Trauma rehabilitation

Whakaoranga kohuki

Te Whatu Ora – Nelson Marlborough case study: Trauma at the top of the South

Te Whatu Ora – Te kēhi o Whakatū, o Te Tauihu o te Waka: Te Whētuki kei te Tauihu

Te Hononga Whētuki ā-Motu National Trauma Network

Te Whatu Ora Health New Zealand Nelson Marlborough

Te Kāwanatanga o Aotearoa New Zealand Government

Te Tāhū Hauora Health Quality & Safety Commission

Te Whatu Ora
Health New Zealand
Nelson Marlborough

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

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.

Background and context | Kōrero o mua me te horopaki

Te Whatu Ora – Nelson Marlborough runs two hospitals within the region. Nelson Hospital is a 140-bed secondary-level trauma-receiving hospital for the upper South Island. Specialities include emergency, intensive care, general surgery, orthopaedics, general medicine and anaesthetics; however, patients requiring sub-specialty tertiary care, such as neurosurgery or cardiothoracic care, are transferred out, to either Christchurch Hospital or Wellington Regional Hospital. Additionally, Wairau Hospital in Blenheim maintains 65 beds.

Te Whatu Ora – Nelson Marlborough sees approximately 85 major trauma patients per year, many of whom fall into the older adult age group due to the demography of the region. Approximately 20.8 percent of the region are aged 65 years or over, almost double the national average of 10.6 percent (based on 2018 Census data). Additionally, the population is dispersed over a large rural geographical area governed by three territorial councils – Nelson City, Tasman District and Marlborough District.

Diagnosing the problem | Te tātari raru

The problem

The nature of major trauma injury often requires patients to receive ongoing rehabilitation even after discharge from inpatient services in order to regain their pre-injury functional status, or as close to it as possible. However, the transition of care from hospital to community-based services can be challenging to navigate for patients and their whānau due to the involvement of multiple agencies across the health, disability and social care system. Duplication of tasks for patients, whānau and staff, delays in accessing community services and dissatisfaction with the discharge process were all common themes fed back to Nelson Marlborough staff.

How did you know this was a problem?

The team used both qualitative and quantitative methods to gather baseline data to identify what issues impacted transitions of care from inpatient to community services for major trauma patients in the Nelson Marlborough region.

Phone interviews were carried out with six major trauma patients to better understand their experiences of transitioning home to continue their rehabilitation journey. Interview questions were open-ended to allow for the collection of rich descriptions of consumer experience. Consumers emphasised how challenging it was during their transition back home.

Issues raised by consumers included the following:

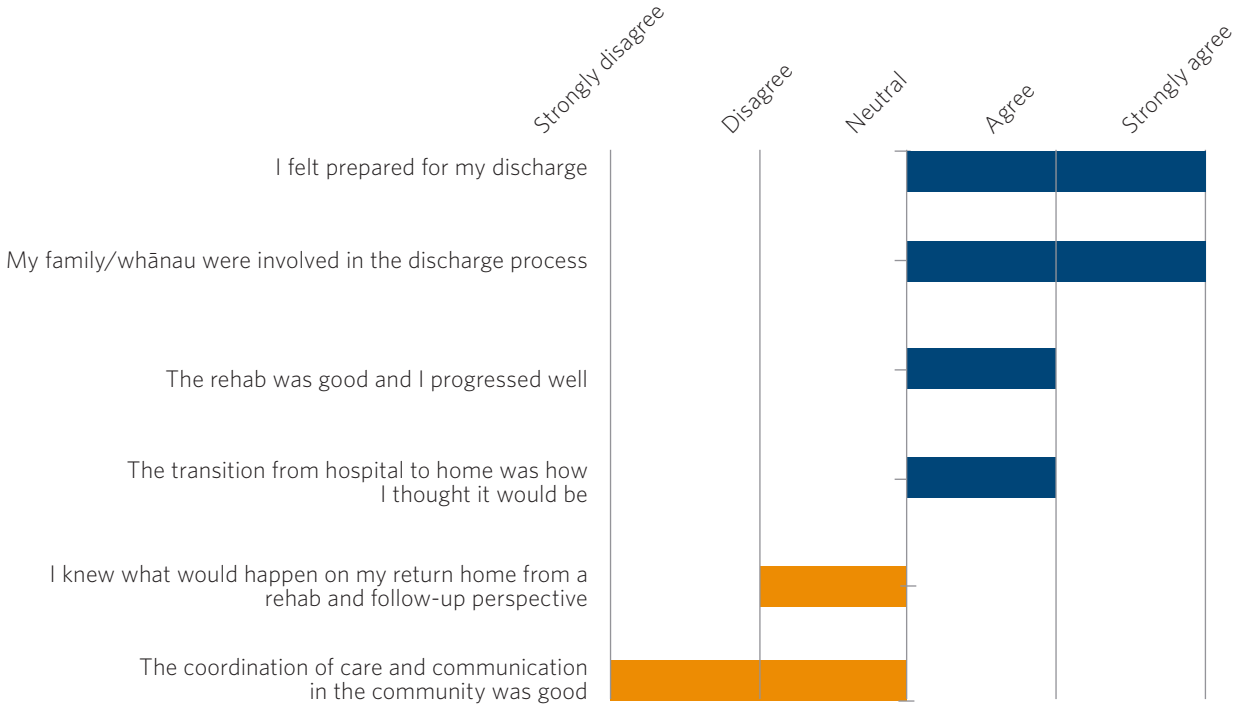
- Ongoing symptoms from head trauma or the use of strong pain medication made it difficult to remember any discharge instructions.
- Some patients needed to organise their own rehabilitation and liaise with ACC to make a return-to-work plan.
- Incorrect patient details led to significant delay in first contact being made by the concussion clinic.
- No knowledge of the date and time of scheduled home physiotherapy visits.
- Some did not know the names, roles or responsibilities of community rehabilitation staff.
- A lack of understanding about how long it would take for them to get back to normal (return to pre-injury function).

