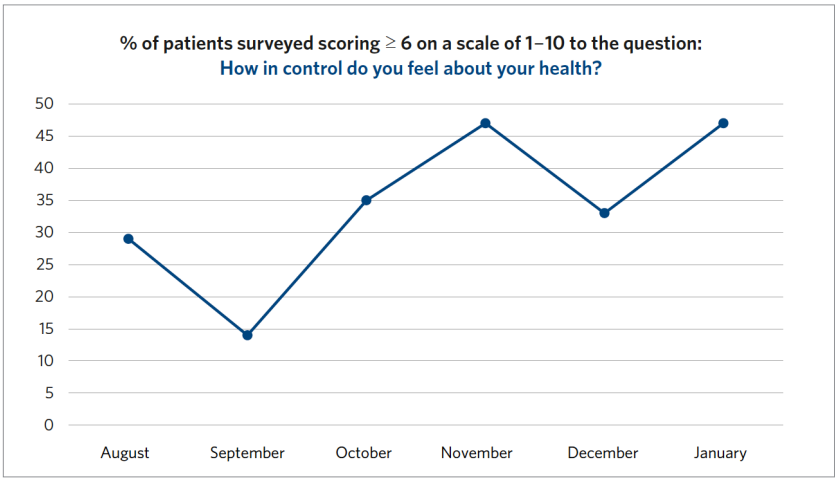
The collection of ECG reports loaded onto the Health Connect South system increased from 27 percent at baseline to 45 percent at the end of the project. Of the clients with no ECG reports online, three were GP prescribed clients, of whom one client had a confirmed ECG report completed at their general practice in the last 12 months during the timeframe of the project.

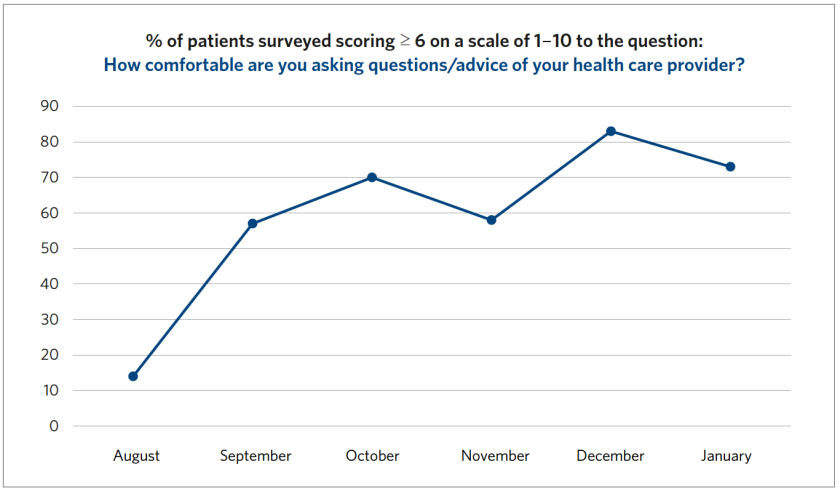
2 What equity measures improved?

This project is addressing a key inequity for AOD clients accessing physical health care. Any improvement in their access to the physical health care they need will improve equity for this group. However, this is a system-wide problem that will require a continued, concerted and integrated effort across the health system to achieve equity for these people.

3 What process measures improved?

Client answers to survey question on their quality of life indicated their quality of life improved over six months, as the following graphs demonstrate.





4 Were there any unintended consequences such as unexpected benefits, problems or costs associated with this project?

We monitored staff satisfaction at our team meetings. One of the main issues noted was the time pressure involved for team members, who were fitting the project into an already busy daily workload. Taking part in this project also brought financial costs to the business.

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

The project team's knowledge of the quality improvement tools has increased and will be invaluable if they participate in any patient care project in the future. By applying the science of the tools, they were able to test a change and measure and analyse the outcomes. This approach has value in making small quality improvements within a working environment to improve efficiencies.

