Evaluation report: Major trauma rehabilitation collaborative

He pūrongo arotake: Whakaoranga tahi i te pāmamae nui

February 2023 | Huitanguru 2023

Te Hononga Whētuki ā-Motu National Trauma Network

Te Kāwanatanga o Aotearoa New Zealand Government

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

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Executive summary | He kupu whakarāpopoto matua

The trauma rehabilitation collaborative ran from March 2021 to June 2022. It brought together 11 clinical teams from across Aotearoa New Zealand to undertake quality improvement projects that would lead to better outcomes for people experiencing major trauma. In addition, the project aimed to increase the quality improvement knowledge and skills of rehabilitation providers.

The Institute for Healthcare Improvement's breakthrough series collaborative model was used to support teams to identify a problem in their clinical area and to test change ideas that would lead to improvement. Teams attended four full-day learning sessions, ten webinars and one site visit and were supported by the Health Quality & Safety Commission (the Commission) team via email and phone.

Nine projects were completed, focusing on traumatic brain injury, care coordination and patient experience. Teams have implemented lasting service improvements that demonstrate improved outcomes. Clinical outcomes included improved case management, timely access to community follow-up, incorporation of kaupapa Māori concepts into traditional models of rehabilitation, improved patient experiences and providing evidence for business cases that has resulted in additional resource.

Apart from the clinical outcomes, the teams built lasting relationships to create a network of passionate rehabilitation clinicians from across Aotearoa New Zealand that didn't exist previously. It also increased the capability of these professionals to use quality improvement methods in future service improvement work. The challenges experienced by all the teams included workload limitations and the stresses of completing their projects during the COVID-19 pandemic.

It is recommended that, in future collaboratives, teams receive support to effectively engage consumer representatives. It is also recommended that the Te Ao Māori Framework[1] for quality improvement is embedded in the curriculum and that equity measures form part of the family of measures for all projects.[2]

1 https://www.hqsc.govt.nz/resources/resource-library/te-ao-maori-framework/
2 *The breakthrough series: IHI's collaborative model for achieving breakthrough improvement*. IHI Innovation Series white paper. Boston, MA: Institute for Healthcare Improvement; 2003. URL: www.ihi.org.

Introduction | Kupu whakataki

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. Serious traumatic brain injury (TBI) accounts for around 35 percent of all major trauma. 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 will support recovery to the fullest potential, which will improve quality of life, ensure cost-efficient and effective care and reduce the burden across the whole health system.

Although trauma care has improved over the past five years (with reduced mortality rates and improved long-term outcomes), several key system issues remain that, if addressed, could enhance patient recovery. These include poor care coordination, difficulty in navigating the health system, delays in accessing essential care, unwarranted variations in service delivery and inequity for Māori.

The trauma rehabilitation national collaborative (the collaborative) formed part of a broader programme of work by the National Trauma Network (the Network), the Accident Compensation Corporation (ACC) and the Health Quality & Safety Commission (the Commission) to establish a contemporary trauma system of care in Aotearoa New Zealand.

Background

The scoping phase of the major trauma rehabilitation project was completed in 2020 and identified improvement opportunities to support people throughout their recovery. The early scoping included engagement with ACC, the then district health boards (DHBs), regional trauma services, consumers and whānau, research teams and rehabilitation service providers.

A 'discovery workshop' was held in September 2020 with 40 representatives from key stakeholders across the sector. It revealed:

- unwarranted variation of rehabilitation service across the country
- that patients with trauma had inequitable access to services
- that inconsistent use of performance measures made it difficult to know whether services were meeting the needs of this complex cohort of patients with trauma
- that rehabilitation services could do more to be culturally appropriate and support Māori in recovering to their fullest potential and in a way that respects te ao Māori.

The collaborative began in March 2021 and was completed in June 2022. The initial goal for recruiting teams was to have representation

from all 20 DHB regions across Aotearoa New Zealand. In the end, the collaborative brought together 11 teams of rehabilitation clinicians from across Aotearoa New Zealand, with representatives across all four trauma regions: nine DHB teams and two community rehabilitation providers.