Case study: Communication challenges

Mrs A is a 78-year-old woman who sustained head and neck injuries from a fall. She was hospitalised for four days and continued to experience dizziness and neck discomfort after being discharged home. When contacted by the team, Mrs A reported that she had been initially assessed by a physiotherapist in the community and was advised someone would be in contact to schedule a follow-up appointment. So concerned was Mrs A that she would miss this phone call, she did not leave her house for five days until she was contacted by another hospital service who assisted in arranging the appointment.

The rich information gathered from the phone interviews helped to shape a wider survey for trauma patients using the themes from the interviews rated using a Likert scale. The questions that garnered the most negative responses were coordination of care and communication in the community, patient's understanding of their rehabilitation plan and follow-up appointments once discharged.

Figure 1: Trauma patient questionnaire average response scores, March–June 2021



Source: Te Whatu Ora – Nelson Marlborough.

The aim | Te whāinga

Initially, the aim of the project was to improve the experience of people with major trauma with their transition of care from inpatient to community-based health services. Patient experience was chosen because the team included locality care coordinators whose role is to support the transition home in the Nelson Marlborough region. Unfortunately, during the project these care coordinators had to resign from the collaborative due to contract changes, and the team was required to adjust the project focus.

To that end, the team chose to focus on discharge summaries as a means of supporting the transition of care. The new project aim was 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.

The measures | Ngā ine

See Appendix 1 for a detailed description of the measures.

Outcome measures

- Discharge summary completed on day of discharge.

