Trauma rehabilitation

Whakaoranga kohuki

# Te Whatu Ora Southern case study: Te Ara Mārama – Improving transition of care to the community for Māori trauma patients

## Te rangahau whakapūaho a Te Whatu Ora ki te Tonga: Te whakapai ake i te whakawhitinga tauwhiro ki te hapori mō ngā tūroro Māori e pāmamae ana


Te Hononga Whētuki ā-Motu National Trauma Network

Te Whatu Ora Health New Zealand Southern

Te Kāwanatanga o Aotearoa New Zealand Government

Te Tāhū Hauora Health Quality & Safety Commission

Te Whatu Ora
Health New Zealand
Southern

**In 2021, the trauma rehabilitation national collaborative brought together 11 teams of rehabilitation clinicians from across Aotearoa New Zealand to complete quality improvement projects that would improve outcomes in rehabilitation after major trauma. The rehabilitation collaborative formed part of a broader programme of work by the National Trauma Network, Accident Compensation Corporation (ACC) and Te Tāhū Hauora Health Quality & Safety Commission (Te Tāhū Hauora) to establish a contemporary trauma system of care in Aotearoa New Zealand.**

## Overview | Tirohanga whānui

Transitioning from inpatient rehabilitation back into the home environment can be a difficult time for patients who have experienced major trauma. Factors identified as making returning to the home environment challenging include: an absence of support in the community, confusion about what assistance services are available, a need for more culturally responsive care and ongoing physical and mental effects of injury. This project, Te Ara Mārama, aimed to encourage collaboration between community health providers and inpatient rehabilitation services to support Māori trauma patients in their transition from inpatient to community care.

### Background and context | Kōrero o mua me te horopaki

The Puāwai rehabilitation unit is a 12-bed inpatient unit located in Ōtepoti Dunedin. It focuses on rehabilitation for people who experience traumatic brain injury (TBI) and orthopaedic injuries as well as non-traumatic conditions such as strokes. The Puāwai rehabilitation unit offers a multi-disciplinary service that includes rehabilitation specialist physicians and nurses, physiotherapists, occupational therapists, social workers, psychologists, speech language therapists, dietitians and pharmacists.

The team wanted to implement an improvement project that would have a substantial positive impact on the lives of those they cared for at the Puāwai rehabilitation unit. Therefore, staff decided to kōrero with consumers to better understand where they felt improvement work should focus. The lived experiences of consumers guided the team to prioritise the transition from the unit back into the community as their area of improvement.

The project focused specifically on Māori trauma patients because of their overrepresentation in TBI statistics. Māori have a 23 percent greater risk of mild TBI than Pākehā, and Māori are three times more likely to sustain a TBI as a consequence of assault. The long-term consequences of TBI, if not properly managed, can have significant flow-on effects on whānau relationships, employment and community involvement.

# Diagnosing the problem | Te tātari raru

## The problem

Māori TBI patients discharging from the Puāwai rehabilitation unit report difficulty with transition from hospital to home. Interviews were conducted with five Māori patients with TBI who spent time at the unit. Whānau were included in these interviews with permission from the patient. Patients described the challenges of adjusting to life at home after their injury, a lack of understanding of the limitations of their injury and how this would affect their daily lives and difficulties navigating the health system and accessing appropriate support while dealing with the ongoing effects of their injury. Some consumers described the transition home as so challenging that they required re-admission to the Puāwai rehabilitation unit and needed further supports in place before they felt safe returning home.

Kaupapa Māori community support services are available, many of which could be valuable for patient wellbeing during brain injury recovery. However, these support services were not being used by staff working in brain injury rehabilitation.

## How did you know that this was a problem? What data did you have to describe this problem?

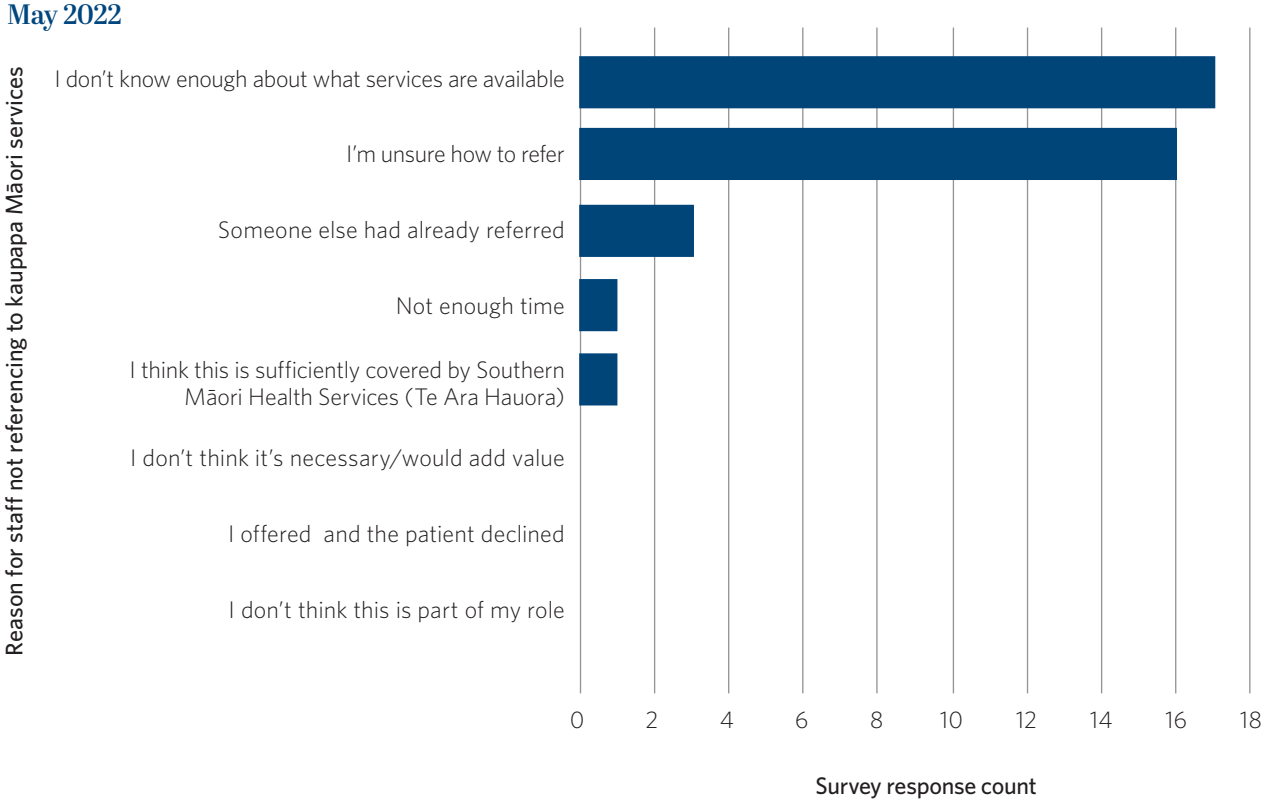
The team used both quantitative and qualitative methods to gather baseline data to identify issues in the care of Māori trauma patients transitioning through the Puāwai rehabilitation unit.