Post-project implementation and sustainability

1 Have the successful changes been embedded into day-to-day practice? How have you managed this?

This project has embedded changes into practice by improving sharing of knowledge among health professionals, in particular through:

- uploading ECG reports
- updating the ECG protocol for OST patients to include information on when to refer them if QTc is prolonged.

2 How did you communicate your progress and results to others?

We have:

- presented our progress to the AOD service team regularly throughout the project
- met with specialist cardiologist to briefly outline the project and clarify the ECG pathway
- presented clinical pearls of information about methadone to general practice professionals and house surgeons at the hospital
- made a presentation about our project at the Mental Health Special Interest Group conference in July 2019.

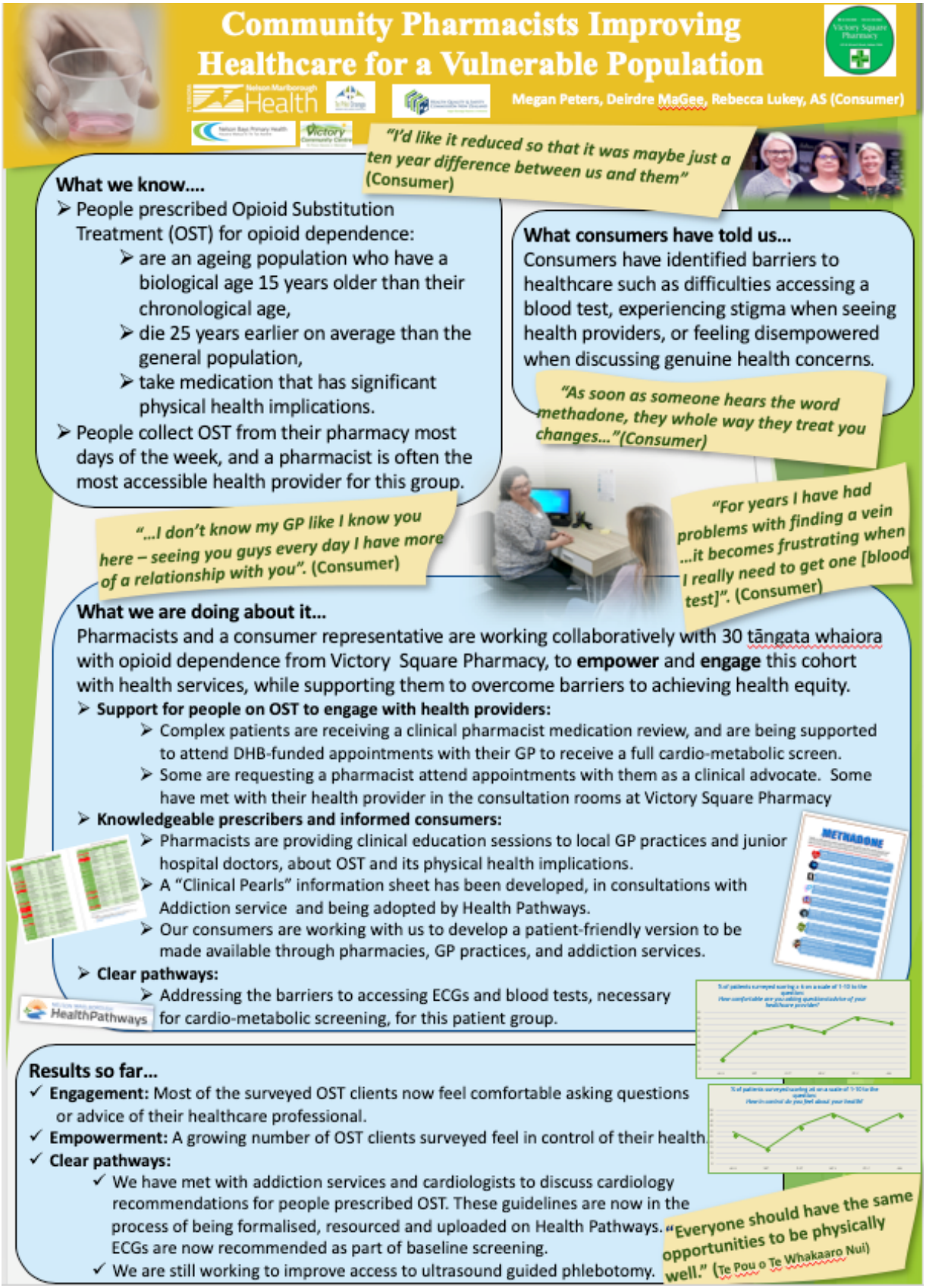
We also entered the project in the Nelson Marlborough DHB Health Innovation Awards, which celebrate health care and support improvement initiatives that make a positive difference to patient and consumer care. It was through this process that we became Nelson Marlborough Winners of the He Tāngata/ The People award for teamwork with consumer engagement: 'Where consumers are part of a diverse team and co-design is used to find a solution'.