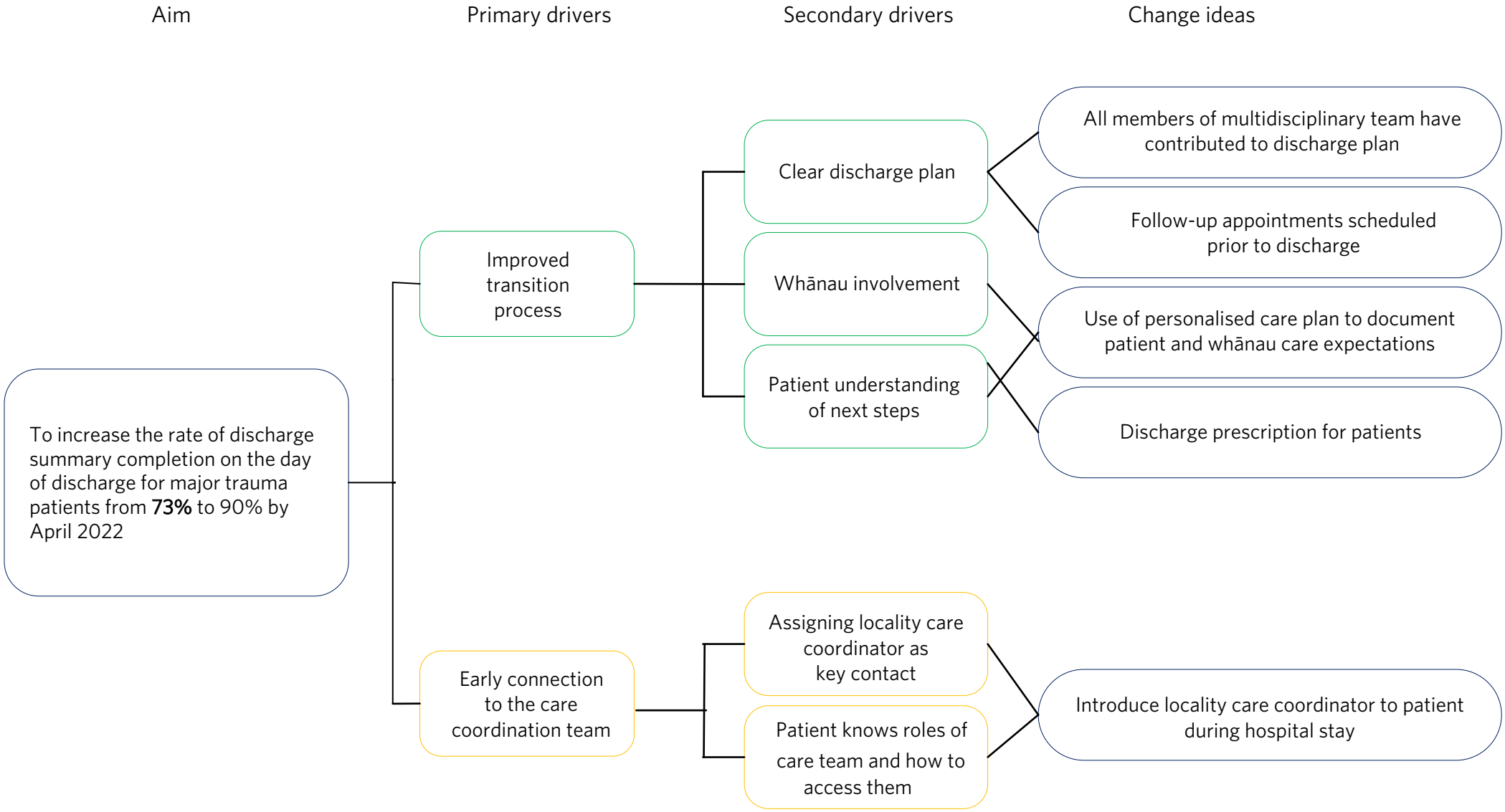
Process measures

- Allied health multidisciplinary team input into discharge summary.
- Community follow-up plan documented on discharge summary.

Balancing measure

- Percentage of patients contacted by community multidisciplinary team within 14 days of discharge.
- Discharge documentation for patients transferred out of Nelson Marlborough.

Drivers of change | Ngā tūāhua panoni



What we did | Tā mātou i mahi

Were there any ethical considerations to be aware of?

There were no specific ethical considerations for this project.

What aspects of the project were co-designed with consumers? How did you involve consumers in co-design? What processes did you use?

The team strived to engage consumers with this work and gathered consumer perspectives via phone interviews at the beginning of the project. This provided rich qualitative data that helped to shape the project so it had the most positive impact on consumers. Despite the team's plans to continue involving consumers in the work, COVID-19 lockdowns made it challenging to include consumers because most project meetings were held ad hoc within the hospital when visitor restrictions were in place. Since the end of the collaborative, the team has contacted a consumer representative to review their discharge checklist; this work is ongoing at the time of publication.

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

The team found that the use of qualitative data had the biggest impact on the direction of their project and gathering support from those who worked in the service. The team used open-ended questions that allowed consumers to discuss the challenges they experienced during their transition from hospital to community, rather than the team assuming what the issues were. The team used this qualitative data to produce a quantitative survey where a wider group of consumers gave feedback on the most commonly experienced issues.

What changes did you test that worked?

- 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.
- 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.

