Trauma rehabilitation collaborative: Summary of case studies

Te ohu whakaora tūkino: He kupu whakarāpopoto

Te Hononga Whētuki ā-Motu
National Trauma Network

Te Kāwanatanga o Aotearoa
New Zealand Government

Te Tāhū Hauora
Health Quality & Safety Commission

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Every year, approximately 2,400 patients experience major trauma in Aotearoa New Zealand. Major trauma is determined by the severity of the physical injuries. Clinical specialists describe this severity using the injury severity score, which ranges from 1 to 75. Any combination of injuries scoring more than 12 is classified as a major trauma.

Males, particularly young Māori males, have the highest burden of trauma. Half of the total caseload is caused by road traffic crashes, followed by falls, assaults and other causes. Trauma is a leading cause of mortality in those aged 15–45 years.

People who survive major trauma often have high treatment costs, lengthy periods of rehabilitation and time on weekly compensation. High-quality, early rehabilitation supports recovery to the fullest potential. This improves quality of life, ensures cost-efficient and effective care and reduces the burden across the whole health system.

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 collaborative began in March 2021 and was completed in June 2022 (Figure 1). The rehabilitation collaborative formed part of a broader programme of work by the National Trauma Network, the Accident Compensation Corporation (ACC) and Te Tāhū Hauora Health Quality & Safety Commission (Te Tāhū Hauora) to establish a contemporary system of trauma care in Aotearoa New Zealand.

This document summarises the nine completed collaborative projects. Detailed case studies of each of the completed projects can be found at www.hqsc.govt.nz/our-work/national-trauma-network/projects/major-trauma-rehabilitation-work-programme/national-collaborative.

Figure 1: Collaborative timeline

Project teams collaborating and building relationships during learning sessions.

Projects teams creating process maps during learning session one, providing them with visual tools to identify inefficiencies in their systems and opportunities for improvement.

During the learning sessions teams displayed storyboards of their progress, this allowed others to learn from their experiences.

Foreword | He kupu takamua

This work is a wonderful example of what can be achieved when dedicated professionals come together with a shared passion for improving outcomes for patients.

The scope of the work was intentionally broad to allow services to target improvements specific to their clinical areas. Despite this, teams worked on similar issues of care coordination, patient experience and improving how people with traumatic brain injury (TBI) receive early rehabilitation. The overlapping themes and shared experiences allowed professionals to establish important, lasting relationships locally, regionally and nationally.

The teams were dedicated and enthusiastic. They participated with pragmatism, humour and flexibility when faced with challenges. At times, teams were unable to collect data in the way they anticipated, and COVID-19 lockdowns and visitor restrictions meant that whānau engagement was challenging and planned in-person learning was instead held online.

Despite the significant clinical pressures experienced by the teams due to the COVID-19 pandemic, they still achieved cross-health sector collaboration, reduced service inequities and implemented lasting improvements to service delivery that have improved outcomes for people experiencing trauma in Aotearoa New Zealand.

Alongside these impactful clinical outcomes, it is a real achievement that participants reported high levels of confidence in using quality improvement methodology. The knowledge and skills learnt during this collaborative will positively impact future service improvement work.

It has been a career highlight to have been involved in this important project. The next few years pose an exciting opportunity to build on these outcomes and collaborate further to implement continued improvement in how people recover after serious injury.

Kat Quick
Clinical Lead, Trauma Rehabilitation – Te Tāhū Hauora Health Quality & Safety Commission

These collaborative projects are a fantastic example of how small ideas can grow and be successful. All the projects in the collaborative were driven by teams in hospitals and rehabilitation providers across Aotearoa New Zealand and resulted in tangible changes that will ultimately benefit the most seriously injured people and their whānau. It is heartening to see some of this work being extended for national roll-out across all hospitals. The quality improvement science and methodology that trauma teams have learned will support further improvements over time.

These projects demonstrate the contribution of the consumer voice in shaping initiatives that work and are important for the very people we are trying to help. Well done to all the teams who have done the hard mahi and achieved excellent results.

A huge congratulations to all the teams on their innovative and inspiring work, from all of us here in the trauma team at Te Tāhū Hauora Health Quality & Safety Commission.

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National Programme Director,
National Trauma Network

The trauma team

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Improving access to community rehabilitation after TBI

Overview

ABI Rehabilitation NZ Ltd (ABI), a specialist TBI rehabilitation provider, and Active+ NZ Ltd, a multidisciplinary rehabilitation provider, worked with allied health and trauma teams at Counties Manukau Health, ACC and academics from Auckland University of Technology to improve access to community rehabilitation after TBI.

The project significantly reduced the waiting time for people to access rehabilitation and improved the quality of referrals, with the result that people received the right rehabilitation to meet their needs and goals from the most appropriate community provider.

Aim

The aim of the project was that by March 2022, among major trauma patients with TBI community rehabilitation needs that Counties Manukau Health refers directly to ABI or Active+, 90 percent will begin community rehabilitation within 2 weeks of discharge from hospital.

What we did

The team tested change ideas that would improve their process. These included:

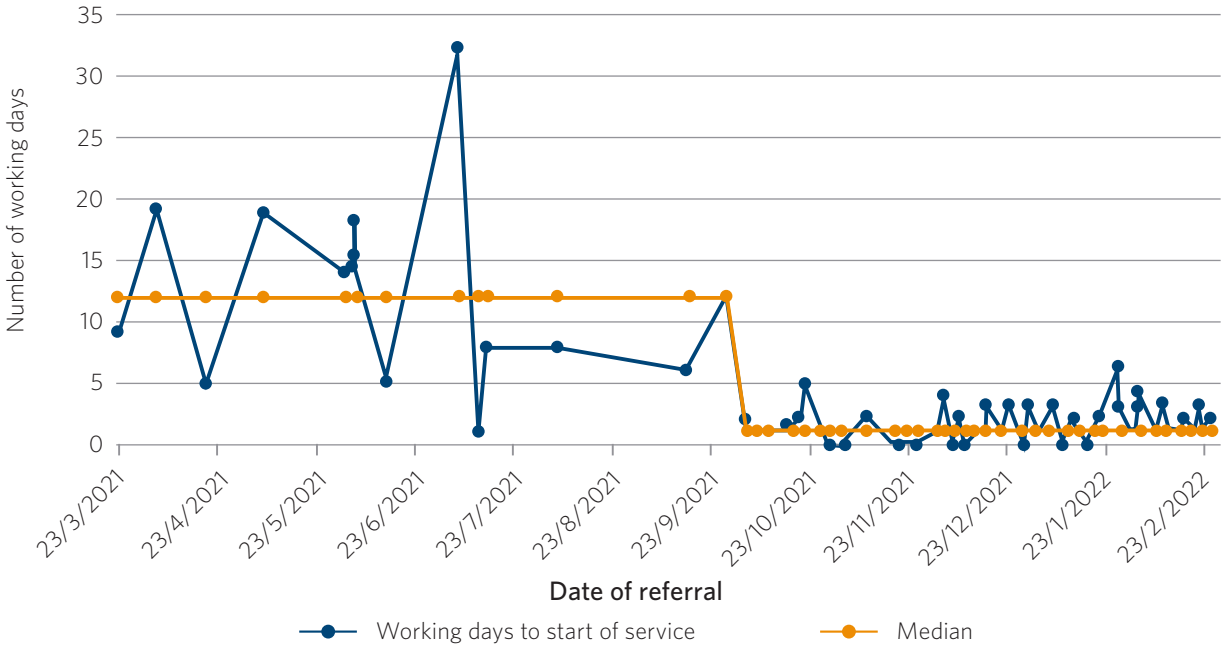
- co-designing a referral form in a process that involved ABI, Active+ and Counties Manukau Health clinicians
- developing a list of clinical concerns to help hospital and community teams prioritise and triage referrals
- 'closing the loop' by informing hospital clinicians when a referral had been received and actioned
- in consultation with ACC, removing the process of requiring ACC prior approval.

Key achievements

- The time between hospital discharge and starting rehabilitation reduced to a median of 1 working day (range 0–6 days) (Figure 2).
- The proportion of referrals received for Māori and Pacific peoples increased, making access to rehabilitation more equitable.