Data was also obtained from analysis of admissions, discharges and readmissions for Māori patients who received care at the Puāwai rehabilitation unit, as well as surveys of staff who work in the unit.

In the 18 months before the launch of this project, 14 Māori trauma patients were admitted to the unit. Of these patients, 73 percent were readmitted to hospital within a year, and half of them had multiple readmissions.

A total of 83 percent of staff reported that they never offered to refer people to kaupapa Māori services. The most common reasons for this were that they were unsure how to refer and they didn't know what services were available (Figure 1).

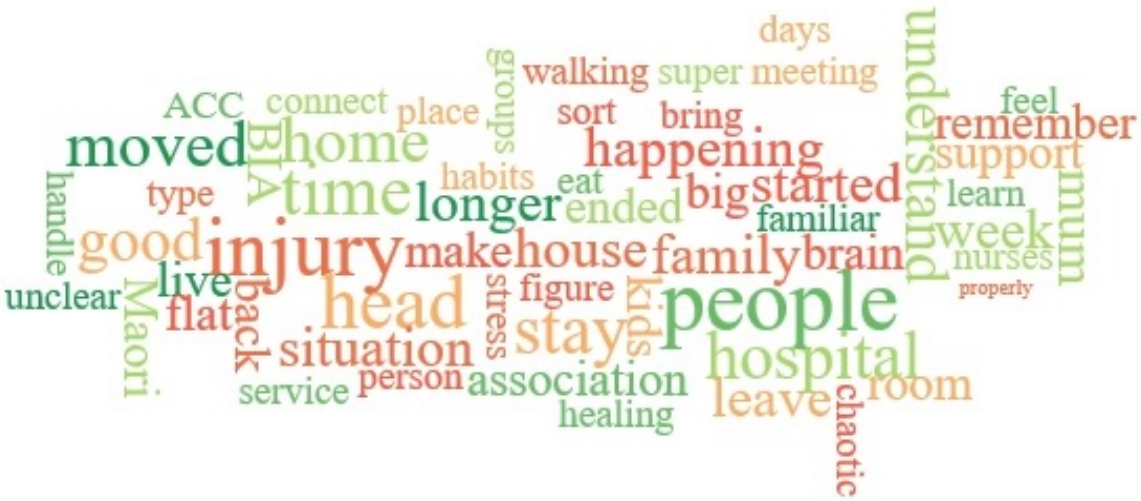
**Figure 1: Reasons why staff were not referring patients to kaupapa Māori community services, May 2022**




Source: Southern data collection.

### Figure 2: Word cloud created from interviews with consumers

Qualitative data was collected through interviews with consumers. The views of five Māori consumers who had experienced TBI and spent time at the Puāwai rehabilitation unit were collected at the beginning of this project. Some of the common themes from these interviews are presented as a word cloud in Figure 2.




Interview questions were open ended to enable the collection of rich descriptions of consumer experience. Consumers emphasised how challenging it was to adjust to life when they transitioned back home.

## Consumer perspectives:

'People that leave the hospital for example with head injury, they don't give the information that "hey ACC is there" and things like that, and sometimes you even have to do a self-referral to your GP and then your GP has to do it and it's just a big … like my mum can't even handle that now. She can't even handle going to ACC appointments like that to help and support because it's just too much stress and that for her.'

'I had a head injury, and I was trying to figure out what the world was … Yeah that was chaotic, but I ended up moving into a place with a bunch of people, they weren't good people to live with. A flatting situation that they couldn't understand my head injury … They tried to connect me with groups, but those groups couldn't help me because I did not fit the criteria and I was a chaotic person.'

'Especially when you're on your own. Sometimes you feel like you've been deserted or something.'