The collaborative was supported by an expert advisory group of 17 people, including four consumers and experts from across the trauma rehabilitation and research sectors.

Aims

The aims of the collaborative were to:

- understand existing trauma rehabilitation provision, access and outcomes
- identify potential new initiatives that would remove barriers to achieving the best outcomes for patients with major trauma
- work with local quality improvement (QI) project teams to implement these initiatives (via a national collaborative, using a consumer co-design approach and supporting kaupapa Māori rehabilitation processes where possible)
- increase the QI skills and knowledge of rehabilitation providers.

The scope of the collaborative was intentionally broad to allow project teams to identify the key opportunities within their services.

The following elements were in scope.

- Rehabilitation of patients with major trauma who met the threshold for the New Zealand Trauma Registry, recognising that patients with less severe injuries may also benefit from the outcomes of the project.
- Transitions of care from acute services through to rehabilitation.
- The pathway for patients who are discharged into the community (major focus) and into residential rehabilitation facilities (minor focus).
- Consideration of the processes to assess and refer patients to rehabilitation services, together with identifying the nature and location of those services.

The following elements were out of scope.

- A formal review of the quality of rehabilitation services or providers.
- Assessment of the cost of care funded by ACC or other sources, although the financial and social burden on injured patients and their whānau may be incorporated.
- Patients with spinal cord injuries or burns and/or requiring extensive plastics; this work is being led by others.

Methodology

The collaborative used the Institute for Healthcare Improvement's breakthrough series collaborative model. The teams received QI training via four full-day learning sessions, a series of webinars and individual mentoring. The final two learning sessions of the collaborative took place virtually because of travel restrictions imposed because of the COVID-19 pandemic.

Using QI methodology and co-design, the teams developed data collection plans to understand the key issues within their services. Aim statements were developed and change ideas explored. Plan, do, study, act (PDSA) cycles were used to support testing, modifying and scaling up change ideas. The project teams gathered quantitative and qualitative data to measure change in their systems. They used sustainability, communication and spread plans to support the successful implementation of their work.

Collaborative timeline

The collaborative officially began with the first learning session in March 2021. The collaborative's original timeline was extended by two months because of the challenges the teams faced completing their projects during the COVID-19 pandemic. The team's final storyboards were submitted in June 2022.

Figure 1: Collaborative timeline

Collaborative projects

From the 11 teams that began the collaborative, nine projects were completed. One team could not complete their project. Two other projects were combined into one during the collaborative.

The nine completed projects focused on three key areas:

TBI

- Pathway to community TBI rehabilitation for patients with major trauma with concussion or mild–moderate TBI (ABI Rehabilitation New Zealand Limited [ABI] and Active+).
- Improving hospital discharge processes for patients with TBI (Auckland).
- Consistent screening for post-traumatic amnesia within the acute hospital setting (Counties Manukau).
- TBI pathway adherence (Taranaki).

Care coordination

- Development of clinical guidelines for patients with trauma presenting to the emergency department from admission through to rehabilitation and transfer of care (MidCentral).
- Improving the rehabilitation journey of adult patients with major trauma and their whānau, as evidenced by appropriate and timely access to ACC early cover and case management allocation (Northland).
- Te Ara Mārama: Improving transitions to the community for Māori patients with TBI (Southland).
- Client- and whānau-centred coordination from inpatient to community-based health services (Nelson Marlborough).

Patient experience

- Improving rehabilitation services for patients following major trauma: Understanding allied health input with patients presenting with major trauma and the experiences of patients and whānau with allied health therapy (Capital & Coast).

Evaluation purpose and design | Te whāinga me te hoahoa

Purpose

The purpose of the evaluation is to determine how the collaborative has met the project aims and its performance in meeting the Commission's strategic priorities.

Scope

This is an interim evaluation report, reviewing the degree to which the collaborative met its objectives during the period March 2021–June 2022. The scope of this evaluation report includes the effectiveness of the collaborative in improving the QI capability of the teams involved. It also evaluates the extent to which the changes implemented by teams during the collaborative have led to service improvement in their local areas.