See image on the following page.

3 Sustainability

One way the gains from this project are being sustained is that the Nelson Marlborough Health Pathways (OST prescribing page) will include (post COVID-19) our clinical pearls about methadone and its interactions as a snapshot of information that GPs and other clinicians can have easy access to.

In addition, confirmation of ECG protocols for methadone users, including a pathway for clients with prolonged QT, will be uploaded post COVID-19.


Community Pharmacists Improving Healthcare for a Vulnerable Population
Megan Peters, Deirdre MaGee, Rebecca Lukey, AS (Consumer)
"I'd like it reduced so that it was maybe just a ten year difference between us and them" (Consumer)
What we know....
People prescribed Opioid Substitution Treatment (OST) for opioid dependence:
are an ageing population who have a biological age 15 years older than their chronological age,
die 25 years earlier on average than the general population,
take medication that has significant physical health implications.
People collect OST from their pharmacy most days of the week, and a pharmacist is often the most accessible health provider for this group.
What consumers have told us...
Consumers have identified barriers to healthcare such as difficulties accessing a blood test, experiencing stigma when seeing health providers, or feeling disempowered when discussing genuine health concerns.
"As soon as someone hears the word methadone, they whole way they treat you changes..."(Consumer)
"...I don't know my GP like I know you here – seeing you guys every day I have more of a relationship with you". (Consumer)
"For years I have had problems with finding a vein ...it becomes frustrating when I really need to get one [blood test]". (Consumer)
What we are doing about it...
Pharmacists and a consumer representative are working collaboratively with 30 tāngata whaiora with opioid dependence from Victory Square Pharmacy, to empower and engage this cohort with health services, while supporting them to overcome barriers to achieving health equity.
Support for people on OST to engage with health providers:
Complex patients are receiving a clinical pharmacist medication review, and are being supported to attend DHB-funded appointments with their GP to receive a full cardio-metabolic screen.
Some are requesting a pharmacist attend appointments with them as a clinical advocate. Some have met with their health provider in the consultation rooms at Victory Square Pharmacy
Knowledgeable prescribers and informed consumers:
Pharmacists are providing clinical education sessions to local GP practices and junior hospital doctors, about OST and its physical health implications.
A "Clinical Pearls" information sheet has been developed, in consultations with Addiction service and being adopted by Health Pathways.
Our consumers are working with us to develop a patient-friendly version to be made available through pharmacies, GP practices, and addiction services.
Clear pathways:
Addressing the barriers to accessing ECGs and blood tests, necessary for cardio-metabolic screening, for this patient group.
METHADONE
HealthPathways
Results so far...
Engagement: Most of the surveyed OST clients now feel comfortable asking questions or advice of their healthcare professional.
Empowerment: A growing number of OST clients surveyed feel in control of their health.
Clear pathways:
We have met with addiction services and cardiologists to discuss cardiology recommendations for people prescribed OST. These guidelines are now in the process of being formalised, resourced and uploaded on Health Pathways. ECGs are now recommended as part of baseline screening.
We are still working to improve access to ultrasound guided phlebotomy.
"Everyone should have the same opportunities to be physically well." (Te Pou o Te Whakaaro Nui)

Summary and discussion

1 What were the lessons learnt?

Quality improvement often involves challenging the 'culture' of health care.