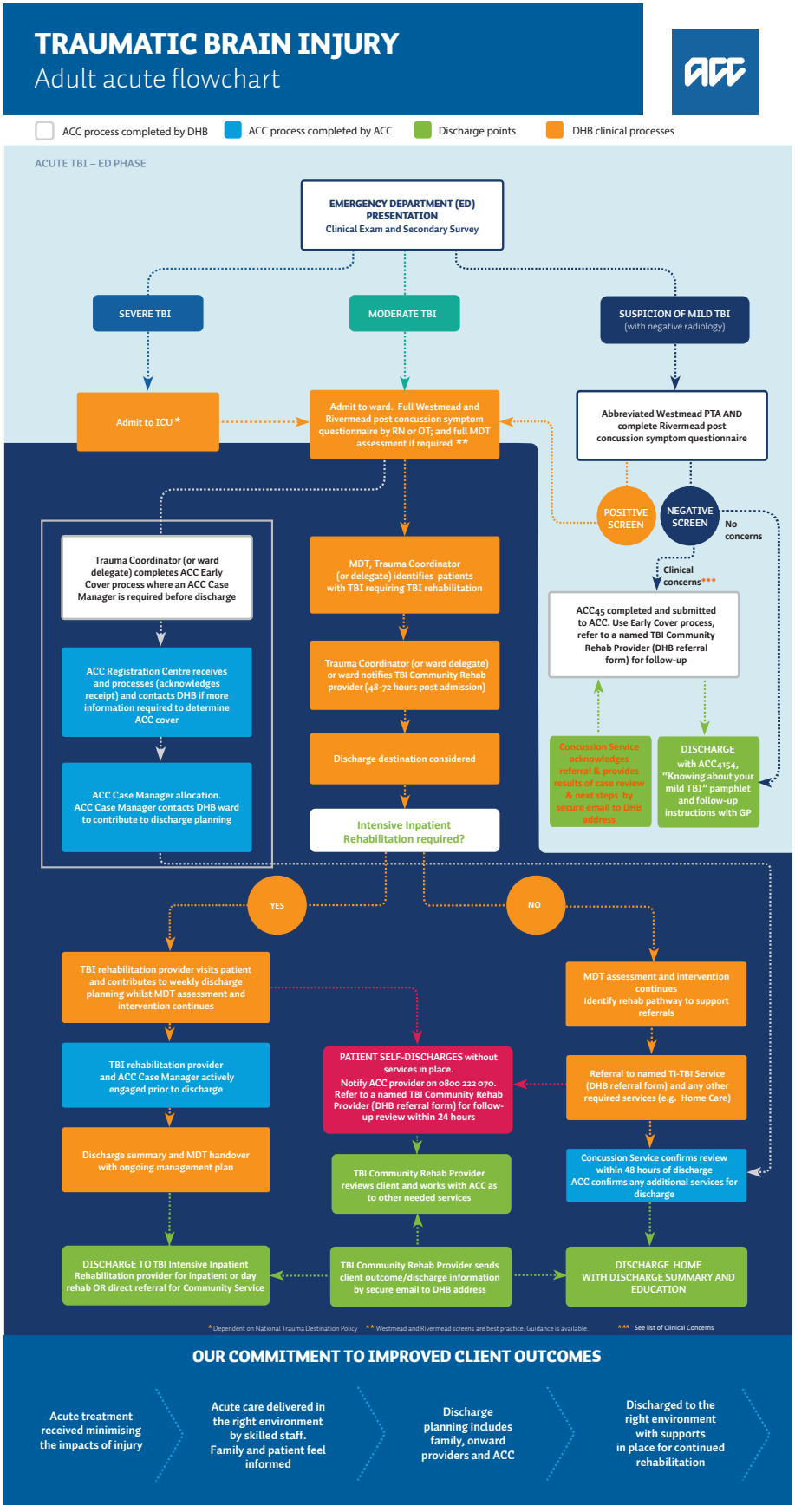
The project was so successful that ACC trialled the pathway (Figure 3) in four urban and regional hospitals and implemented it nationally across all hospitals in August 2022.

Figure 2: Time in working days between hospital discharge and accessing community rehabilitation, March 2021 –February 2022



Source: ABI and Active+ data

Figure 3: Traumatic brain injury adult acute flowchart[1]



1 A full-size version of this flowcart is available at: www.hqsc.govt.nz/resources/resource-library/abi-and-active-case-study-improving-access-to-community-rehabilitation-after-traumatic-brain-injury

Te Whatu Ora
Health New Zealand
Te Toka Tumai Auckland

Improving the discharge pathway for people hospitalised with TBI

Overview

The Auckland City Hospital neurosurgical wards admit people with TBI. When people are later transferred to another hospital or inpatient rehabilitation provider, junior medical staff complete the electronic discharge summary sent to the receiving hospital.

This project identified that, because the discharge summary only contained medical information, important allied health assessments were not being handed over to the receiving team. The project developed an integrated allied health assessment form to make the information easier to find and aimed to have allied health team members document on the electronic discharge summary, so that rehabilitation providers received information about the person's rehabilitation needs in a timely manner.

Aim

The project aim was that, by December 2021, 90 percent of people with moderate to severe TBI being discharged or transferred from neurosurgical wards at Auckland City Hospital would have an allied health rehabilitation plan and recommendations included in their discharge report.

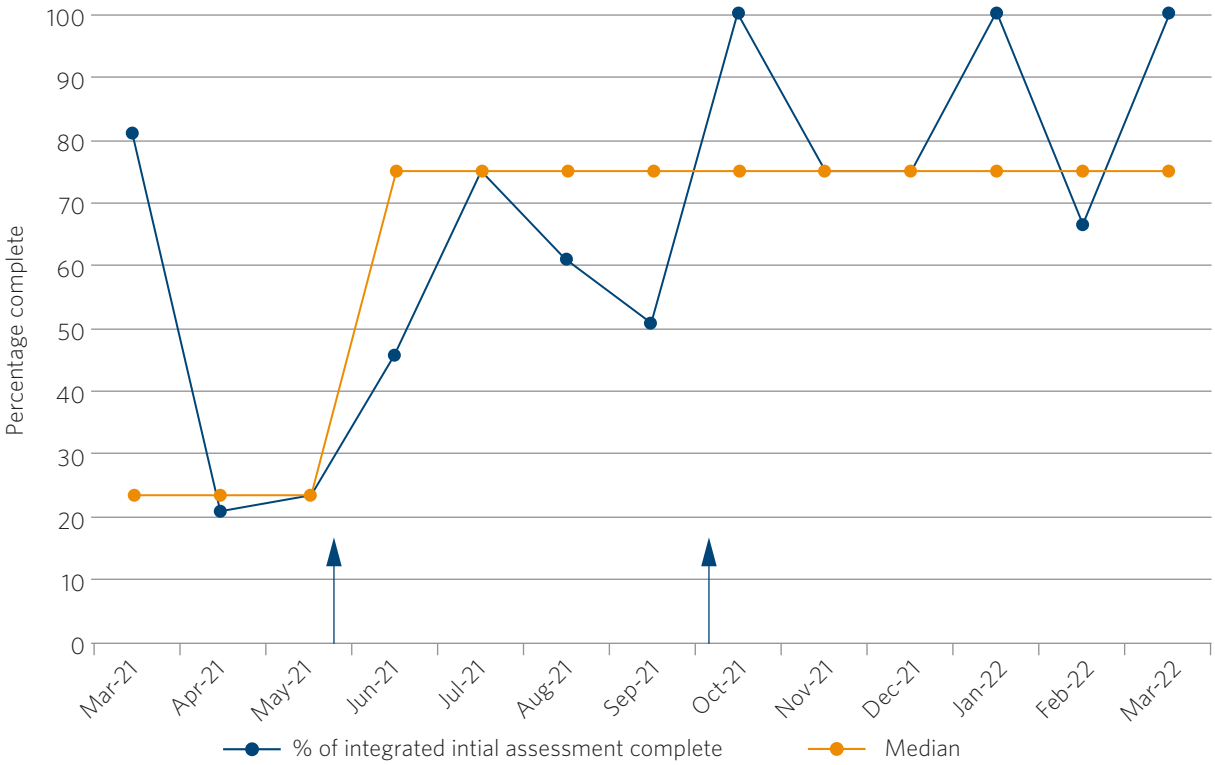
What we did

- Implemented an integrated allied health assessment form, to be commenced within 24 hours from admission and completed within 3 days (Figure 4).
- Developed a culturally safe family and friends questionnaire to capture the patient's relevant social history and cultural needs. This was used alongside the allied health assessment form and sent to the receiving provider.
- Allied health clinicians in neurosurgery began to input information into the electronic discharge summary.