'Not being able to do the things you could do before. Staying locked in his room because noise was too much for his head with the kids … Everything he could do before he couldn't do, so it was really frustrating. So yeah, the first six months or so for us was super hard, and he did go down that looking like he was going to get depressed …'

### Quality improvement and the Māori world view

This project focused on improving service provision for Māori trauma patients, and the team noted early on that traditional quality improvement methodologies, such as the model for improvement used within this collaborative, are not conducive to the Māori world view. This is consistent with wider health service provision across Aotearoa New Zealand, which follows Western ideas of health and continues to deliver inequitable health outcomes for whānau Māori while requiring them to navigate a challenging system not built by Māori, with Māori or for Māori.

Additionally, work was already in progress at the Puāwai rehabilitation unit around community engagement and whakawhanaungatanga (establishing relationships) with kaupapa Māori service providers. This foundational work helped to highlight the breadth of services available, including those that provide more holistic services and may not have recognised themselves as a service that could be important in a person's journey to better health. The team built upon this existing work while investigating ways to embed mātauranga Māori into the project. They chose to use Sir Mason Durie's Te Whare Tapa Whā model, which supports the holistic view of hauora Māori and treats all dimensions of health and wellbeing as equal. These dimensions are:

- taha hinengaro – mental and emotional wellbeing
- taha tinana – physical wellbeing
- taha whānau – whānau and social wellbeing
- taha wairua – spiritual wellbeing.

Each of these dimensions provides a foundation, or 'wall', of the wharenui (house). When one or more of these dimensions is damaged, a person may find their health and wellbeing weakened or unbalanced. The team used this model to develop a method of understanding the health and wellbeing of their patients.

## The aim | Te whāinga

To increase the average Te Whare Tapa Whā score (from admission to 3 months post-discharge) for Māori patients discharged from the Puāwai rehabilitation unit by +1 in each dimension by April 2022.

## The measures | Ngā ine

Refer to Appendix 1 for a detailed description.

### Outcome measures

- Te Whare Tapa Whā scores
- Qualitative patient feedback

### Process measures

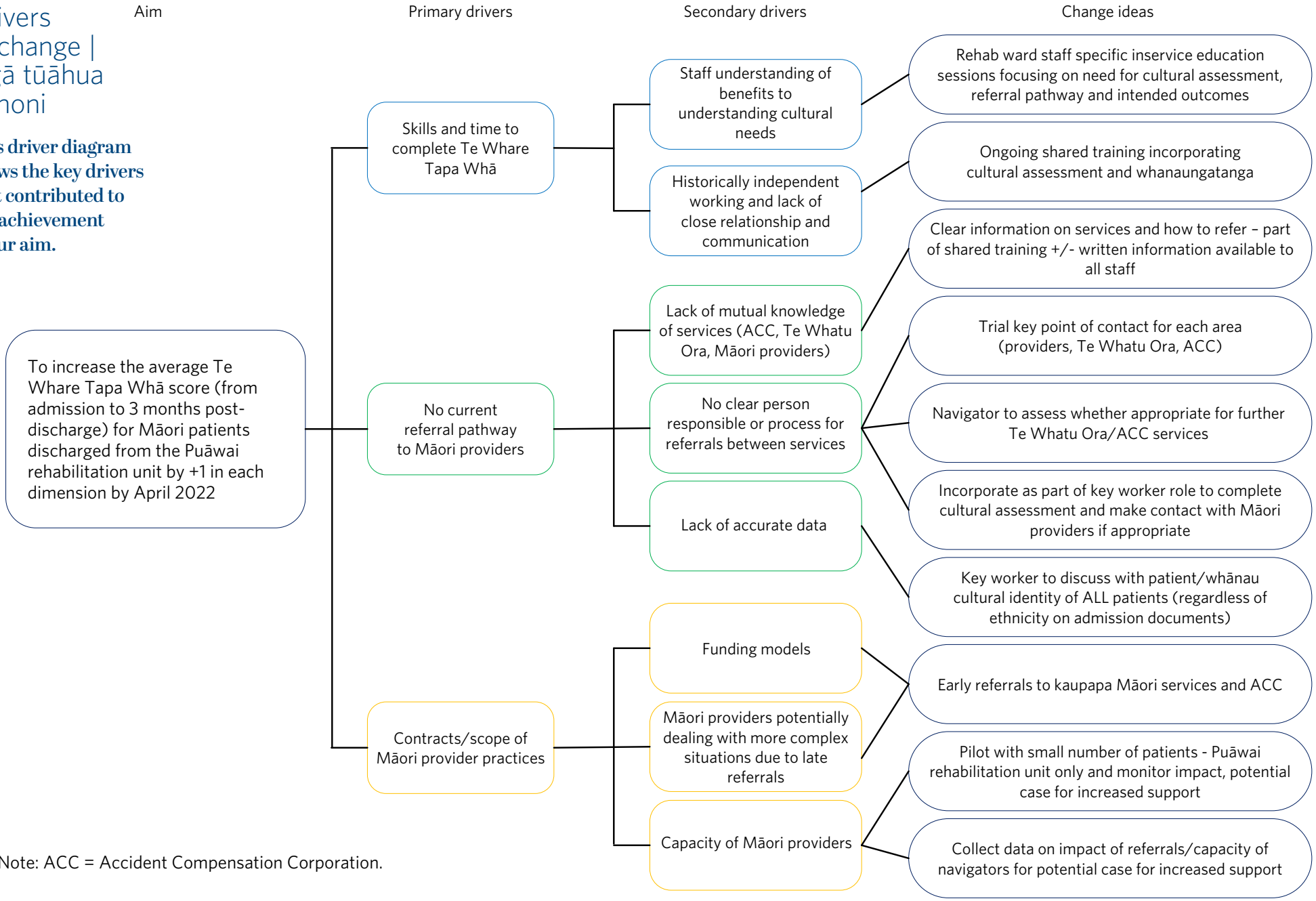
- Staff knowledge of external services
- Percentage of Māori patients discharging from the Puāwai rehabilitation unit who are referred to a kaupapa Māori provider

### Balancing measure

- Staff feedback on referral process
- Capacity of kaupapa Māori services

# Drivers of change | Ngā tūāhua panoni

**This driver diagram shows the key drivers that contributed to the achievement of our aim.**




Note: ACC = Accident Compensation Corporation.