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

Gather team members with a range of skill sets and knowledge. Importantly include a consumer representative to bring a lived experience and hear their voice.

Devote time at the beginning of the project to using the quality improvement tools to define a clear aim and what successful outcomes will look like. Your driver diagram helps to prioritise your project and which change ideas to test.

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

We will continue to advocate for ultrasound guided phlebotomy as a standard pathway for any client with difficulty accessing a patent vein for blood tests.

The team

Megan Peters, Deirdre (Dee) Magee – Victory Square pharmacists; and Rebecca Lukey – mental health and addictions pharmacist facilitator, Nelson Marlborough DHB

Skill sets on the team included:

- the experience of Deirdre Magee as Victory Square Pharmacy owner with a specialist interest in addiction and mental health
- mental health pharmacist facilitator Rebecca Lukey, with a master's degree based around addiction
- clinical pharmacist Megan Peters
- consumer representative Ali, whose willingness to help and be invested in the project was greatly appreciated.

Much thanks and appreciation go to:

- the alcohol and drug team at Nelson Marlborough DHB
- Jane Kinsey, general manager Mental Health Addiction and Disability Support Services, Nelson Marlborough DHB
- Jo Mickleson, pharmaceutical services manager, Nelson Marlborough DHB
- Te Piki Oranga
- Steph Anderson, Victory Community Centre.

Teamwork tip:

Effective communication with team members is important to keep up momentum and enthusiasm over the journey of your project.

Appendix 1: Clinical pearls for health providers

The content below can be downloaded as a PDF here.

METHADONE

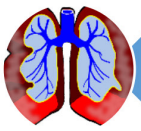
People on methadone for opioid substitution treatment (OST) have poorer physical health than those who are not, and many experience significant barriers to accessing healthcare.
These are some of the common physical health issues in this population.

Cardiac: Methadone can prolong the QT interval and serious arrhythmias (torsades de pointes) have occurred. Most cases involve patients being treated with large doses of methadone, although cases have been reported in patients receiving doses commonly used for maintenance treatment of opioid addiction. Age, female gender, electrolyte abnormalities, some medicines and cardiac conditions are all predisposing factors.

Gastro-intestinal: Methadone may cause constipation and may obscure diagnosis or clinical course of patients with acute abdominal conditions. Consider stool softeners and dietary advice.

Endocrine: Long-term opioid use may cause adrenal insufficiency, leading to hypogonadism, decreased plasma testosterone and sexual dysfunction.

Methadone can also contribute to weight gain.



Respiratory: Methadone can contribute to respiratory depression in patients with significant chronic obstructive pulmonary disease, and those with a substantially decreased respiratory reserve, hypoxia, hypercapnia, or severe asthma. Critical respiratory depression may occur, even at therapeutic doses.

Bone Density: Methadone can directly affect bone formation as well as hypogonadism being a secondary cause of osteoporosis. This population may aslo have other risk factors for osteoporosis including tobacco and/or alcohol use. Consider screening and fracture risk reduction strategies.

Drug Interactions (see Interaction checker):

Serotonin syndrome: May occur with concomitant use of serotonergic agents (eg, SSRIs, SNRIs, triptans, TCAs), lithium, St. John's wort, or tramadol.

Profound sedation, respiratory depression, coma, and death may result from the concomitant use of methadone with benzodiazepines or other CNS depressants inlcuding gabapentinoids.

