

TBI at ABI: Trends over the past 3 years



Tony Young, Nina Andreas

ABI Rehabilitation, Auckland, New Zealand

Introduction

In order to plan for service development and provide education to assist targeted prevention campaigns, it is vital to look back and reflect on what the data is telling us. Are we seeing trends emerging? Is there a need to collect additional information along the journey? Is there a shift in patterns?

ABI Rehabilitation has facilities in Auckland and Wellington and is the sole provider for intensive inpatient rehabilitation for moderate to severe brain injury in the North Island.

The data illustrated here represents clients discharged from ABI Rehabilitation between 2015-18.



Methods

A retrospective data analysis of clients discharged over a 3-year-period (01/10/15 – 30/09/18) from ABI Auckland and Wellington under the ACC Traumatic Brain Injury Residential Rehabilitation (TBIRR) contract was conducted. Excluded were admissions from the community and re-admissions.

Multiple variables were examined such as age, gender, ethnicity, length of stay (LOS) in hospital and at ABI, discharge destination, injury mechanism and contractual information. LOS considers the time the client was an inpatient and funded under the TBIRR contract. Clients were categorised into age groups (10-year brackets) and by discharge date (year1, year2 or year3 - from October to September the following year). Descriptive statistics were used in order to identify patterns and find trends.

Results

Characteristics of the sample

n = 737

73% Male **27%** Female

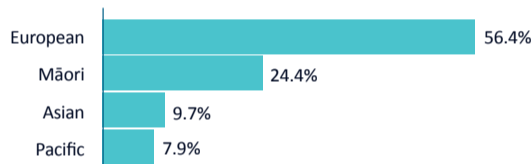
42.5 \bar{x} age on admission

19.2 \bar{x} # days in hospital

44.5 \bar{x} # days at ABI

88% discharged home

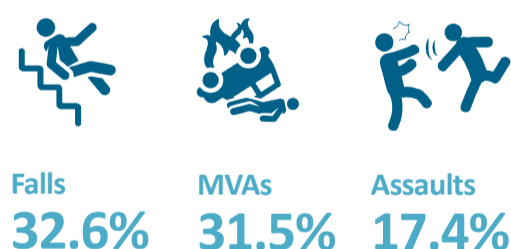
Ethnicities



Contracts



Top 3 mechanisms



Interesting findings

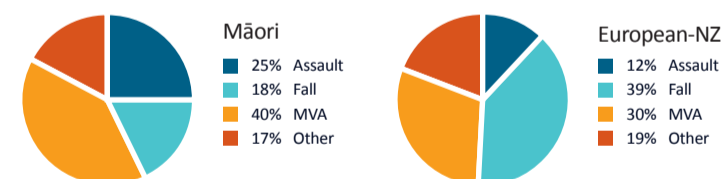
1 Age and mechanism of injury
Almost 50% of the 15-24 year olds had an MVA and close to 80% of the 75+ had a fall

2 Volume
Lower client volume in year 3 (- 10%) despite population growth (+ 1-2%)

3 Emerging consciousness
25 Admitted under EC contract
56% were women
22 Emerged from minimally consciousness
54% Discharged home

4 Ethnicities
Māori Clients **24.4%** VS Māori in contract region/age: **14.7%**

Mechanisms of injury by top 2 ethnicities:



Discussion

The data collected and analyse included those admitted to ABI Auckland and Wellington. It therefore comprises moderate to severe TBI's with an accepted ACC claim who are over 15 years of age. It does not include clients who did not survive their TBI, those that did no require inpatient rehabilitation or those that declined our services.

The data suggests that there is value in looking at the variables such as mechanism of injury, age, ethnicity and gender to determine if trends are

emerging. With the knowledge we are in a stronger position to plan for service developments and provide useful retrospective data.

An area for future improvement would be to use this data to with forecasting. It is also felt that there would be significant value in gathering greater details about the mechanism of injury e.g. causes of MVAs such as alcohol, speed, distraction. There would also be value in including data from those that did not survive the TBI or did not come to ABI.