## What we did | Tā mātou i mahi

### Were there any ethical considerations to be aware of?

The problem analysis phase of this project used interviews with Māori trauma patients to identify issues and challenges during their rehabilitation journey. Sustaining a traumatic injury is a significant event in someone's life, and talking about it has the potential to cause distress. The team took time to whakawhanaungatanga and connect with patients to establish a feeling of safety and invited whānau to be present for support if the patient felt this would be helpful.

Additionally, the team took care to ensure that Puāwai rehabilitation unit staff working with Māori patients did not assume their cultural background based on their ethnicity. Within the framework developed as part of this work, staff are taught to value whakawhanaungatanga, and during these conversations they try to gain an understanding of the cultural background of the patient and their whānau (iwi/hapu, locations of importance) and their connection to this. However, they are also taught to be aware that everyone has a different level of knowledge of and involvement with their Māori heritage. For consumers who are disconnected from this, feeling as though they 'should' know things can be a source of shame or discomfort.

### How were consumers involved in this project?

Consumer co-design played a crucial role throughout this project. Problem analysis was undertaken through interviews with five whānau Māori to determine their perspective on where improvements could be made within the service. The team had a passionate consumer representative who was involved with all aspects of the project and ensured that the consumer perspective was kept at the forefront. They did this by connecting with other consumers to gain diverse insights to shape the change ideas and ensured that resources designed for consumers were easy to understand and avoided medical jargon.

### What quality improvement tools did you use that you would recommend?

The team used many quality improvement tools throughout the project. Most importantly, the principles of consumer co-design allowed for improvement work to be designed with consumers for consumers. For staff in particular, process mapping shed light on previously unrecognised issues between inpatient and community services that hindered the referral process and made the transition home more challenging for consumers. Getting input from both Puāwai rehabilitation unit staff and kaupapa Māori community services helped to identify areas to target improvement work (Appendix 2).

### What changes did you test that worked?

- A wellbeing assessment tool was developed based on the Te Whare Tapa Whā model and co-designed with a consumer representative. The tool is used in discussions with patients at specific times (admission; 1, 3, 6 and 12 months post discharge) to determine where they feel their wellbeing sits, from 1 (very bad) to 5 (very good), in each of the four dimensions or 'walls' of the whare:
  - taha hinengaro – mental and emotional
  - taha tinana – physical
  - taha whānau – whānau and social
  - taha wairua – spiritual
- Patients also gave an indication of where they believed their wellbeing had been before their injury, and the responses were used as a basis for goal setting and identifying what the patient felt was important to work on during their recovery.
- Patients were also offered the opportunity to explain their scores and what they felt could be done to help them improve in that area before the next discussion.
- Shared in-service education sessions were held between Puāwai rehabilitation unit staff and whānau ora navigators, with emphasis on learning about each other's roles and how they can align to support whānau using a te ao Māori approach.
- The team introduced an initiative where all Māori TBI patients were offered a referral to a kaupapa Māori community provider:
  - Two providers covering the Dunedin (Arai te Uru Whare Hauora) and Southland (Nga Kete Matauranga Pounamu) areas were recruited for the initial trial to ensure equitable access for patients regardless of their home address within the Te Whatu Ora Southern region.

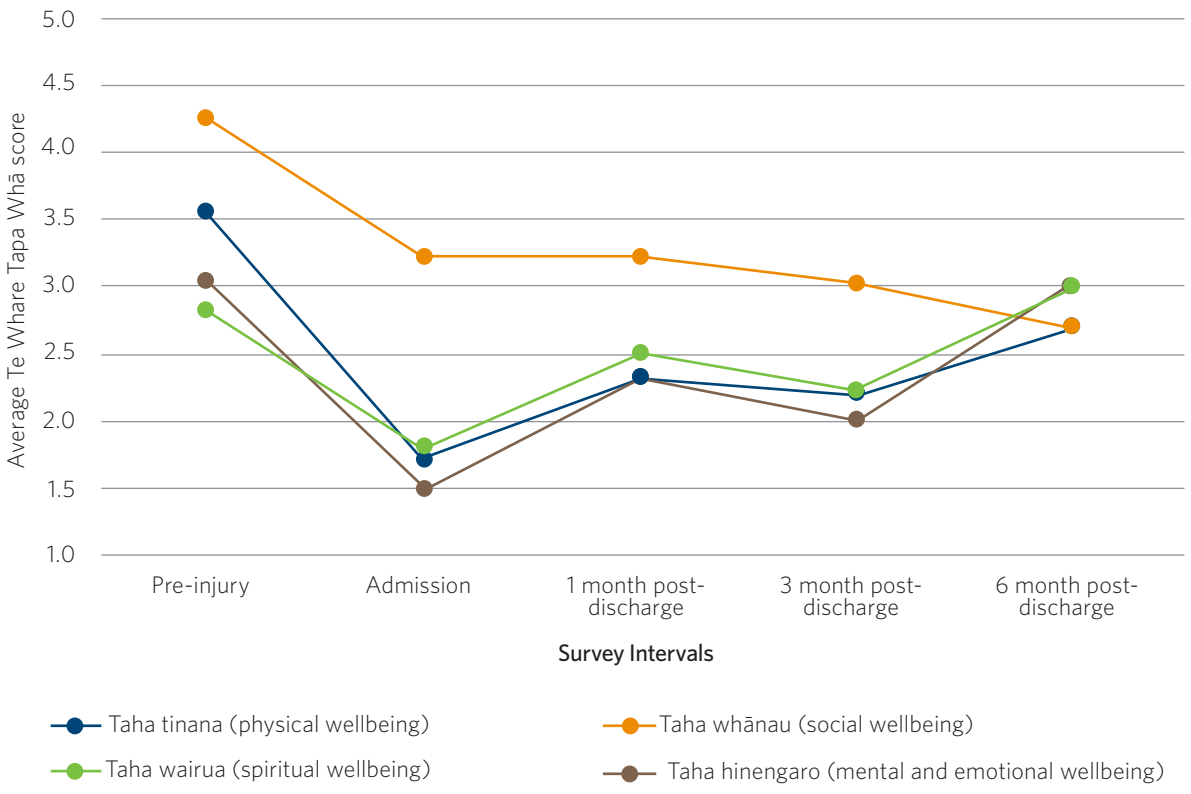
- If the patient accepted the referral, the kaupapa Māori provider assigned a whānau ora navigator. This navigator engaged with the whānau and the clinical teams while the patient was in hospital, engaged in joint goal setting with whānau and clinical staff and supported the transition home, identifying barriers to engaging in clinical services and advocating for the whānau.
- After this change was introduced, referral rates to kaupapa Māori services increased from 0 to 98 percent, with just over half of eligible patients accepting the referral.

