



Final report prepared for Waikato Medical Research Foundation

Study title: **Six-year Outcomes following Traumatic Brain Injury (TBI) in Childhood** (WMRF 2016 #272)

Principal Investigator (PI): Dr Kelly Jones

Date: 18 September 2018

Institution: Auckland University of Technology

Funding start date: 22 August 2016

**Study summary:** This longitudinal, age-matched case-control study of children with and without TBI aims to: 1) examine the recovery trajectory of children across the full spectrum of TBI, focusing on behavior, emotion, executive and cognitive function, and quality of life over the 6-year period following TBI; 2) determine the behavioral and emotional adjustment, executive and cognitive functioning, social competence and community participation of children at 6-years post- TBI compared to an age, gender and ethnicity matched comparison group of TBI-free children; and 3) identify factors associated with poor 6-year outcomes following childhood TBI.

**Current status of the study:** Data collection is now completed and data analysis is continuing.

**Ethical update:** Throughout the duration of the study, there are no severe adverse events or complaints to report.

**Study update:** The study team have endeavoured to contact all families of children who were eligible to take part in this study and who agreed to on-going contact. Throughout the study period, the core research team met fortnightly to discuss study logistics and progress. All study data have been finalised, with online and hard copy data combined into a single online data file. Of the two Masters students working on Bionical and co-supervised by the PI, one has submitted her thesis and been awarded an A grade. A second, part-time student is continuing to work on her thesis. Participant contact and recruitment concluded April 2018. A key challenge in recruitment was that 18% of families in the TBI group were unable to be contacted. Of those TBI cases contacted, 72% consented to take part in a follow-up assessment. This is higher than the 60-65% recruitment rate reported in other longitudinal TBI studies. 66% of controls who were contactable agreed to take part. In total, 90 TBI and 63 control children were assessed, including parent, self, and/or teacher report data. Few families affected by child TBI declined to participate (15 (8.2%) TBI cases, and 24 (19.3%) control cases declined. Both cases and controls were similar in terms of child age at assessment, gender, and ethnicity (Māori: NZ European). Parent age at assessment, gender, and ethnicity were also similar across both groups. However, the control group had higher socio-economic status and were more educated than the TBI group ( $p > .05$ ). We will statistically control for these group differences in all relevant analyses. Medical record searches are complete, along with all data entry (including 10% data entry checks for accuracy and range and logic checks). A final update has been provided to the Steering Committee of the parent study, known as BIONIC. Data analysis per main objectives is currently underway. Given recruitment numbers are lower than anticipated, largely due to the proportion of families who were uncontactable, analyses will focus on between group comparisons at follow-up and identifying factors associated with good and poor outcomes..

**Budget update:** Budget expenditure for core expenses as at 18 September 2018 were –

<i>Expense</i>	<i>Funded</i>	<i>Actual</i>
<i>Research assistant</i>	490 hours	457 hours
<i>Koha</i>	\$4,000	\$4,000
<i>Mileage</i>	\$814	\$463
<i>Mobile phones</i>	\$490	\$490
<i>Named investigator (Parmar)</i>	\$539	\$539
<i>Named investigator (Theadom)</i>	\$712	\$712
<i>Named investigator (Starkey)</i>	\$6,270	\$6,270
<i>Other (stationary, study logo, Dictaphones for consent via phone)</i>		\$950