Key achievements

- The integrated assessment form and the family and friends questionnaire are now both consistently used in day-to-day practice on the neurosurgery wards.

Figure 4: Percentage of integrated assessment completion, March 2021–March 2022



Source: Te Toka Tumai Auckland data collection.

Auckland City Hospital, Te Whatu Ora Health New Zealand Toka Tumai Auckland

Credit: Te Whatu Ora Health New Zealand Te Toka Tumai Auckland Medical Photography.

Auckland City Hospital, Te Whatu Ora Health New Zealand Toka Tumai Auckland

Credit: Te Whatu Ora Health New Zealand Te Toka Tumai Auckland Medical Photography.

Te Whatu Ora
Health New Zealand

Capital, Coast and Hutt Valley

Improving inpatient rehabilitation services for patients following major trauma

Overview

Trauma care is a multi-disciplinary specialty, and the important role of allied health services in the care and rehabilitation of major trauma patients cannot be understated. This project aimed to understand allied health input into the care of major trauma patients and investigate opportunities to improve trauma rehabilitation and enhance patient experiences at Wellington Regional Hospital.

Discussions with both consumers and clinicians raised issues of communication, patient-centred care, the role of different therapy disciplines and therapy access. Change ideas to address these issues were developed and tested, resulting in successful and meaningful change for both patients and staff.

Aim

The project aimed to improve the experience of adult major trauma patients who receive allied health therapy during their stay on an acute ward at Wellington Regional Hospital from a baseline score of 84 to 95 percent by December 2021.

Initially, the project also aimed to increase the experience score for whānau by 50 percent during the same period. However, visiting restrictions because of multiple COVID-19 outbreaks meant the team could not conduct surveys of the whānau experience.

What we did

- A major trauma information booklet was co-designed with consumers to help trauma patients and their whānau navigate their inpatient stay (Figure 5). The booklet included information on the role of different health care providers and ACC, as well as key contact numbers, for patients being discharged home to ease their transition to community-based care.
- Communication among the allied health team was identified as an area for improvement, so an allied health handover form was developed to clarify therapy plans, reduce duplication of care and improve teamwork and day-to-day care planning.
- Education sessions were held for nursing staff about making allied health referrals and correctly completing ACC referral paperwork to encourage early discharge planning.

Key achievements

- Compliance with the allied health handover tool was 100 percent, and excellent feedback from staff indicated that it improved the planning and efficiency of allied health therapy.
- The confidence of nursing staff in making allied health referrals improved.
- Patients and whānau noted that they had a better understanding of the hospital system and what rehabilitation services were available to them, both as an inpatient and in the community post-discharge.

'If I had known about that service, it would have really helped my journey' *Consumer perspective*

Figure 5: Sample pages from the major trauma information booklet[2]

Major trauma patient information

This information is for people who have been admitted to hospital after a major trauma (multiple, serious injuries). This information aims to supplement the information given to you by your health care team.

During your hospital stay, many health care professionals may be involved in your care, and there is often a lot of information to remember. This booklet gives you a brief introduction to some teams you may be working with, as well as some more information and contact details of organisations that can offer support to you and your family and whānau after you leave Wellington Regional Hospital.

Feedback

Te Whatu Ora Capital, Coast and Hutt Valley is committed to providing the best services for our community and is continually involved in service development and improvement. Please take the time to complete one of our feedback forms online or ask your in-hospital staff to provide a paper version to let us know what we are doing well or if there is anything we could do better.

Email: feedback@ccdhb.org.nz

Website: www.ccdhb.org.nz/contact-us/feedback-suggestions-complaints-and-compliments/

Useful contacts

ACC: www.acc.co.nz Tel: 0800 844 657

Wellington Regional Hospital: email: ccdhb.org.nz Tel: 04 385 5999

Central equipment pool: Tel: 04 385 5999 ext|6334

Wellington Centre
Peke Waihanga | Artificial Limb Service: www.pw.co.nz Tel: 04 389 2045

Additional contacts or information/guidance:

Acute pain service

The acute pain management service (APMS) provides advice to your doctors and therapists on managing acute (severe and sudden) episodes of pain. APMS provides treatment that reduces your pain with as few side effects as possible.

Pharmacist

Pharmacists are experts in medicines. They are available for help and advice to you and all the hospital team. The pharmacist makes sure that you get the best from your medicines. The pharmacist will talk with your doctors to make sure that all medicines prescribed are suitable for your needs.

Consult-liaison

Consult-liaison is a clinical service focused on the assessment and treatment of people's mental health/psychological wellbeing in the general hospital setting.

Teaching hospital

Wellington Regional Hospital is a teaching hospital. In the ward, there may be health professional students working with trained staff. You may be asked to participate in teaching sessions – you may refuse if you wish.

Patient care coordinator

The patient care coordination service organises all stages of the patient's journey to support discharge. Patients who have more complex conditions, have longer length of hospital stays and require more complex discharge planning can get support from this service.

Chaplains

Hospital chaplains and their volunteers make regular visits to wards. We listen and provide company and emotional and spiritual support as identified by the patient. No judgement, no agenda. We have time.

Support services

Do you have a disability support need? If so, please let staff know.

Do you need an NZSL interpreter? If so, please let staff know as soon as you can.

The Te Whatu Ora Capital, Coast and Hutt Valley team participating in a plan–do–study–act workshop during learning session 1

2 The full version of this information booklet is available at: www.hqsc.govt.nz/resources/resource-library/improving-inpatient-rehabilitation-services-for-patients-following-major-trauma

Te Whatu Ora
Health New Zealand

Counties Manukau

Improving the accuracy of post-traumatic amnesia assessments

Overview

Te Whatu Ora Counties Manukau has long had a process in place to screen for post-traumatic amnesia (PTA) following suspected TBI. However, there were inaccuracies in the way the assessments were performed, increasing the risk of missing diagnoses of concussion or more serious TBIs. As a result, some people experienced suboptimal hospital care, and some referrals to community support services could potentially be overlooked. The team developed resources and delivered education to occupational therapy and nursing staff working on the acute wards. Staff feedback has been positive about the ease of completing the assessment with the structured distribution of consistent resources.

Aim

The project aimed to improve the accuracy rates of the Westmead PTA assessments, when administered for patients admitted to acute wards who meet TBI pathway criteria, from 33 percent to 90 percent by February 2022.

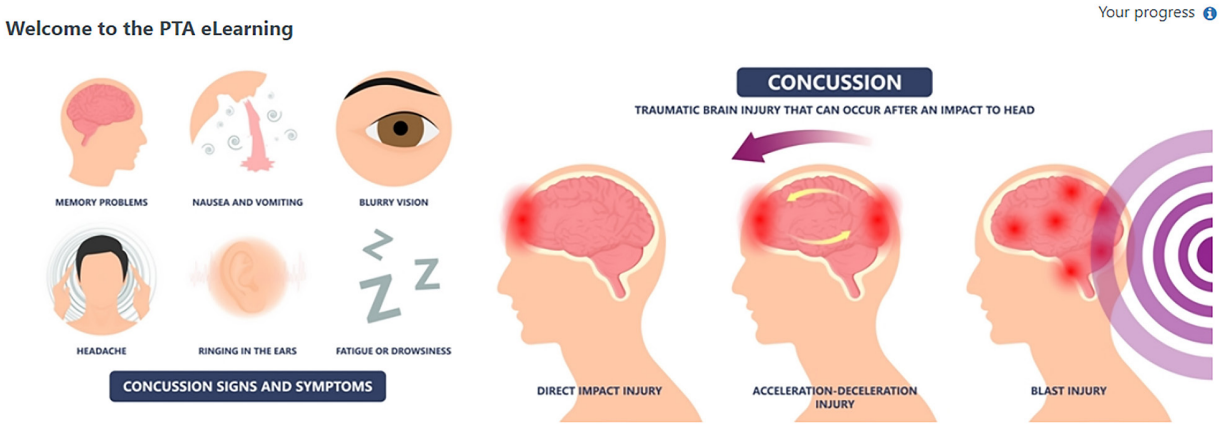
What we did

- Created an e-learning module to inform clinicians about how to administer the Westmead PTA assessment and other aspects of treatment to consider in the early stages of recovery (Figure 6).
- Ran training to upskill occupational therapists.
- Engaged and trained a team of nursing PTA champions responsible for identifying patients and assessing PTA on the wards.
- Reviewed and updated physical resources and electronic documents.

