



Serious
Traumatic
Brain Injury
Collaborative
progress report:
Executive
summary

He pūrongo
Wharanga
Roro Whētuki
Kauneke
Ngātahi: Kupu
Whakarāpopoto

December 2024

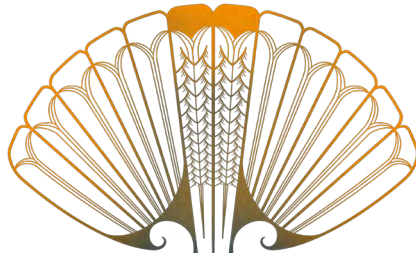


**Te Kāwanatanga
o Aotearoa**
New Zealand Government

Health New Zealand
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Health Quality & Safety
Commission





Executive summary | Kupu whakarāpopoto

In Aotearoa New Zealand assessment of traumatic brain injury (TBI) in patients admitted to hospital with major trauma was inconsistent, inequitable and was in places very limited. If left undiagnosed, the presence of a TBI can impact on patients' long-term outcomes, delay their functional recovery and reduce their quality of life.

To address this concern, Te Tāhū Hauora Health Quality & Safety Commission (Te Tāhū Hauora), the Trauma National Clinical Network (the network) and the Accident Compensation Corporation (ACC) jointly supported a national serious traumatic brain injury (sTBI) collaborative. The aim of this work was to improve identification of TBI by conducting post-traumatic amnesia (PTA) assessments for major trauma patients, to ensure all brain injured patients receive timely rehabilitation.

PTA duration is a well-known indicator of injury severity and a predictor of functional outcome in those who sustain TBI. The duration of PTA is also used by hospitals and ACC to determine the severity of TBI and the rehabilitation services required.

Between October 2022 and June 2023, nine teams from across Aotearoa New Zealand participated in a national serious TBI quality improvement collaborative. A team from Counties Manukau was also involved as part of the teaching faculty (having led similar work in a rehabilitation

collaborative in 2021 and 2022). Teaching focused on quality improvement methodology, consumer co-design and health equity tools to facilitate improvements to local services. Full details of the serious TBI collaborative can be found in the [Serious Traumatic Brain Injury in Aotearoa New Zealand: Summary of Improvement Work report](#) (Te Tāhū Hauora and the National Trauma Network, 2024).

In July 2024, Te Tāhū Hauora analysed quantitative data (from the New Zealand Trauma Registry) and qualitative data (gathered via semi-structured interviews and focus-groups) to understand if the collaborative's aim was met.

Quantitative results demonstrate that over 18 months, all but one of the collaborative sites demonstrated median PTA completion rates higher than the national average. In the first year (2022 and 2023) of collecting the PTA data point (which was also during the time the collaborative was running), median PTA assessment for collaborative sites was 75 percent, compared with 66 percent for non-participating sites. Between November 2023 and April 2024 results have increased to 84 percent for collaborative sites, compared to 68 percent for non-collaborative sites.

Factors that related to an increased chance of being assessed for PTA included having higher injury severity scores, being

managed in a larger hospital, age (younger people are more likely to be assessed) and whether the major trauma event was caused by transport or being struck by or colliding with a person or object. There was little difference in rates seen across ethnic groups.

Qualitative results identified that the project teams felt that:

- the collaborative resulted in successful implementation of change ideas
- innovative solutions reduced staff effort to complete new, improved processes
- staffing capacity was seen as the biggest barrier to service improvement and the recent health system changes made quality improvement initiatives challenging
- improvements were spread beyond initial services
- initiatives targeted a focus on improvements for vulnerable populations.

The TBI collaborative has resulted in lasting service improvement initiatives that have improved the assessment of brain injury for the most seriously injured New Zealanders.

Work is now underway to connect with teams outside of the collaborative to share resources and support their local improvement opportunities with PTA assessment.

An output from this project is a focus on equitable access to rehabilitation services for patients with a TBI. Having the New Zealand Trauma Registry PTA data point reflect information on PTA duration, rather than assessment completion, would positively inform the direction of future work.



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