# Commitment to Quality Award Entry Hawkes Bay Health Awards 2015

## Screening Tool for a History of a Traumatic Brain Injury within a Prison Population to Support Rehabilitation

## Organisation

The Department of Corrections Health Services provides a primary health care service to up to 8 and half thousand people on any given day and over a twelve month period with those coming and going up to 22 thousand prisoners. Over 50% of these prisoners are Maori, 5 % women, and 35% under the age of 35.

The Clinical Quality Team which is made up of four registered nurses are responsible for the Quality Framework and activities of Health Services that supports the provision of primary healthcare services to prisoners in New Zealand. All sixteen Health Centres across New Zealand are Cornerstone accredited.

Kay Sloan a registered nurse in Hawkes Bay has led the Clinical Quality team in the identification and development of this continuous quality improvement activity. This screening tool while impacting on prisoners within Hawkes Bay has also had impact on other prisoners across New Zealand.

The Department of Corrections vision is to create lasting change by breaking the cycle of re-offending. For Prison Health Services this applies to improving health outcomes for patients to support their wellness to then be able to address their offending. The Departments goal is to reduce re-offending by 25% by 2017.

## Commitment to Quality

The Clinical Quality Team were reviewing the clinical requirements of the health assessment content for prisoners arriving at prisons. This occurs between the first and seventh day when a patient is received in prison. The initial health assessment is a collection of questions covering physical, mental, alcohol and substance, immunisation, infectious diseases, and social history from patients. During this review the research gathered identified gaps in this health assessment.

It was noted that the prison populations internationally have a higher incidence of Traumatic Brain Injury (TBI) than the community. It was unknown how many prisoners in New Zealand have a history of a TBI as this information has never been collected before. There were no processes to capture and record the volume of all patients being received into prisons with a history of TBI.

This identified an opportunity to develop a tool a screening tool for a history of Traumatic Brain Injury (TBI) with prisoners in New Zealand.

Two screening tools that have been validated with prison populations internationally were reviewed and deemed not appropriate to use in New Zealand as they required additional staff roles and resources.

Professor Hinemoa Elder was approached for input and who is acknowledged internationally as a leader with her expertise with Acquired Brain Injury (ABI) research. An international email group was formed and consisted of:

- Professor Elder, Auckland University
- Kay Sloan, Clinical Quality Assurance Advisor Department of Corrections
- Nick Rushworth, Executive Officer of Brain Injury Australia
- Max Cavit, Managing Director of ABI Rehabilitation New Zealand
- Professor Catherine McPherson, Professor of Rehabilitation New Zealand
- Debra Fortescue Head of the Foundation Trust Disabilities Trust, United Kingdom
- Dr Paul Skirrow Clinical Neuropsychologist with ABI Rehabilitation New Zealand.

An adapted version of the international screening tools was developed, critiqued and modified using the expertise and input of the above people. The screening tool was to identify those consenting patients that self reported a history of TBI when arriving in prison.

Three receiving prisons were selected for a three month pilot with Hawkes Bay being one of these. Initial discussions were held with the nurses that would be using the screening tool. The screening tool consists of questions to ascertain history of any past TBI and determines mild, moderate of severe based injuries to the head and on the length of time unconscious with brain trauma.

The health assessment information is normally captured in an advanced electronic form in an electronic clinical record of the patient. For the purpose of this pilot a hard copy set of questions was used and the outcome if a TBI history was reported was then entered into the patient's electronic clinical file as a READ code classification. This was to alert all other health providers that this patient may display symptoms of a past TBI.

The responses were self reported by the patients and there was no confirmation of their clinical history of TBI validated by other health providers.

Following this pilot it was identified that while gaining data on the incidence of a history of TBI within the prison environment there was currently no services offered

to these people identified with a TBI while in prison. To address this a revised TBI plan was rolled out at a sentenced prison using the screening tool.

Brain Injury Support Association Hawkes Bay were contacted and together with the Clinical Quality Assurance Advisor provided in-service education and resources for case managers, custodial and probation staff. All prisoners were screened for a history of a TBI at this prison.

All consenting patients identified with a history of a severe TBI were to have a health alert placed in the prisoner's penal electronic file. There was a link for staff to access more information and resources on people with a history of a TBI.

People who have suffered a TBI have a higher incidence of deficits in cognition, memory, attention, concentration, planning, perception, learning information processing and communication. Research shows that people with a TBI will have more difficultly functioning within a prison environment. That they are more likely to have problems with alcohol and substances and are more likely to suffer from mental health conditions.

## Benefits and results

This is seen as the first steps, the beginning in setting up a process to gather this information for all New Zealand prisoners.

Results using the screening tool were classified in the patient's electronic clinical file and an audit was able to be run resulting in the below figures.

| History of a TBI | 3/12 pilot at the front door | One whole prison popn |
|---|---|---|
| Mild TBI | 39.7% | 39% |
| Moderate TBI | 10.5% | 10.7% |
| Severe | 2.3% | 4.5% |
| Total patients that identified of a history of TBI | 52.6% | 54% |

This showed the prevalence of patients with a history of a TBI was very high, over 50%. To support managing these prisoners staff are able to refer prisoners on release to one of the 14 Brain Injury Associations throughout New Zealand for ongoing support. This links the community providers to the prisoners to provide additional functional support.

By providing the in-service education and resources to non health staff this has enabled them to have a better understanding and strategy's to support the rehabilitation and learning of prisoners attending programs. Simple strategy's like providing learning in the morning when the brain is more rested, keep external noise

to a minimum, reduce artificial lighting, and take regular brain breaks has improved the prisoners capacity to benefit from programs and education sessions.

With staff more aware of people with a history of a TBI they have adjusted and improved their communication which has reduced tension and conflict making the environment safer.

One instructor has advised that he teaches two classes the same course one in the morning and one in the afternoon. The morning class is more advanced and progressing faster than the afternoon class. Now with the information learnt from the in-service he is considering alternating his classes from am to pm to allow both classes the opportunity to learn while addressing the needs of people with a history of a TBI.

There are links placed in the health alerts to access more information for non health staff and so that if that prisoner transfers to another prison where the in-service and resources have not yet been rolled out.

## Plans for the future

It is anticipated that this TBI screening tool will eventually be rolled out to all prisons in New Zealand. A patient hand out is to be developed by using a focus group of prisoners that will be relevant to the prison environment with some strategies and information to assist these prisoners while living in prison.

The value of this information early in a prison environment would help to shape and determine pathways of management to support the prisoner. To plan to match these results also with ethnicity, high users of alcohol and substance and mental health conditions will identify a very high risk cohort within the prison.

Now that the screening tool is providing date on the prevalence of the prison population with a history of a TBI future service delivery can be targeted to support this group. Plans to explore and scope the options of additional services and programs targeted specifically for people with a history of a TBI.

This may lead to services offered for assessment of cognitive function and neuropsychological services while in prison and hopefully the development of a TBI unit in prison to support the high risk cohort.