Key achievements

- Westmead PTA assessments were performed with a greater degree of accuracy.
- Work done during this project has informed the current serious TBI national collaborative to increase PTA assessment in hospitals across Aotearoa New Zealand.

'Before the [education] session, I had not thought about the long-term impact for patients if they go undetected and continue to suffer symptoms of concussion at home.' *New graduate occupational therapist*



This e-learning has been developed for health care professionals who work with people with suspected or confirmed post-traumatic amnesia (PTA) following brain injury (TPI).

Time: You should allow 1 hour to complete this module.

On completion of this module you will be able to describe what PTA is and how it is tested, understand the importance of testing, feel confident in testing procedures, and understand the clinical implications of the test results.

Te Whatu Ora
Health New Zealand

Te Pae Hauora o Ruahine o Tararua MidCentral

Implementing a major trauma pathway for coordinated care and timely access to allied health input

Overview

People admitted to Te Pae Hauora o Ruahine o Tararua MidCentral after major trauma require input from the multidisciplinary team, which includes a physiotherapist, an occupational therapist and a social worker. The project team designed a major trauma pathway in which the nurse specialist conducted a daily follow-up, allowing the required referrals to allied health to be made promptly. As a result, coordinated interdisciplinary assessments and rehabilitation started sooner and patients and whānau were more involved in decision-making about care, post-discharge follow-up and linkages to required community supports.

The project has improved care processes within the medical, nursing and allied health teams. Through using an electronic whiteboard, teams know who is waiting for allied health follow-up. Follow-up phone calls after discharge have enabled patients to make a smoother transition into the community.

Aim

The aim of the project was that, by 1 March 2022, 100 percent of adult major trauma inpatients would have the appropriate multidisciplinary assessments completed, as indicated by screening and the major trauma pathway, before they were discharged from the inpatient ward.

What we did

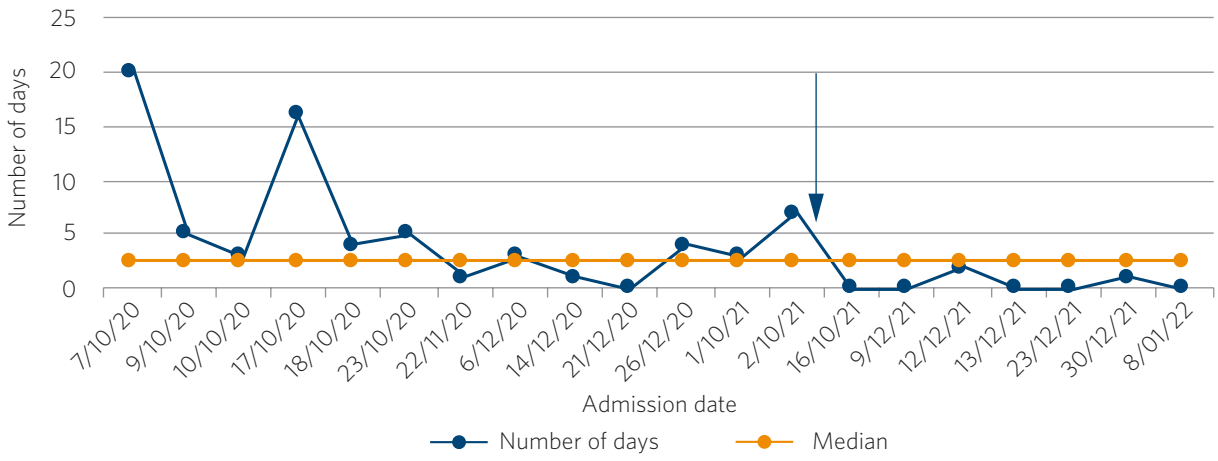
The successful changes included:

- Developing a pathway for all patients presenting with trauma, outlining the multidisciplinary referrals that were required during the inpatient stay (Figure 8).
- Early identification and daily follow-up of major trauma inpatients.
- Follow-up phone call from a nurse specialist 48 hours after discharge.

Key achievements

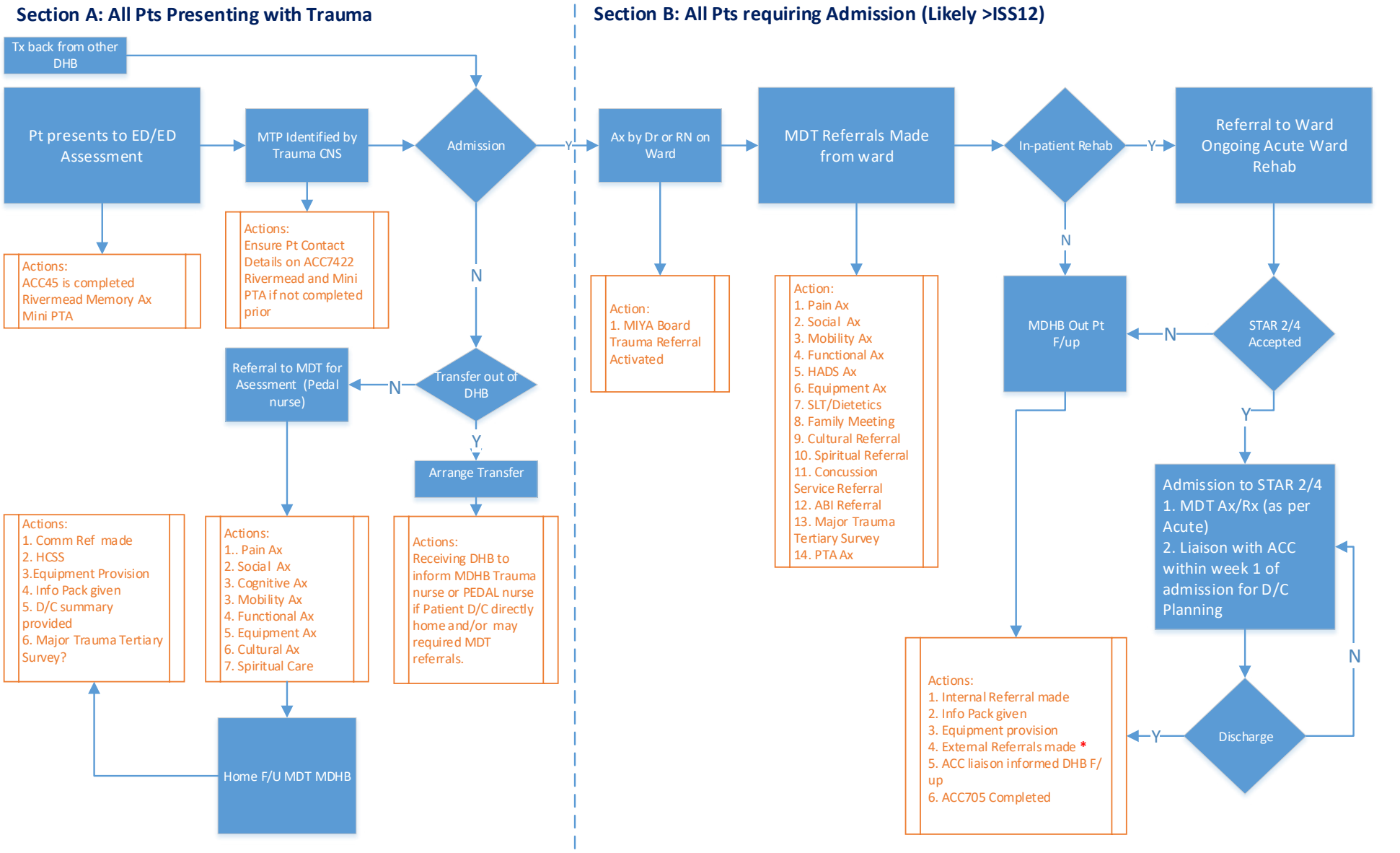
- In the 3 months following the introduction of the major trauma pathway, 100 percent of inpatients had all required referrals made and responded to within 1 working day of admission (Figure 7).
- The percentage of trauma patients who did not attend outpatient appointments decreased from 20 percent to 5 percent.
- Re-presentations to hospital within 30 days of discharge reduced from 8 percent to 2 percent.