## The results | Ngā hua

### What outcome measures improved?

Using the Te Whare Tapa Whā visual tool, data was collected retrospectively from Māori patients who had been discharged from the Puāwai rehabilitation unit within the previous 18 months. Data was also collected from patients currently transitioning through and outwards from the unit. Six patients were assessed using the tool to develop a pre-intervention baseline (Figure 4). The averages of their Te Whare Tapa Whā scores demonstrated a decrease in wellbeing across all four dimensions from pre-injury to admission, which is expected after major trauma. However, the baseline data also demonstrated a concerning decrease in scores at 3 months post-discharge, in line with the difficulties experienced by patients upon their transition home demonstrated in the problem analysis. These scores then began to improve again at 6 months post-discharge as patients settled into their home routines and were likely seeing improvements in functional recovery post-injury with ongoing rehabilitation.

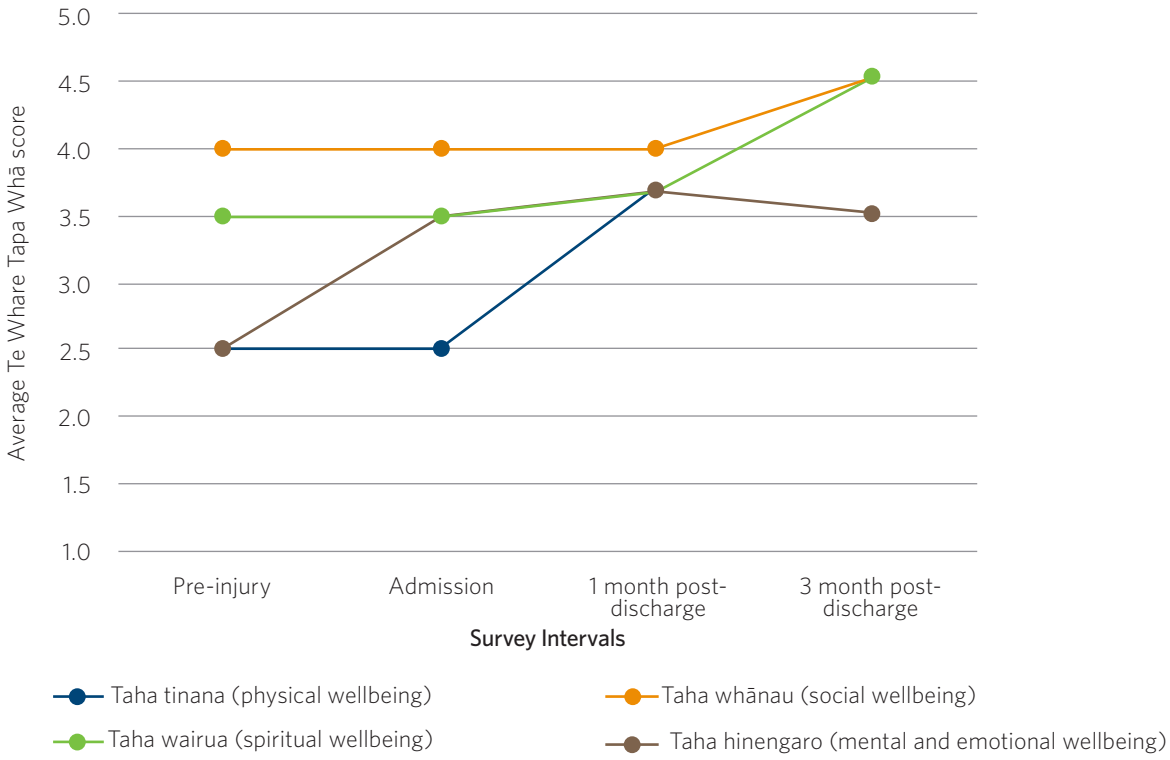
**Figure 4: Average pre-intervention Te Whare Tapa Whā scores, Jan 2020–March 2021**




Source: Southern data collection.