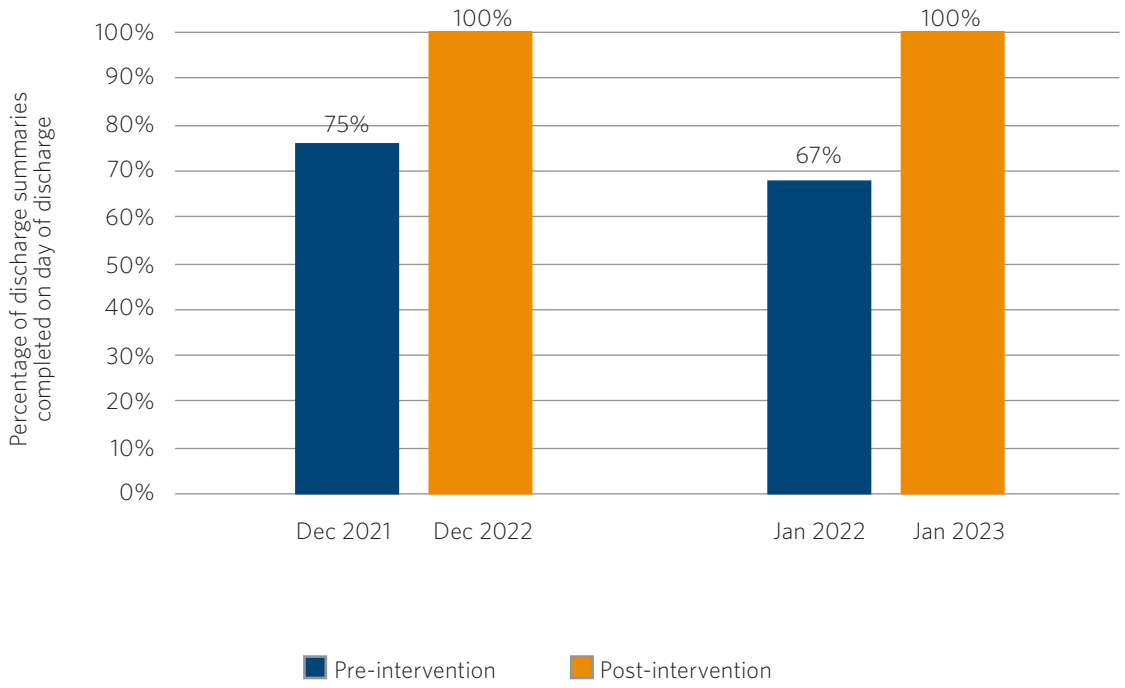
The results | Ngā hua

What outcome measures improved?

Since discharge summaries contain valuable information to support patients transitioning into community care from inpatient services, the team examined whether those summaries were completed on the day of discharge or were being sent out after the patient had already left the hospital. A sample audit of 22 major trauma patients admitted to Nelson Hospital showed that 73 percent of patients received their discharge summary on the day they were discharged.

However, due to disruptions to the project caused by COVID-19 lockdowns and service pressures, the team was unable to collect a post-improvement sample of data until December 2022. Although this meant there was not enough data to produce a monthly run chart to demonstrate improvement, a year-on-year comparison can be made between the months of December and January that show improvement between the pre-intervention and post-intervention phases (Figure 2). Completion rate prior to intervention ranged from 67 percent to 75 percent, whereas the rate post-intervention improved to 100 percent of all major trauma patients at Nelson Hospital receiving their discharge summaries on the day of discharge.

Figure 2: Percentage of discharge summaries completed on the day of discharge, December 2021–January 2022 and December 2022–January 2023

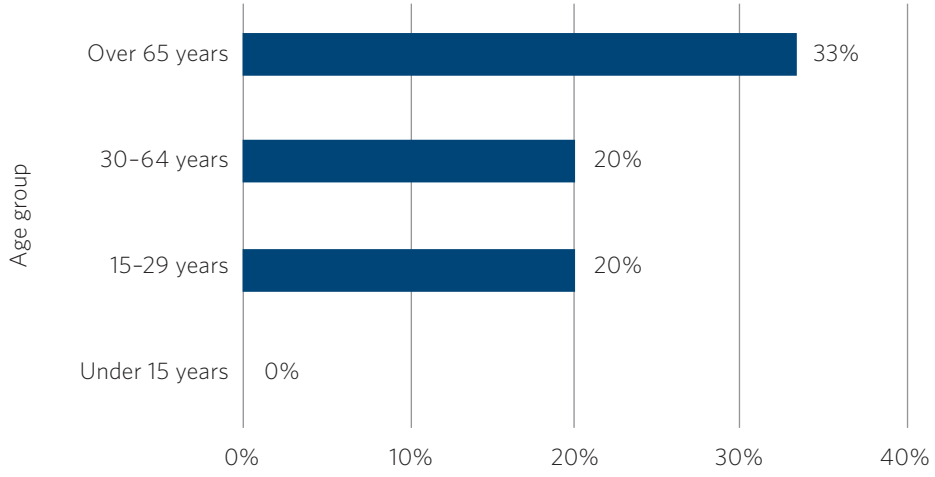


Source: Te Whatu Ora – Nelson Marlborough.