This interim report does not evaluate the reach and effectiveness of the case studies or communications strategy. A cost-benefit analysis is outside the scope of this evaluation.

Methods

During the collaborative:

- the Commission team recorded team attendance at learning sessions and webinars and collected participant feedback after learning sessions one, two and four
- teams developed measurement plans to monitor the impacts of their change ideas and submitted progress reports at regular intervals.

After submission of final storyboards, the Commission team conducted:

- an electronic evaluation survey of collaborative team participants
- a thematic analysis of successes and barriers
- telephone interviews with consumer representatives
- a telephone interview with the team that did not complete their project.

Participants provided feedback via paper forms at the end of learning sessions one (n=33) and two (n=22). Because learning session four took place virtually, participants completed their feedback electronically after the session. Fewer feedback forms (n=8) were received after learning session four, which reflected the reduced number of participants who were able to attend the full day. Participant feedback was not collected after learning session three.

The Commission team developed an electronic evaluation survey using Survey Monkey™ and invited 19 key participants from the teams to complete it after they submitted their final storyboards; a reminder was sent two weeks later. Answers to the survey questions were anonymous. The online survey received 12 responses, a 63 percent response rate.

The Commission team then:

- reviewed the outcome and process measures submitted in the teams' final storyboards to determine the extent to which the project aim was met
- compared the teams' self-reported progress (rated using a numerical scale on regular progress reports) against what was initially anticipated
- reviewed the teams' record of attendance at the webinars, learning sessions and site visits
- conducted a thematic analysis of the teams' self-reported successes and barriers to determine the common experiences
- conducted a telephone interview with the team who withdrew from the collaborative to understand the reasons why they were unable to complete their project
- contacted the four teams who listed consumer representatives as part of their project teams and conducted semi-structured phone interviews with the consumers to understand their experiences as part of the project team.

Evaluation questions

The overarching evaluation question is **to determine how the programme delivered on each of its four key aims**. Supplementary questions relate to each of the four aims.

1. **To what extent did the rehabilitation collaborative contribute to a better understanding of existing trauma rehabilitation provision, access and outcomes?**

   What was the scope and range of the completed collaborative projects?

   Are any networks that have been established by the collaborative well developed, useful and sustainable?

2. **Did the rehabilitation collaborative identify potential new initiatives that will remove barriers to achieving the best outcomes for major trauma patients?**

   What was the direct impact of the collaborative on the consumer?

   Has this programme reduced inequities?

3. **How effectively did the rehabilitation collaborative work with local QI project teams to implement these initiatives?**

   To what extent did the project teams achieve their original aim/objectives? Why?

   What were the barriers and enablers to implementation at a local level?

   To what extent was local programme implementation informed by consumer engagement?

   What was the experience of the consumers involved in the teams?

   To what extent were kaupapa Māori rehabilitation processes supported?

4. **To what extent did the rehabilitation collaborative increase the QI skills and knowledge of rehabilitation providers?**

   How effective were the programme's training and learning sessions?

   Did the project teams receive the support they needed to implement the programme locally?

Evaluation findings | Ngā kitenga

The rehabilitation collaborative contributed to a better understanding of existing trauma rehabilitation provision, access and outcomes

All participants who completed the final evaluation survey reported that being part of the collaborative increased their knowledge about the wider system of trauma rehabilitation care in Aotearoa New Zealand (43 percent increased a great deal, 57 percent increased a moderate amount).

> 'As I work in the community setting, I had little insight into the wider tertiary-level trauma setting, so it was very helpful to understand how this worked and the level of skills and knowledge from the teams in this area'

> 'I learnt more about the regional and national trauma services, I learnt that you [could] effect change at a systems level'

Project teams had the ability to choose any topic they wanted to work on within the field of trauma rehabilitation. There was some overlap between the projects. Five of the projects focused on improving care for people with TBI. Four projects focused on care coordination or improving the transitions between acute services, rehabilitation and the discharge home.