Data was then collected during the improvement phase to determine whether the team's change ideas improved the transition from inpatient to community care in the immediate 3-month post-discharge period (Figure 5). Given the extended nature of the data collection timeline and the low numbers of Māori trauma patients admitted to the Puāwai rehabilitation unit, only three patient data sets were collected during the improvement period. Encouragingly, the data no longer demonstrated a drop in wellbeing at the 3-month post-discharge mark for three of the four dimensions; however, issues remain with sustaining hinengaro (mental and emotional wellbeing). This reflects an area that may benefit from further improvement work to support this dimension of the wellbeing whare.

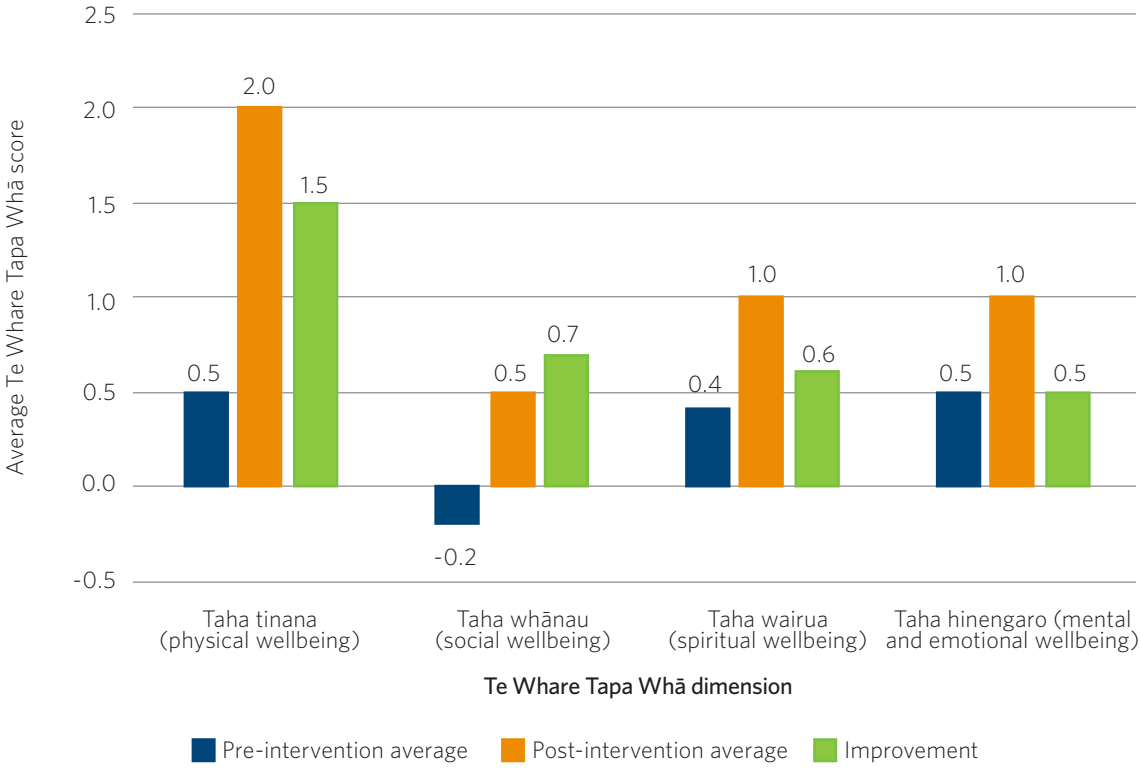
**Figure 5: Average post-intervention Te Whare Tapa Whā scores, July 2021–February 2022**




Source: Southern data collection.

The project aimed to increase the average Te Whare Tapa Whā score by +1 in each dimension from admission to 3 months post-discharge. Figure 6 demonstrates the difference in average scores for each dimension pre-intervention and during the improvement period. A positive change occurred across all four dimensions, with the biggest gain of +1.5 made in taha tinana (physical wellbeing). Gains of +0.7, +0.6 and +0.5 were seen in taha whānau, taha wairua and taha hinengaro, respectively.

### Figure 6: Average Te Whare Tapa Whā scores for pre- and post-intervention periods




Source: Southern data collection.

## What equity measures improved?

- Te Ara Mārama was led by Māori, with Māori and for Māori, so equity was embedded throughout all project measures. Specifically, the project improved access to services and support for Māori patients, with the collective aim of improving health outcomes for all Māori who were discharged from the Puāwai rehabilitation unit.
- Barriers identified during the initial scoping phase of the project, such as differential access to services and perceived non-compliance with treatment, were reduced.

## What process measures improved?

- During the lifespan of the project, the percentage of Māori patients discharged from the Puāwai rehabilitation unit who were offered referrals to a kaupapa Māori provider increased from 0 percent to 98 percent. However, the volume of eligible patients during the improvement period was too low for improvement to be demonstrated on a run chart.
- A total of 55 percent of patients accepted this referral.
- The most common reason noted by the 45 percent of patients who declined a referral was prior involvement with navigation services or extensive whānau/iwi support already in place.

## Were any unintended consequences, unexpected benefits, problems or costs associated with this project?

The Te Whare Tapa Whā tool was incorporated into usual goal-setting practices for improved holistic assessment and was so successful that some community rehabilitation teams asked permission to use the tool within their own services outside of the unit.

The ongoing COVID-19 pandemic during the project lifespan was a challenge for the team because of the additional workload, pressure and stress on staff. Data collection also took longer than anticipated because of the low numbers of eligible patients.