Figure 7: Number of days between trauma admission and physiotherapy input, October–December 2020 and October 2021–January 2022



Source: Te Pae Hauora o Ruahine o Tararua MidCentral data collection.

Figure 8: Major trauma pathway[3]



NB: Clinical variation from identified pathway (ie: nil intervention from specific service) needs to be clearly documented and reasoned in patient file
All associated documents/assessments can be found on the intranet/clinical/trauma pathway. * completed for patients transferred to other/external services.

3 The full version of this pathway is available at: www.hqsc.govt.nz/resources/resource-library/te-pae-hauora-o-ruahine-o-tararua-midcentral-case-study-implementing-a-major-trauma-pathway-for-coordinated-care-and-timely-access-to-allied-health-input

Te Whatu Ora
Health New Zealand
Nelson Marlborough

Trauma at the top of the South

Overview
The transition from hospital to home can be challenging for patients who have experienced major trauma. The team at Te Whatu Ora – Nelson Marlborough identified that discharge information is often complex and confusing for patients. They are expected to understand how to manage their injuries and any associated functional restrictions, arrange and/or attend follow-up appointments and liaise with the different health and social agencies relevant to their rehabilitation journey. This is made even more difficult when patients are discharged without receiving their electronic discharge summary where some, or all, of this information is found. The team worked to ensure all major trauma patients are discharged safely from Nelson Hospital with appropriate information to support their transition to the community.

Aim
The project aimed to increase the rate of discharge summary completion on the day of discharge for major trauma patients from 73 percent to 90 percent by April 2022.

What we did
- A major trauma discharge checklist was developed for the multidisciplinary team to complete. The checklist acts as a prompt to ensure relevant referrals are made (such as to ACC case management and the concussion clinic) and the right information is given to patients (such as wound care advice and driving restrictions) before discharge (Figure 9).
- House officers and registrars received targeted education on the importance of completing discharge paperwork on time.
- Allied health services included rehabilitation plans on the patient's discharge summary.

Key achievements
- Despite significant COVID-19 disruptions to the project, discharge summaries were completed on the day of discharge for 100 percent of major trauma patients at Nelson Hospital at 12 months after the intervention period.
- There was an overrepresentation of patients in the over 65 age group who were not receiving their discharge summary on time during the baseline data collection. This inequity gap had also closed by 12 months.

Nelson Hospital, Te Whatu Ora Health New Zealand Nelson Marlborough

Credit: Te Whatu Ora Health New Zealand Nelson Marlborough.

Figure 9: Major trauma discharge template

Major Trauma Discharge Template

Patient & process		**Other considerations before discharge**	
Patient & family/whānau involved in discharge planning		Drains & catheter review	
Patient identification & contact details		Wounds checked – dressings changed	
Ethnicity		Pins/cast/traction/splintage review	
Trauma diagnosis confirmed		IV lines removed	
Comorbidities & medical risks confirmed		Removal of sutures Date_____	
Tertiary survey completed & documented		Physical restrictions discussed	
Procedures listed on dx doc		Sleep/wake cycle review	
ACC confirmed – case manager allocated?		Falls risk assessment	
ACC7422 – early cover required		Driving restrictions	
ACC706 – early notification of complex claim		Patient information leaflet(s) provided	
Clinical status for discharge		**Follow-up**	
Neurological status		GP in __ days	
Concussion referral required		Outpatient follow-up apt made? • Surgical • Orthopaedic • Other	
Physiotherapy clearance		Physiotherapy	
Equipment available		Occupational therapy	
Acute Pain team referral		Speech language therapy	
Analgesia plan for home			
Aperients			
Bladder and bowel care discussed		**Contacts & support**	
Referral to community RNs		Te Waka Hauora	
DVT prophylaxis review		Hinengaru Mental Health	
Comments:			

Te Whatu Ora
Health New Zealand
Southern

Te Ara Marama – Improving transition of care to the community for Māori trauma patients

Overview
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 discharge 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. The team identified poor referral rates from the rehabilitation unit to Māori community providers and high re-admission rates for Māori; there was a missed opportunity to provide patients with important assistance during the discharge period. This project, Te Ara Mārama, aimed to encourage collaboration between community health providers and inpatient rehabilitation services to optimally support Māori trauma patients in their transition from inpatient to community care.

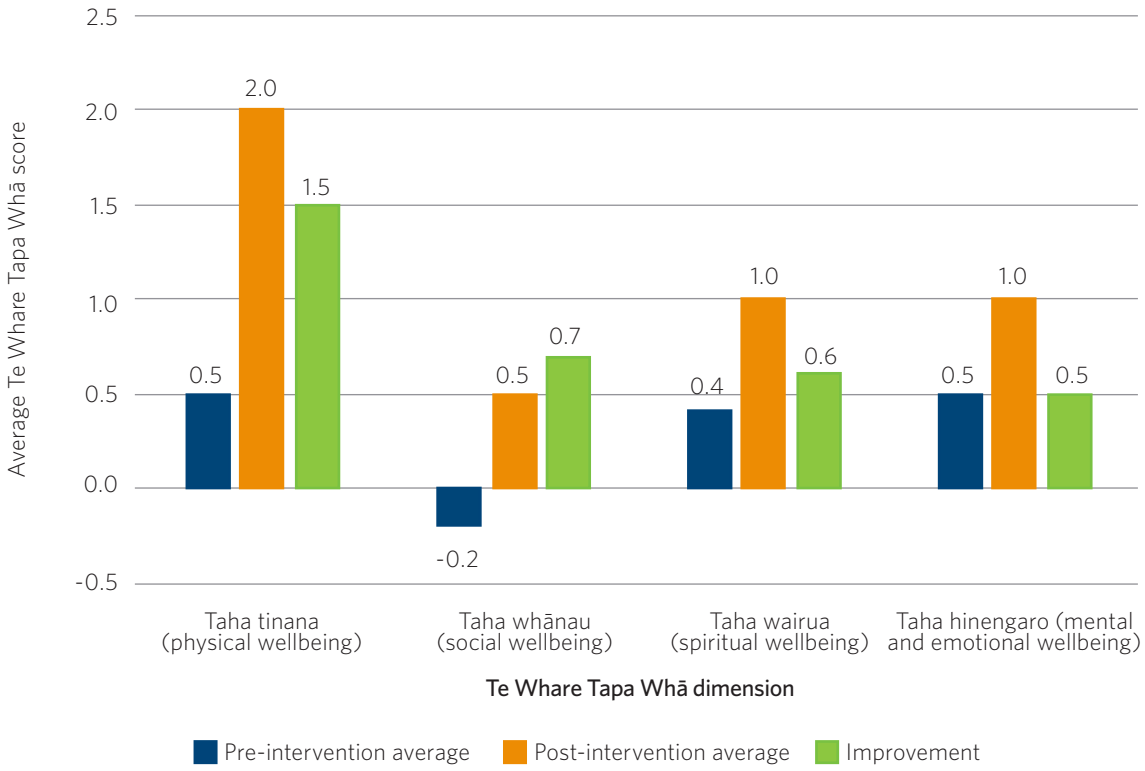
Aim
The project aimed to increase the average Te Whare Tapa Whā score (from admission to 3 months post-discharge) for Māori patients discharged from the Puāwai rehabilitation unit by +1 in each dimension by April 2022.