Networks have been established locally, regionally and nationally

The level of communication and knowledge sharing between project teams increased over the period of the collaborative. After learning session one, 22 percent of respondents reported having medium or high levels of communication with the other project teams. This increased to 63 percent after the final learning session.

Several teams described the benefits of the collaborative in strengthening their working relationships with others. For some teams, this meant collaborating with other organisations in a way that they hadn't done before.

> '... everyone [was] so committed to this improvement project across a multitude of organisations – connection and collaboration is really strong'

For other teams, relationships were strengthened between different professional groups in their organisation. Teams described improved collaboration between the trauma service and the allied health team. For one team, this led to the appointment of an allied health representative onto the regional trauma network.

The rehabilitation collaborative identified new initiatives that will remove barriers to achieving the best outcomes for patients with major trauma

The impact of the collaborative on the consumer

Several collaborative projects improved outcomes for people after major trauma, demonstrated by:

- improved consumer satisfaction after implementing the ACC 7422 process for early cover
- reduced waiting times between hospital discharge and accessing concussion services
- improved volume and quality of referrals to outpatient services before hospital discharge
- improved access to therapy before hospital discharge.

Other projects did not progress to a stage where they could demonstrate improved outcomes, but there is potential for future impacts, such as:

- accuracy of screening for post-traumatic amnesia following serious injury
- incorporation of kaupapa Māori approaches into rehabilitation
- improved allied health discharge documentation for people hospitalised with major trauma.

Two projects are being scaled wider to benefit consumers around Aotearoa New Zealand. The direct referral to concussion services from hospital clinicians without ACC pre-approval has undergone a trial in four other centres and is currently being rolled out across Aotearoa New Zealand.

A training module developed to improve screening for post-traumatic amnesia is being used in further QI work by the Commission and the Network to improve rates and accuracy of screening for TBI.

Reducing inequities

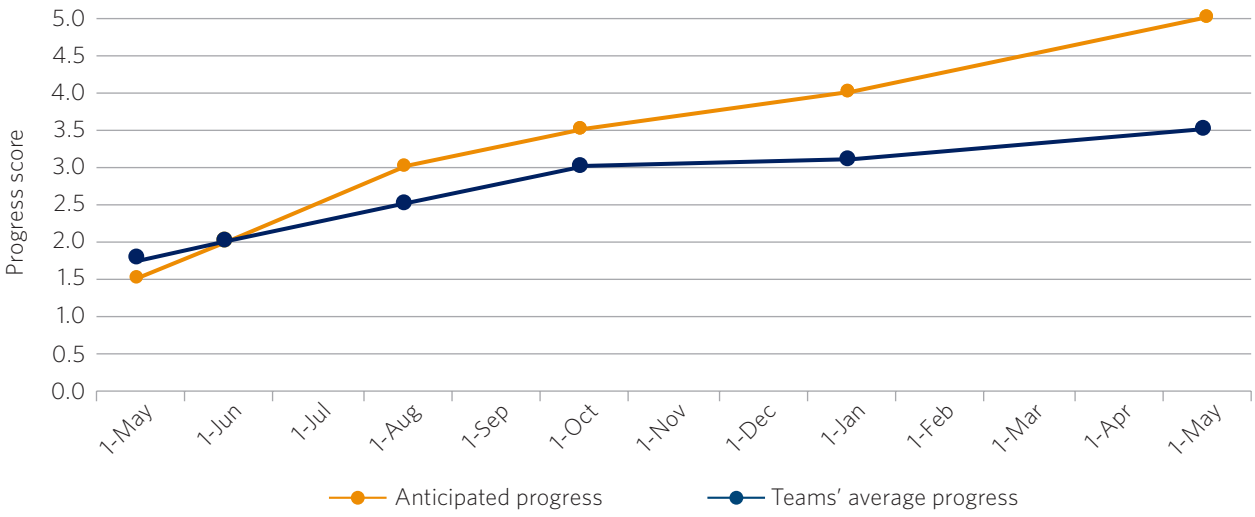
It is difficult to determine whether the collaborative has reduced inequities. The teams all worked through the health equity assessment tool as part of their projects. However, only a few teams included equity measures as part of their data collection; of these, two teams showed an improvement.