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

Participating in this collaborative increased the base knowledge across the team in the use of quality improvement methods and tools, such as driver diagrams and process maps. It also helped build even stronger working relationships between staff at the Puāwai rehabilitation unit and those working at various kaupapa Māori community services.

## Post project implementation and sustainability | Te whakaritenga me to whakapūmautanga

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

The change ideas successfully tested during this project have been incorporated into the Whāia te Ora (pursuit of health) framework, which is now in place at the Puāwai rehabilitation unit. Staff consultation and education helped to embed this framework into everyday practice.

## Summary and discussion | Te whakarāpopoto me to matapakinga

### What were the lessons learned?

- Whakawhanaungatanga is key and takes time and care to achieve. The process cannot be rushed.
- Improving transitions of care requires establishing strong cross-sector connections with community services to achieve a common goal.

### What are the key steps that a team somewhere else should take to implement a similar project?

- Prioritise listening to consumers and valuing their voice in shaping change work.
- Understand the power of kōrero and the importance to consumers that they remain in control of their own narrative. Tikanga demands a robust process for protecting the sovereignty of a consumer's words: Just signing a consent form is not enough– teams must continue to engage with consumers and discuss how their words are used through the project.
- Whakawhanaungatanga is vitally important for team members to be trusted with consumers' stories and experiences. Community services are often very protective of their people because of the inherent power imbalance between health professionals and consumers. Follow their lead and respect the process.
- Take the time to build networks and familiarise yourself with the breadth of services available in your region, including those that are not solely focused on tinana (physical wellbeing). Taking a holistic view and improving social, spiritual and mental wellbeing are just as important during recovery.
- Consult regularly and gather as much feedback as possible so that consumers feel listened to.
- Build improvement projects with people, not for people.

### Are there any future steps or ongoing work that you intend to continue with on this project topic?

The Whāia te Ora framework continues to be used for patients at the Puāwai rehabilitation unit and other community services in the Ōtepoti region. The Te Whatu Ora Southern service planning team have been especially interested in how the Te Whare Tapa Whā tool developed through this work could improve equity across the organisation. Since completion of the initial project, health services in the Te Whatu Ora Southern district have assigned a dedicated equity champion. A total of 140 people have attended one of seven full-day equity workshops, and participants meet weekly to embed equity principles into clinical care and service strategy. Additional resources have been developed in Te Whatu Ora Southern to support the continued spread of this important work. As Māori are overrepresented in major trauma incidents and outcome statistics, the project team has an aspirational goal to share their work nationally to improve the transition of care for Māori trauma patients across Aotearoa New Zealand.

## The team | Te rōpū

- Amy Rosenfeld – speech and language therapist
- Denise Gordon-Glassford – consumer advisor
- Sue Smith – improvement advisor
- Mathew Kiore – pou taki educator
- Warren Cossou – speech and language therapist
- Trish Frederickson – ACC client service leader
- Shelley Kapua – general manager, Arai Te Uru Whare Hauora
- Luana Berwick – tu pono connector, Arai Te Uru Whare Hauora
- Fiona Sinclair – whānau ora navigator, Arai Te Uru Whare Hauora
- Kerstin Kummerer – community services manager, Ngā Kete Mātauranga Pounamu
- Jackie Hawker – Puāwai rehabilitation unit reception