What equity measures improved?

The team identified that inequities between age groups may exist due to the demography of the region and the increased proportion of adults over the age of 65 years. When examining the data, the baseline sample audit showed that one-third of patients aged over 65 was discharged without a completed discharge summary, the highest across all age groups (Figure 3).

Figure 3: Percentage of patients discharged without a discharge summary by age group, December 2021–January 2022



Source: Te Whatu Ora – Nelson Marlborough.

With 100 percent of patients receiving their discharge summary on the day of discharge in the post-intervention phase, this inequity no longer exists in any age group.

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

The team initially intended to use the locality care coordinator team to support major trauma patients in their transition from hospital to community care. However, due to a change in contract scope, the locality care coordination team had to resign from the collaboration. This required the project to change focus from improving the discharge process to including more comprehensive information on discharge summaries such as booked follow-up appointments and self-care.

Additionally, the spread of COVID-19 across Aotearoa New Zealand coincided with much of the timeline of the project work and significantly hindered progress at times. The project team leader was seconded out of the region to assist with COVID-19 response work, and roster gaps and resignations impacted on the ability of staff to complete required paperwork on time.

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

The learning sessions and webinars helped to impart a greater understanding of quality improvement and its application in the health system for the whole team regardless of previous quality improvement experience. The team lead has gone on to participate in further collaborative work with Te Tāhū Hauora to improve the care of trauma patients in the region and has forged a strong connection with the Nelson Marlborough quality improvement team.

Post project implementation and sustainability | Te whakaritenga me te whakapūmautanga

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

The rollout of the major trauma discharge checklist across the hospital was unfortunately paused because of stress on the service and staff due to COVID-19. However, this is now about to be rolled out to the surgical ward as an initial pilot as part of the serious traumatic brain injury collaborative currently underway. The checklist has already been shared with other districts across Aotearoa New Zealand, and there has also been an enquiry from a clinician in Australia looking to implement a similar project.

Summary and discussion | Te whakarāpopoto me te matapakinga

What were the lessons learnt?

- Successful change does not happen overnight.
- The timeline of a project is important, so make sure your aim is achievable.
- Improvement work does not stop at the end of the collaborative; keep the momentum and enthusiasm for change going.

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

- Improvement should be a team effort – the project work was undertaken primarily by the team lead, a significant amount of work for a single person. Try to gather as many allies as possible across your service.
- When involving medical staff in project work, ensure you are aware of when their roles change during their training – try and get them involved early from the time they orientate to their placement in your health service.

The team | Te rōpū

- Claire Hitchcock – trauma nurse specialist.

Claire also acknowledges and thanks the following people for their contribution to the success of the project: the Nelson Marlborough trauma committee, the locality care coordination team (Libby McKinney, Bella Clark, Bronwyn Hutcheson and Grace Combellack), Hillary Exton (Director of Allied Health) and Keith Marshall (Ki Te Pae Ora).

Appendix 1: Measures | Āpitihanga 1: Ngā ine

Measures (operational definitions and query builds)

Measure name	Description	Collection method	Collection frequency
Discharge summary completed on day of discharge	Numerator: The number of major trauma patients who have a discharge summary completed on the day of discharge Denominator: Total number of major trauma patients discharged	Review of electronic records, compared with a count of major trauma discharges	Monthly

Glossary | Te kuputaka

Allied health: Registered health professionals such as physiotherapists, occupational therapists, social workers and speech and language therapists.

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.

Multidisciplinary team: A range of health professionals, from one or more organisations, working together to deliver comprehensive patient care.

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

Process mapping: 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 where opportunities for improvement are.

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.

Other resources

The following resources can be downloaded from: www.hqsc.govt.nz/resources/resource-librar y/trauma-at-the-top-of-the-south.

- Nelson Marlborough major trauma discharge checklist

Published in June 2023 by
Te Tāhū Hauora Health Quality & Safety Commission and the National Trauma Network.
Available online at www.hqsc.govt.nz.