The collaborative methodology was an effective way of working with local QI project teams

Achievement of team aims and objectives

Five of the nine (55 percent) projects either achieved their aim or showed improvement towards achieving their aim. Each of these

Figure 2 Teams' average self-rated progress scores compared with the anticipated progress between May 2021 and May 2022



Source: Interim report data collection.

teams had good attendance at the learning sessions and webinars, often with more than one team member attending.

Two projects were unable to complete enough PDSA cycles during the collaborative timeframe to demonstrate any change in outcomes. Both teams faced considerable workload challenges, including redeployment, that severely impacted the time they had available for this work. However, both continue to work on their improvement projects. Two projects had insufficient data in their final storyboards to show whether their projects had led to a change in outcomes.

The teams' self-rated progress scores initially matched the progress that was anticipated when the collaborative was planned. Progress plateaued during the latter part of 2021 when the northern region was significantly disrupted by COVID-19 restrictions and teams from other regions were redeployed to assist with the COVID-19 response. However, there was no correlation between an individual team's self-rated progress scores throughout the collaborative and whether they achieved their aim. See Appendix 1 for an example of the progress reporting tool.

Clinical outcomes

The outcomes of the collaborative projects were as follows.

Whangārei: Completion rate for the ACC 7422 early cover improved from 0 percent to 68 percent, enabling ACC to designate a case manager to participate in discharge planning. This improved consumer satisfaction after discharge.

ABI and Active+: Reduced time between hospital discharge and community rehabilitation from 12 days to 1 day by removing the requirement for ACC pre-approval for concussion services, co-designing a referral form and providing education sessions to hospital staff.

Auckland: Developed an integrated allied health assessment for patients with moderate–severe TBI, which was completed 88 percent of the time. Allied health provided input into the electronic discharge summary to support post-discharge communication.

Middlemore: An e-learning tool was developed to support capability in accurate assessment of post-traumatic amnesia.

Taranaki: Developed an information booklet for people discharged following TBI. Improved the percentage of people who received all required referrals for follow-up and improved discharge advice from 17 percent to 36 percent overall and from 0 percent to 30 percent for Māori.

Palmerston North: Developed a major trauma rehabilitation pathway to enable identification of patients with trauma, allied health assessments required prior to discharge and follow-up after discharge. All patients received all required allied health assessments.

Wellington: A standardised approach to rehabilitation planning was introduced, which meant patients received more allied health input, an information booklet for patients and their whānau was made available and a standardised discharge checklist was implemented.

Nelson Marlborough: A multidisciplinary discharge checklist was developed that included medical, nursing and allied health input into the electronic discharge summary.

Southern: Developed a Whāia te Ora framework to support Māori through their rehabilitation journey. This included: whanaungatanga, using te whare tapa whā to support goal setting and rehabilitation interventions and early referral to kaupapa Māori services.

Key successes

The teams described many successes with their projects. When grouped into themes, the key successes were:

- improved collaboration and strengthened relationships between services or organisations
- streamlined transitions of care and access to rehabilitation
- a more equitable service.

Barriers to success

When describing the barriers faced in completing their project, three key themes were consistently described:

- 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.

The team that was unable to complete the collaborative identified the key barriers that impacted their project's success:

- having a small team with high clinical workloads and little protected time to complete the project
- targeting improvement in a clinical area that the team were not based in
- the impact of COVID-19, including staff redeployment and a directive to pause all non-clinical project work.

Consumer engagement

Teams were expected to engage consumers and use a co-design approach during their improvement work. Four collaborative teams listed consumer representatives as part of their project team. Other teams engaged consumers in other ways, such as asking consumers for feedback on printed materials they had created.