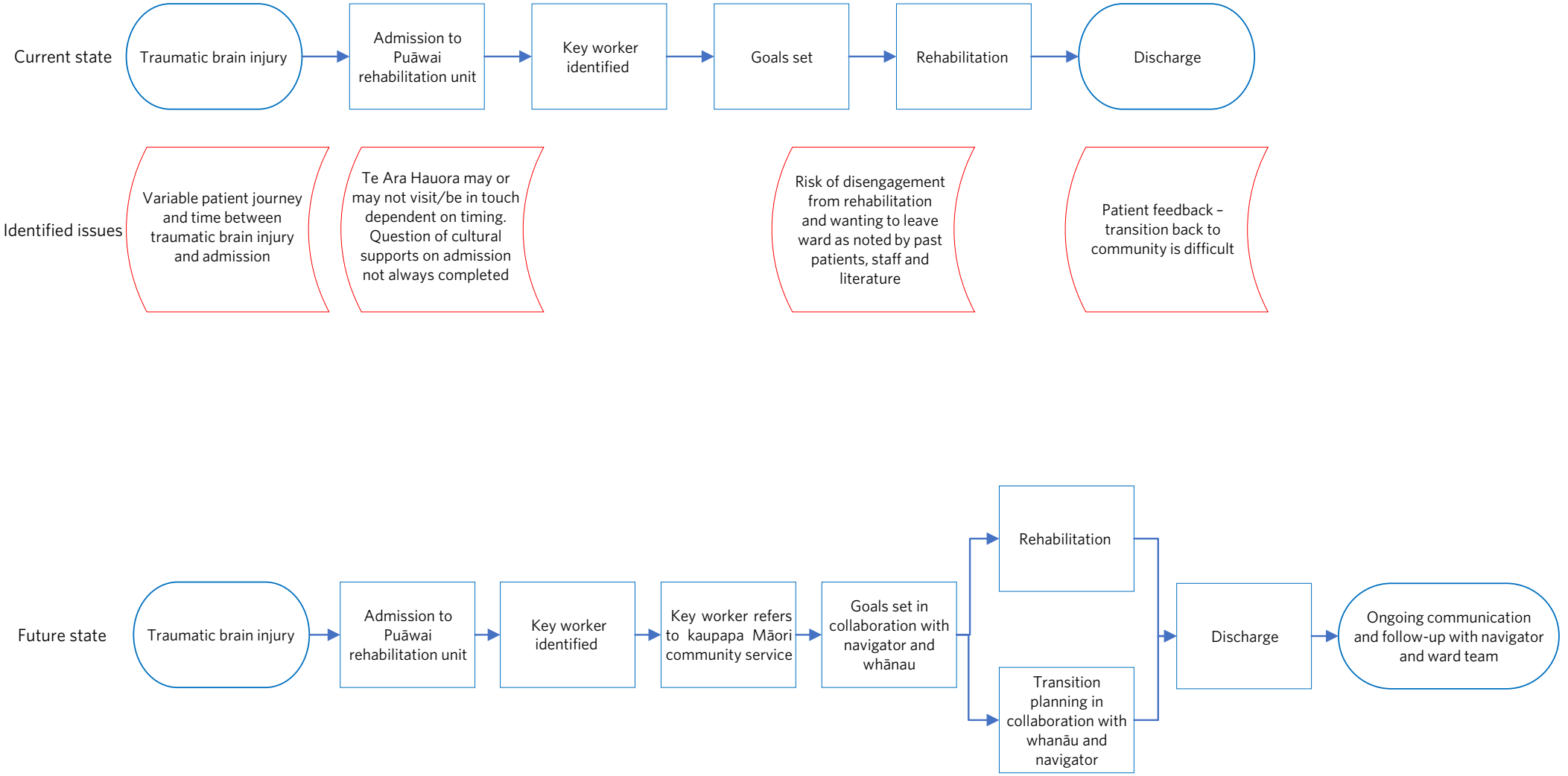
The team also acknowledges and thanks the following people for their contribution to the success of the project: Gilbert Taurua (chief Māori health strategy and improvement officer – Te Whatu Ora Southern), Toni Auchinvole (rehabilitation consultant – Puāwai rehabilitation unit), Alice Barach (senior physiotherapist – Puāwai rehabilitation unit), Huata Arahanga (contracts advisor – Te Pūtahitanga o Te Waipounamu), Roera Komene (kaihautu, operations manager – A3K Kaitiaki), Maria Russell (whānau ora navigator – Tumai Ora), Christine Maxwell (general manager – Te Roopu Tautoko Ki Te Tonga), Mel Kuiti (general manager – Uruuruwhenua Health), Sue Barrett (Te Hou Ora Whānau Services), Chris Rosenbrock (general manager – Aukaha), Carol Padgett (Uruuruwhenua Health), Rebecca Coats (trauma nurse specialist, Southland Hospital – Te Whatu Ora Southern), Fiona Thomas (trauma nurse specialist, Dunedin Hospital – Te Whatu Ora Southern), Tracey Wright-Tawha (CEO – Ngā Kete Mātauranga Pounamu), Alycia Mitchell (team leader, partnered physical injury team – ACC), Leanne Stewart (registered nurse, Arai Te Uru Whare Hauora), Emma Grant (associate charge nurse manager – Puāwai rehabilitation unit).

## Appendix 1: Measures | Āpitihanga 1: Ngā ine

| Measure name | Description | Collection method | Collection frequency |
|---|---|---|---|
| Average Te Whare Tapa Whā score | Score of 1 (very bad) to 5 (very good) for each of the four dimensions<br>Numerator: sum of the scores for each dimension<br>Denominator: number of surveys for each dimension | Visual tool provided to eligible consumers who then self-rate their health and provide any comments, either face to face or via phone with PRU staff | As guided by time intervals (pre-injury; admission; 1, 3, 6 and 12 months post discharge) |
| Percentage of Māori patients discharging from PRU who have been referred to a kaupapa Māori community service provider | Numerator: Number of referrals to kaupapa Māori community service<br>Denominator: Total number of discharges of Māori patients from PRU | Manual audit | Quarterly |
| Kaupapa Māori service capacity | Feedback from service providers on capacity of their navigators and whether increased referrals from PRU are beyond service capabilities | Phone calls to service providers | Quarterly |

Abbreviations: PRU = Puāwai rehabilitation unit.

# Appendix 2: Process map | Āpitihanga 2: Mahere Tukanga



# Glossary | Te kuputaka

**Balancing measure:** Determines whether changes made to one part of the system are causing any unintended consequences in another part of the system.

**Driver diagram:** A visual display of a team's theory of what contributes to the achievement of the project's aim.

**Kaupapa Māori:** Ways of doing or being that is by Māori, with Māori and for Māori, informed by tikanga.

**Mātauranga Māori:** Knowledge and understanding of all things from a Māori perspective.

**Outcome measure:** Determines the extent to which the aim has been achieved.

**Process mapping:** Creates a visual diagram of the steps involved in a process. It helps a team to understand their current system better and makes it easier to see opportunities for improvement.

**Process measure:** Determines the degree to which processes or change ideas have been implemented.

**Qualitative data:** Describes the attributes or properties of a person, event or object. It represents information and concepts through text, audio and images and cannot be counted, measured or easily expressed through numbers.

**Quantitative data:** Information that can be counted, measured or quantified and given a numerical value.

**Te Whare Tapa Whā:** The house with four walls.

**Tikanga:** Māori customs, philosophy, principles and values.

**Whakawhanaungatanga:** The process of establishing relationships and relating to others.

## Other resources

The following resources can be downloaded from: www.hqsc.govt.nz/resources/resource-library/te-ara-marama-improving-transition-of-care-to-the-community-for-maori-trauma-patients.

Te Whare Tapa Whā visual tool

Whāia te Ora framework

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Available online at www.hqsc.govt.nz.