Additive QTc prolongation can result from antibiotics, cardiac medicines and psychotropic medicines, or diuretics causing electrolyte abnormalities.

Liver: The concomitant use of methadone with all cytochrome P450 (CYP450) 3A4, 2B6, 2C19, 2C9, or 2D6 inhibitors may result in an increase in methadone plasma concentrations, which could cause potentially fatal respiratory depression.

Patients with hepatic impairment (incuding hepatitis C) will metabolise methadone, and many other medicines more slowly than normal patients.

Appendix 2: Clinical pearls for consumers

The content below can be downloaded as a PDF here.

What do I need to know about taking Methadone?

Methadone is a synthetic opiate to be taken by mouth to stop the craving for opiate-type drugs in people who are addicted to them. Methadone acts on the same receptors in the brain as other opioids, and can reduce withdrawal symptoms because of it stays in your body for a longer time.

How to use methadone properly

Methadone liquid is to be taken only by mouth. The dose is different for different people. It is very important that you take your methadone, including takeaway doses, exactly as prescribed and at the time advised, to keep your blood levels stable.

Do not give your methadone to anyone else.

Do not stop taking methadone or change your dose unless you have first discussed this with the person who has prescribed your methadone

Driving and using machinery

If you are stable on methadone, you may continue to drive and operate machinery as part of normal activities. If your methadone dose is not stable or is changed for any reason you need to be careful as drowsiness may be increased and there may be side effects while you get used to the new dose.

Do not drive if intoxicated with alcohol or other drugs.

Possible Side effects

All medicines have side effects. Sometimes they are serious and require medical treatment, but mostly they require some change to the dose.

The most common side effects with methadone are nausea, vomiting, constipation, drowsiness and confusion, increased sweating, dry mouth, eyes and nose.

Taking other medicines

Some medications cause the liver to process methadone more quickly, decreasing methadone levels in the blood. This may may lead to withdrawal effects.

Other medications can slow the process of methadone which can lead to an increase in methadone levels. This may cause drowsiness/intoxication.

It is important to tell your pharmacist, doctor or case manager if you are taking any other medicines, including medicines you can buy without a prescription from a pharmacy, supermarket or health food shop.

Appendix 2: Clinical pearls for consumers – continued

The content below can be downloaded as a PDF here.

Possible effects of methadone on the body

Methadone can have some effects on your heart that can change the way your heart works. While this is a uncommon effect, it does need to be monitored to make sure no issues are being caused by your dose. This is why you need to have an ECG which looks at how your heart is beating, and these should be done yearly, or more frequently if you are on other medications or your methadone dose is increased.

Having low mood or being anxious is common in people who take methadone. If you have any concerns – anxiety or feeling depressed then speak to your health professional.

Methadone can slow your gut (intestine) movement which means that constipation can be an issue. This can be helped by using stool softeners or stimulant laxatives to help.

Drinking plenty of water and eating foods that have fibre (fruits and vegetables) can also help reduce constipation.

Using methadone long term can cause your adrenal glands not to work as well.

Methadone can reduce sex hormones which can cause a decrease in sexual enjoyment/sex drive. Women's menstrual cycles can be affected.

Increased sweating and hot flushing may also occur.

Stopping smoking is best for your breathing.

Methadone can cause difficulty breathing in patients with significant chronic obstructive pulmonary disease (COPD), or severe asthma.

Methadone increases your risk of breaking a bone as it can make your bones less dense and weaker (Osteoporosis).

Patients with decreased liver function(including hepatitis C) will process methadone, and many other medicines differently than normal patients.

If you have hepatitis C or have decreased liver function then speak to a healthcare professional

Methadone can cause a dry mouth and inhibits salvia production. Saliva protects against plaque and decay. It is important to maintain good oral hygiene, minimize sugar intake and have regular dental check-ups.

If any of these effects are concerning you – talk to your prescriber, pharmacist or caseworker.