Several teams reported that recruiting consumers to participate in their project team was challenging and time-consuming. The Commission was able to support some of the teams to find suitable consumer representatives and funded travel for consumers to attend the in-person learning sessions.

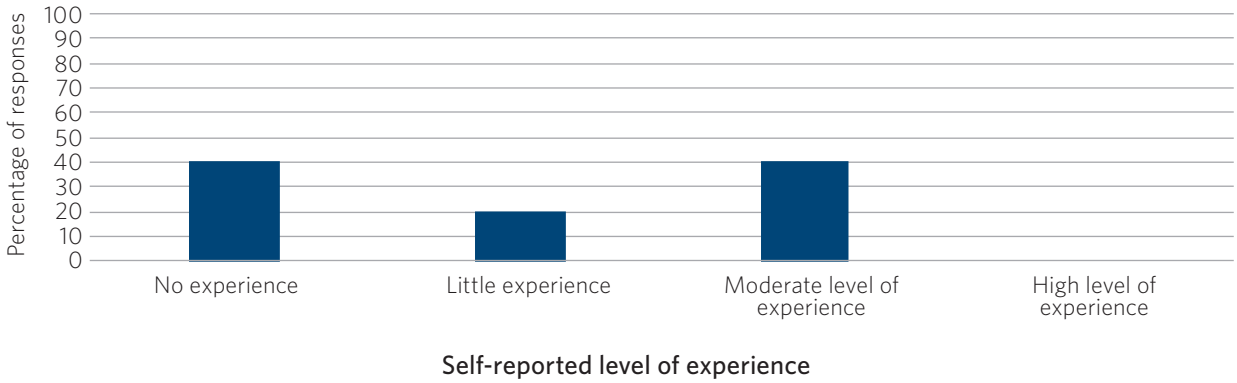
The consumer representatives' experience

The experiences of the consumers varied across the teams. Being involved with the teams' activities from the start of the collaborative and attending the learning sessions improved the consumer experience. Consumers who described having a positive experience felt that they were part of the project team throughout the project and that their knowledge and expertise was valued. All the consumers surveyed said that they felt safe to speak from their personal perspective and that they were able to express their opinions freely.

The learning sessions were seen as a valuable experience although they were overwhelming at times for some consumers, and regular 'brain breaks' were needed. A consumer described how attending the learning sessions and working on the project increased their understanding of their own injury. Having another non-medical person in the team who could help to translate acronyms and medical terminology during discussions was described as particularly useful.

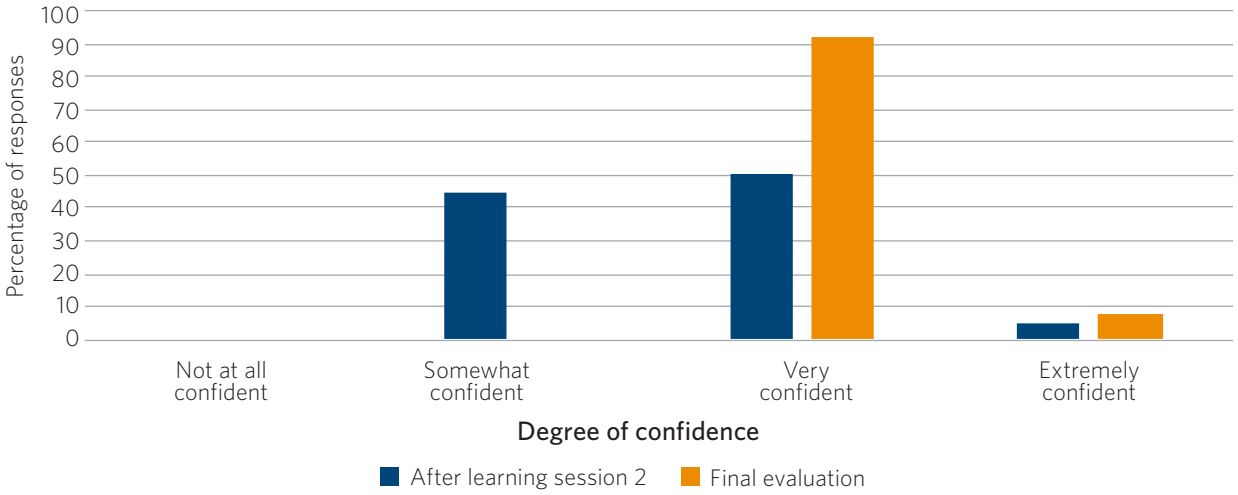
Experiencing a mismatch between their expectation of what their role would be and what occurred negatively affected the consumer experience. Feeling that their expertise was not valued also led to a poorer consumer experience. Consumers identified some practical barriers to their participation in the