What we did
- Developed a wellbeing assessment tool based on the Te Whare Tapa Whā model and co-designed with a consumer representative (Figure 10). This tool was used throughout the patient journey to assess where the patient felt they currently sat across the four wellbeing dimensions of the whare: taha hinengaro – mental and emotional; taha tinana – physical; taha whānau – social; and taha wairua – spiritual. A goal-setting tool was also used.
- Introduced an initiative to ensure all Māori TBI patients were offered a referral to a kaupapa Māori community provider.
- Provided shared in-service education sessions between Puāwai rehabilitation unit staff and community whānau ora navigators to learn how they can work together to support patients using a te ao Māori approach.
- Developed a new framework, called Whāia te Ora (pursuit of health), that guides health professionals to incorporate whakawhanaungatanga into their work with Puāwai patients and facilitate referrals to kaupapa Māori service providers and whānau ora navigators.

Key achievements
- Improved patient experience in each of the four Te Whare Tapa Whā dimensions from admission to 3 months post-discharge, with the biggest gain made in taha tinana (physical wellbeing), followed by taha whānau (social wellbeing), taha wairua (spiritual wellbeing) and taha hinengaro (mental and emotional wellbeing) (Figure 10).
- Referrals to kaupapa Māori community services increased to 98 percent, with over half of patients accepting these referrals.

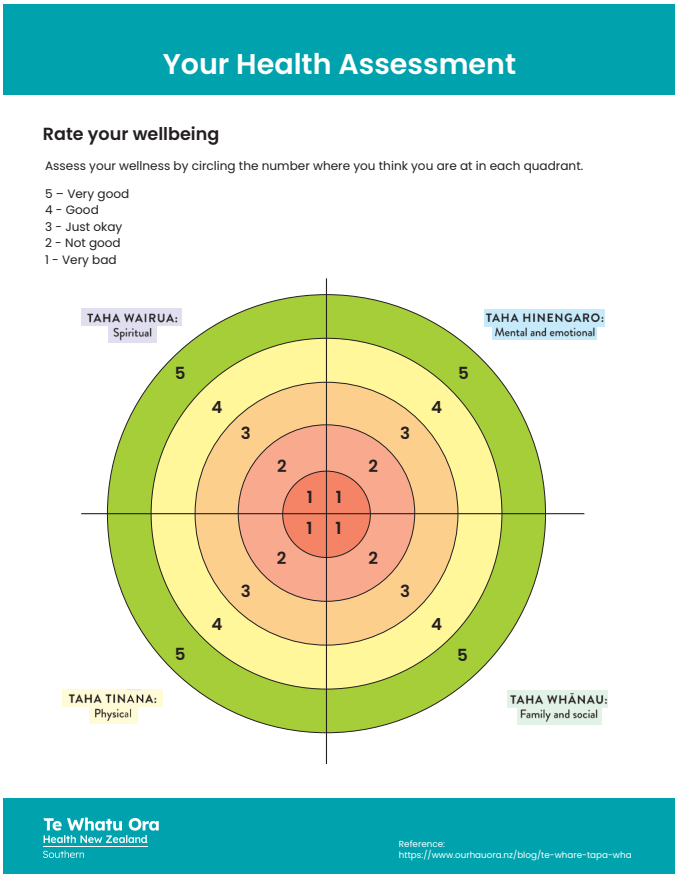
The Te Whatu Ora Southern team participating in a measurement workshop during learning session 1

Figure 10: Average Te Whare Tapa Whā scores for pre- and post-intervention periods



Source: Southern data collection.

Figure 11: Te Whare Tapa Whā self-assessment[4]



4 The full self-assessment tool is available at: www.hqsc.govt.nz/resources/resource-library/te-ara-marama-improving-transition-of-care-to-the-community-for-maori-trauma-patients

Te Whatu Ora
Health New Zealand
Taranaki

Improving discharge processes after TBI

Overview
Te Whatu Ora Taranaki identified through quality improvement methods, such as using a fishbone diagram (Figure 13), that many people were not receiving the required discharge information or referrals for follow-up when they were discharged from hospital following a TBI. Staff had low levels of confidence in referral processes, and the educational resources for patients and whānau were out of date. They designed an information booklet for patients and education for staff, resulting in an increase in the proportion of people leaving hospital with all required information and referrals.

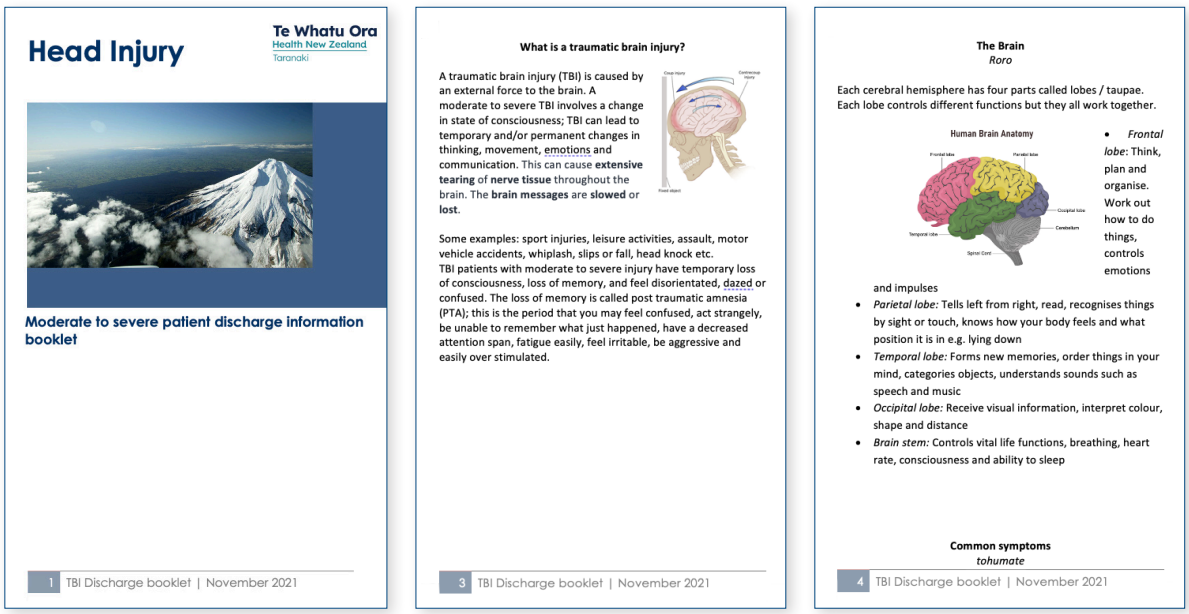
Aim
The project aim was to increase the percentage of Taranaki Base Hospital staff adherence to the TBI pathway discharge advice section for people diagnosed with moderate to severe TBI (injury severity score 6–11 and 12 and above), aged 16 and above, from 17 percent to 58 percent by March 2022 to promote better outcomes for patients.

What we did
- Created a discharge booklet for people being discharged from hospital following TBI (Figure 12). This booklet provided standardised written information to complement the discharge education provided by therapists.
- Provided education and training to medical, allied health and nursing staff. These focused on processes for ACC referrals to concussion services, and the discharge information and follow-up that people need after a brain injury.

Key achievements
- The rate of compliance with the TBI section of the discharge pathway improved from 17 percent to 36 percent.
- For Māori, the median rate of compliance with the discharge advice section of the TBI pathway increased by 30 percent.
- Staff knowledge and confidence about concussion processes, referrals, discharge summaries and patient and whānau education improved.