Appendix 3: Pathway for ECG assessment in OST patients, including for when they are taking other QT prolonging medications

An editable version of this appendix content is available for download in MS Word format here.

Methadone and QTc Prolongation

Methadone is a synthetic opioid used to suppress the opiate-agonist abstinence syndrome in clients who are dependent on these drugs. As an adverse effect, methadone may cause a delay in ventricular repolarisation of cardiac muscle (QT prolongation) leading to an increased risk of cardiac arrythmias which may be life threatening. QT prolongation has been reported in patients receiving doses of methadone greater than 100 mg/day, and is evident in 10–15% of people on methadone.

Methadone ECG Protocol

Baseline ECG prior to commencing methadone and weekly while titrating (timewise individual), then annual ECG as per metabolic screening schedule.

Normal ECG:
Continue annual ECG protocols

Abnormal ECG:
Consultant psychiatrist/registrar/house surgeon to check ECG, with low threshold to seek out expertise via GP or on-call cardiologist (letter with ECG attached) depending on level of concern. (QTc greater than 500ms cause for concern)

QTc around 500ms (+/- 10 ms):

Action plan:

- Arrange repeat ECG in 1 week.
- Manual measurement of QTc – via ECG department technicians.
- Blood test to check electrolytes within 2 weeks.
- Discuss with patient any other reasons for this e.g. recent dentistry, new medication, increase dose of medication, taking over the counter
- medications, illicit drugs. Liaise with GP/pharmacist re: concurrent meds, check Health One.

QTc above 510ms:

Action Plan:

- Blood test to check electrolytes stat.
- Consultant psychiatrist/registrar/ house surgeon to consult on-call cardiologist.
- Discuss with patient any other reasons for this e.g. recent dentistry, new medication, increase dose of medication, taking over the counter medications, illicit drugs.
- Liaise with GP/pharmacist re: concurrent meds, check Health One.

Baseline echocardiogram: Although cardiomyopathy a potential concern with this population, no echo cardiogram required unless clinical symptoms indicate need.

General

- Refer to QT drugs.org (https://crediblemeds.org/) as helpful reference source. Continually updated.

Appendix 4: Monthly survey questions

Four questions for 30 OST clients to answer every month:

1. "Have you had an ECG in the last 12 months?" ☐ Yes ☐ No
2. "Have you had a blood test in the last 12 months?" ☐ Yes ☐ No
3. "How confident are you in talking to your prescriber about your healthcare?" (Engagement)

4. "How much control do you feel you have over your healthcare?" (Empowerment)

Appendix 5: Ali's story

Blood stories

My name is Ali and I have had a kidney disease for the last three-and-a-half years which requires me to have monthly blood tests.

Going to get blood for me is not a very easy process and one which I put off due to the hassle of it all.

I have very narrow veins and every time we would try to access blood from my veins we would never succeed. After some time my kidney specialist decided to just get capillary blood done, which is blood taken from one's finger.

So now I firstly have my hands put into a bowl of hot water or hold onto a rubber glove filled with hot water to make my hands warm. Then they prick a small needle into the side of my finger. This allows the blood to slowly drip out. Sometimes we have to prick another finger as the flow is stopping.

Many times the next day I have a phone call from the blood lab asking me to go and get some blood taken as soon as possible. This is due to the person doing my blood has squeezed my finger which then apparently causing an inaccurate reading (of my blood tests).

I wish I got proper blood test done every month as I worry that we are only testing a small amount of tests due to the small amount of blood received.

I wish the hospital here in Nelson would have a nurse and an ultrasound machine available once a month or a couple of times per month ready to do all of us difficult people and get blood out of us. With the help of the machine, this works well.

So my experience of getting blood out of me is never an easy quick experience and for all of our health issues this should be a matter that is dealt with correctly every time.

I feel I have a disadvantage of keeping on top of my health issues than a person who gets from a vein regularly.

This worries me a lot.