Figure 3 Participants' self-reported experience in using PDSA at the beginning of the collaborative



Source: Interim report data collection.

Figure 4 Participants' self-reported confidence in using PDSA after learning session two and at the end of the collaborative



Source: Interim report data collection.

work. These included navigating the hospital when it was an unfamiliar place and meetings being held in parts of the hospital that required swipe card access.

Supporting kaupapa Māori rehabilitation processes

One collaborative project focused on appropriately supporting Māori patients with TBI by using a kaupapa Māori approach during their inpatient rehabilitation stay and transition to home. One of the strengths of this team was that it was led by Māori; they had several Māori team members and were supported by the Māori leadership in their organisation. They were able to use a kaupapa Māori approach consistently throughout their project.

Other teams found it challenging to include Māori representation on their teams and incorporate a kaupapa Māori approach. This is reflective of the limited Māori allied health workforce in acute hospitals.

Throughout the project, the Commission team provided training on health equity within QI. The first and second learning sessions included expert speakers with a Māori health background discussing kaupapa Māori models of care and how these applied to rehabilitation. Three members of the expert advisory group were Māori, and it was recognised that the incorporation of true kaupapa Māori was challenging to achieve in this project.

The rehabilitation collaborative increased the QI skills and knowledge of rehabilitation providers

Participants who completed the final evaluation survey displayed high levels of confidence in using QI methodology. All participants surveyed stated that being part of the collaborative had increased their knowledge of QI science within trauma rehabilitation (58 percent strongly agreed 42 percent agreed).

An example of this is the use of PDSA cycles to test change ideas. Participants began the collaborative with varying prior experience of this methodology. Self-rated confidence in using this methodology was rated after the theory was taught in learning session two and again during the final evaluation. Participants demonstrated increased confidence over time, and all respondents stated they were very confident or extremely confident in the final evaluation.

The methodologies that participants rated themselves the least confident in were the interpretation of their data using run charts (33 percent very confident, 67 percent somewhat confident) and statistical process control charts (8 percent very confident, 83 percent somewhat confident, 8 percent not at all confident). Data collection was a time-consuming process for most teams. At the start of the collaborative, either services collected minimal to no information on rehabilitation service provision or outcomes or the existing data was held outside of the organisation. Additionally, teams with lower trauma numbers struggled to collect enough data to demonstrate significant changes. Understanding and collecting clinically meaningful measurement data could be an area of focus for future collaboratives, as being able to interpret data is an important part of QI.

Due to travel restrictions during the COVID-19 pandemic, two of the learning sessions were held online. Participants noted that the online sessions were well run but expressed a strong preference for these to be held in person where possible. Some participants only attended the online learning sessions for part of the day as they were fitting it in around their clinical workloads.

QI methodology and conflict with a Māori world view

Feedback from learning session two highlighted that the QI methodology being used was challenging and at times conflicted with the Māori world view. The delivery approach used mainstream QI 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.

One of the Commission's strategic priorities is to embed and enact Te Tiriti o Waitangi. Work around incorporating te ao Māori into QI is underway within the Commission, with the development of the Te Ao Māori Framework. The new Improving Together e-learning developed by the Commission provides foundational knowledge in QI and outlines both western and Māori approaches to QI.