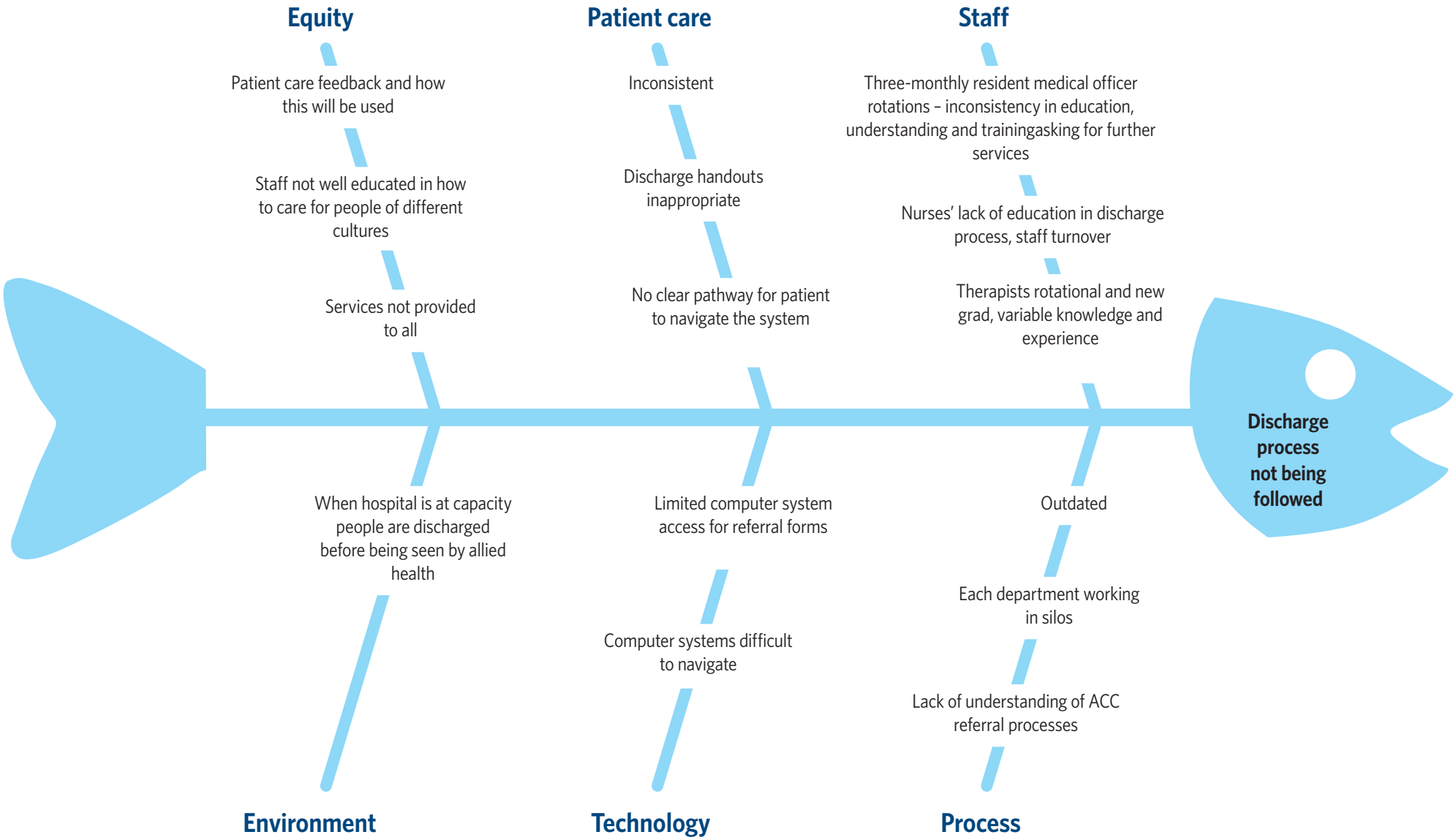
'It is a great resource to help reinforce the information that is often given verbally and something to refer back to when a patient or family is unsure.' *Staff feedback*

Figure 12: Patient discharge information booklet[5]



5 The full version of the information booklet is available at: www.hqsc.govt.nz/resources/resource-library/te-whatu-ora-taranaki-case-study-improving-discharge-processes-after-traumatic-brain-injury

Figure 13: Fishbone diagram



Te Whatu Ora
Health New Zealand

Te Tai Tokerau

Introduction of the ACC early cover process to enable ACC to allocate a case manager earlier

Overview

The experiences of people in Te Tai Tokerau after being discharged from hospital following major trauma varied widely. Almost one in five people re-presented to the emergency department within 90 days of hospital discharge, indicating a need for improvement in the supports people received after hospital discharge.

Trauma services in many parts of Aotearoa New Zealand use the ACC early cover referral form (ACC7422) for people who experience a TBI, multi-trauma or spinal cord injury. This means that an ACC case manager can participate in discharge planning earlier, possibly while the person is still in hospital. The project team implemented this process in Te Tai Tokerau, leading to an improvement in consumer satisfaction after discharge.

Aim

The project aim was that, by February 2022, 100 percent of surviving adult major trauma patients at Whangārei Hospital would have an ACC7422 lodged within 1 week of injury.

What we did

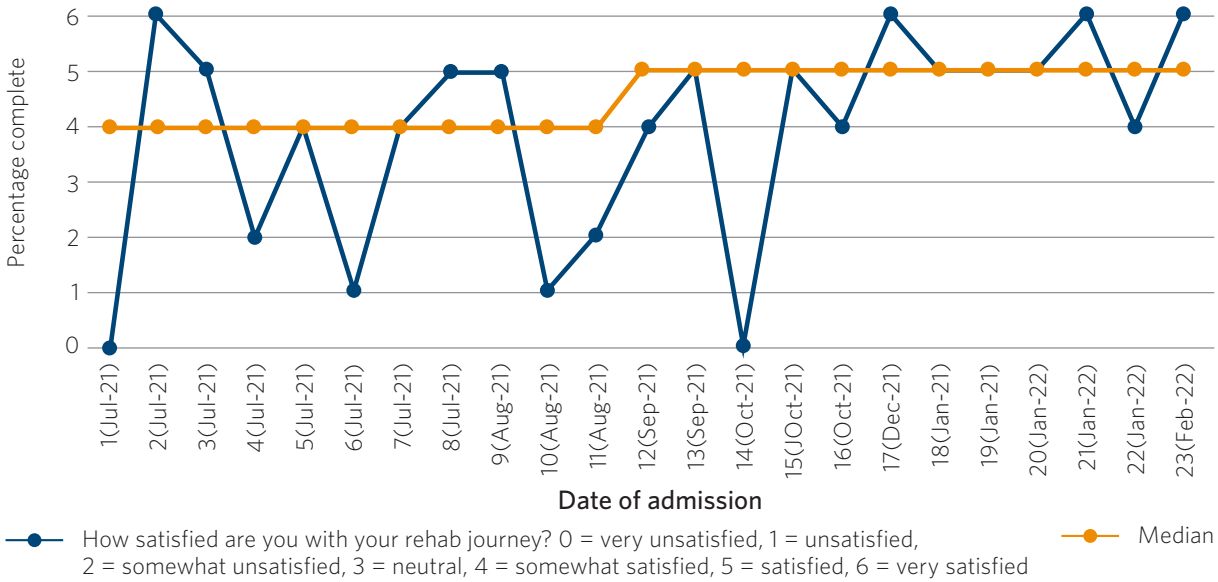
The team began to lodge early cover ACC7422 for adult major trauma patients within 1 week of admission. Alongside this, they:

- developed a resource for hospital staff to follow when submitting ACC claims for adult major trauma patients
- followed up with adult major trauma patients by telephone 2–4 weeks after discharge to discuss their experience
- developed a major trauma intranet page to improve access to up-to-date resources
- developed an information pamphlet about how to access funded rongoā Māori services.

Key achievements

- The median completion rate for the ACC7422 improved from 0 percent to 67 percent following the introduction of the ACC early cover process.
- Consumer satisfaction with their rehabilitation journey improved.

Figure 14: Individual consumer satisfaction scores, July 2021–February 2022



Source: Te Tai Tokerau data collection.

The Te Whatu Ora Te Tai Tokerau team participating in various workshops during learning session 1

Whangarei Hospital, Te Whatu Ora Health New Zealand Te Tai Tokerau

Credit: Te Whatu Ora Health New Zealand Te Tai Tokerau.

Highlights | Ngā hua

Many of the collaborative projects achieved lasting improvements to service delivery that have improved outcomes for people experiencing trauma in Aotearoa New Zealand.