Conclusions | Kupu whakatepe

Overall, the collaborative met its aims of understanding existing trauma rehabilitation provision, working with local teams to implement new initiatives that will improve outcomes after trauma and building QI capability among rehabilitation clinicians.

The collaborative methodology was an effective way to bring together a range of rehabilitation clinicians to work on QI projects that were relevant to their clinical setting. It increased participants' understanding of the trauma system and how to effect system-level change. The collaborative built a network of allied health professionals working in trauma, which hadn't existed before.

Many of the collaborative projects achieved lasting improvements to service delivery that have improved outcomes for people experiencing trauma in Aotearoa New Zealand. Work is currently underway to scale two of these projects nationally, and all nine completed projects are being published as case studies to enable other services to undertake similar projects.

Despite health equity being part of the curriculum, few teams had equity measures as part of their family of measures. This made it difficult to determine the effect that the projects had on reducing inequities.

Data collection was challenging for the teams. 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.

Teams found consumer engagement challenging, and consumer experience was varied. Clear, shared expectations about the role of the consumer within the project team is necessary to promote a positive experience for consumer representatives.

The collaborative has resulted in capability building, improving the skills and knowledge of rehabilitation clinicians in using QI methodology. This is demonstrated by the increased confidence shown through the evaluation surveys. Participants have reported that they are already using the skills they have gained in other service improvement work. There is an opportunity to better incorporate Māori models of QI into future collaboratives.

Recommendations | Ngā whakatau

1. Support teams to engage consumers to be part of their project teams early in their project by outlining clear, shared expectations about the role that a consumer representative should play in the project team. Support teams to find suitable consumers, where required.
2. Give preference to in-person rather than virtual learning sessions. Although in-person learning is more time-consuming and has greater costs, feedback from teams is that it is preferred and enables them to build a network more easily. It also requires participants to commit fully to attending the learning session.
3. Incorporate equity measures routinely into the family of measures, alongside outcome, process and balancing measures. Convey an expectation that project teams will include at least one equity measure.
4. Incorporate the Commission's Te Ao Māori Framework into teaching about QI methodology.
5. Focus on how to understand and collect clinically meaningful measurement in services where little data exists in order to support teams to demonstrate effective change.

Appendix 1: Progress reporting tool |
Āpitihanga 1: Te taputapu mō te pūrongo kauneke

Major trauma rehabilitation collaborative progress report
What are you currently working on?
What are your recent successes?
Do you have any questions or challenges needing support?

Project progress score	
Please use the scale below to rate how your team is progressing during this action period. Select the definition that best describes your current progress. All elements of the operation definition must be satisfied to rate progress at each step.	
Score	**Operational definition**
0.5	**Intent to participate**: Team has signed up to participate in Collaborative; project has been identified but the team has not been formed
1.0	**Forming team**: Project team has been formed; ideas for an aim have been discussed
1.5	**Planning for the project has begun**: Team has met, and improvement discussion is occuring; target population identified (as reflected in aim); team's aim has been decided
2.0	**Activity but no changes**: The improvement team is actively engaged in development, research and discussion; measures selected by the team are aligned with the aim; data collection of baseline data has begun; changes planned but not yet tested
2.5	**Changes tested, but no improvement**: PDSA testing is underway in at least one driver, but no improvement in measures has been noted; data on key measures is being collected regularly
3.0	**Modest improvement**: Initial test cycles have been completed; evidence of moderate improvement in process measures
3.5	**Improvement**: PDSA testing for several components is underway and some changes have been implemented; some improvements in outcome measure(s) demonstrated, and process measures continue to improve
4.0	**Significant improvement**: Most planned changes have been implemented; evidence of sustained improvement in outcome measures demonstrated by the outcome measure(s) showing 50 percent improvement towards the target
4.5	**Sustainable improvement**: Data indicates sustained improvement within the system across all outcome and process measures
5.0	**Outstanding sustainable results**: Implementation cycles have been completed; project aim and expected results have been accomplished; organisational changes have been made to accommodate improvements and to make the project changes permanent
Action period:	**Score:**

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