Key successes:

- Capability building; improving the skills and knowledge of rehabilitation clinicians in using quality improvement methodology. Participants who completed the final evaluation survey displayed high levels of confidence in using quality improvement concepts and have reported that they are already using the skills they have gained in other service improvement work.
- Enhanced clinical outcomes for major trauma patients, including:
  - streamlined transitions of care
  - improved access to early rehabilitation
  - more equitable services.
- Development of a new network of allied health professionals working in trauma and strengthened relationships between services and organisations.

Te Whatu Ora Health New Zealand Te Pae Hauora o Ruahine o Tararua MidCentral team working on their collaborative project

Credit: Te Whatu Ora Health New Zealand Te Pae Hauora o Ruahine or Tararua MidCentral.

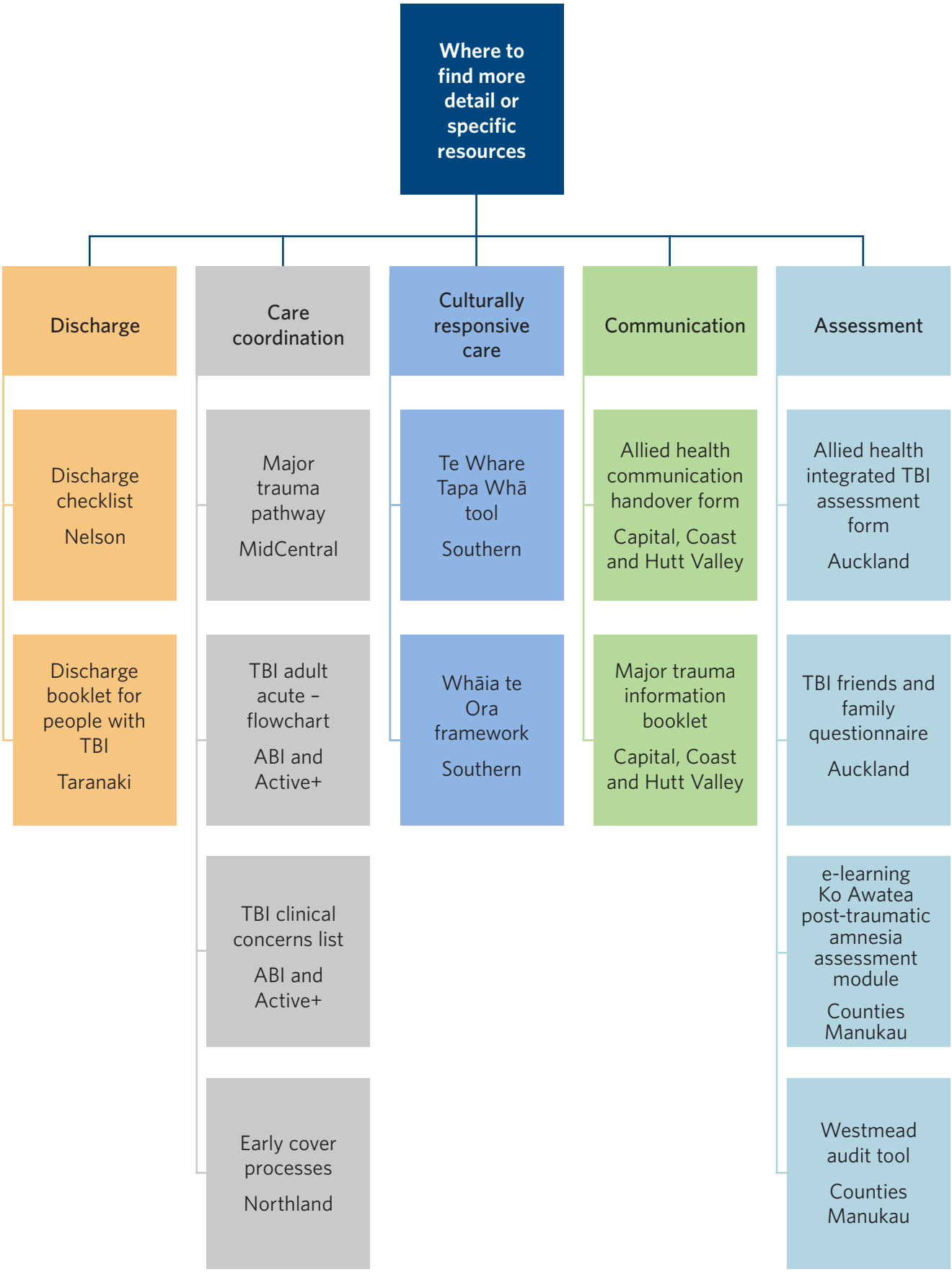
Challenges | Ngā wero

Despite the overwhelming success of the collaborative, teams faced barriers in completing their projects, including:

- difficulty engaging people in change, including getting buy-in from leaders and engaging clinical staff
- workload limitations in a time of increased staff sickness, high numbers of vacancies and prioritisation of clinical work
- completing projects during changing COVID-19 alert levels, which increased uncertainty, impacted patient flow and staffing levels and changed the way that clinical staff could move through the hospital
- data collection was challenging; difficulties included a lack of existing service data, data held in services external to the hospital (such as ACC or rehabilitation service providers), the need to complete time-consuming manual audits because clinical records were paper-based and low volumes of patients with trauma, affecting how measurement demonstrated the impact of change ideas
- several teams reported that recruiting consumers to participate in their project team was challenging and time-consuming
- feedback from learning session two highlighted that the quality improvement methodology being used was challenging and at times conflicted with the Māori world view. The delivery approach used mainstream quality improvement principles, including problem identification for service delivery (through measurement and problem analysis). It was felt that, without first identifying the solution (to demonstrate where the work was heading), teams could become disengaged. While there is a rationale for the methodology used, it is acknowledged that this may be the reverse of a te ao Māori perspective.

Recommendations and tips for teams completing similar service improvement work | Ngā whakatau me ngā tuwhiri mā ngā tīma e ōrite ana te mahi whakapai ratonga

1. Engage consumers to be part of project teams early, and outline clear, shared expectations about the role that a consumer representative should play within teams. Teams can be supported to find suitable consumers through their hospital's consumer council or the Te Tāhu Hauora consumer network where required.
2. Senior leadership support is crucial for overcoming institutional barriers that may hamper change work. They are also instrumental in communicating new processes and spreading these outward into other services.
3. Quality improvement methodologies enable project work to be carried out in a systematic and measurable way. However, care must be taken to incorporate the Te Tāhū Hauora Te Ao Māori Framework into all quality improvement work to inspire successful change within Aotearoa New Zealand's health system.
4. Invest time in identifying the problem you are trying to solve. It can be tempting to jump straight to change ideas that seem obvious, but problem identification tools can help teams to consider new ways of thinking about an issue and develop creative, sustainable ideas to solve them.
5. Focus on how to understand and collect clinically meaningful measurement in services where little data exists in order to demonstrate effective change. Consider reaching out to business intelligence analysts who work within your systems or to health professionals in other districts who may already have methods in place to collect similar data.
6. Qualitative data is just as important as quantitative data and is a critical tool in motivating staff to participate in change work. Consumer and staff stories can often be more impactful than numbers and graphs at demonstrating the need for change. Projects are memorable, and more likely to be supported, when they inspire feelings within the staff.


Where to find more detail or specific resources
Discharge
Discharge checklist
Nelson
Discharge booklet for people with TBI
Taranaki
Care coordination
Major trauma pathway
MidCentral
TBI adult acute – flowchart
ABI and Active+
TBI clinical concerns list
ABI and Active+
Early cover processes
Northland
Culturally responsive care
Te Whare Tapa Whā tool
Southern
Whāia te Ora framework
Southern
Communication
Allied health communication handover form
Capital, Coast and Hutt Valley
Major trauma information booklet
Capital, Coast and Hutt Valley
Assessment
Allied health integrated TBI assessment form
Auckland
TBI friends and family questionnaire
Auckland
e-learning Ko Awatea post-traumatic amnesia assessment module
Counties Manukau
Westmead audit tool
Counties Manukau

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