

Return to Work Following Moderate-to-Severe Traumatic Brain Injury

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Return to Work following Moderate-to-Severe Traumatic Brain Injury (TBI)

- Return to work is frequently a definitive goal in community rehabilitation
 - The majority of individuals who suffer a TBI are productive wage-earners prior to their injury (Donker-Cools et al., 2016)
 - Returning to productive employment is an influential factor in increasing quality of life (Matérne et al., 2018)
- However, returning to pre-injury employment or study following moderate-to-severe TBI can be challenging



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Return to Work following Moderate-to-Severe TBI

- Up to 80% of individuals with moderate-to-severe TBI were not working at two years (Sandhaug et al., 2015)
 - 59% unable to maintain uninterrupted employment at 3 to 5 years (Van Velzen et al., 2009; Machamer et al., 2005)
 - Further, some jobs have limited 'light duties,' inability to modify working hours, or are high risk.
- Age (e.g., older than 40; Grauwmeijer et al., 2012) and injury severity have been shown to be predictors of return to work in this population (DiSanto et al., 2018)



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Aims

- New Zealand is unique in terms of rehabilitation following brain injury given its funding model for accident-related injuries
 - Relatively comparable levels of rehabilitation, including vocation
- This pilot project evaluated employment status across the first year of recovery following moderate-to-severe TBI
 - Part of a larger follow-up study investigating longer-term outcomes in moderate-to-severe TBI



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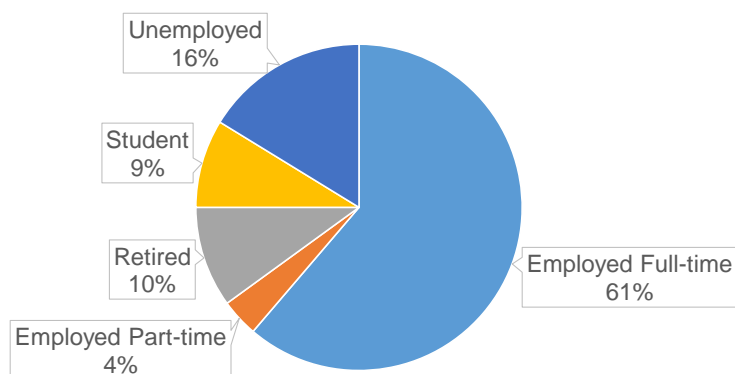
Methodology

- Retrospective audit investigating return-to-work frequency
 - TBI severity was defined using Glasgow Coma Scale score (≤ 12) and Post-Traumatic Amnesia (PTA; > 24 h)
 - Admission to a post-acute intensive, residential rehabilitation provider in Canterbury (n = 119)
- Analysed rates of return to pre-injury full- or part-time work/study
 - 39 individuals lost to follow-up due to living overseas or out of the region (56%, n = 22), referral to alternate local provider (36%, n = 14), or inability to consider return to work due to non-injury related complications (8%, n = 3).



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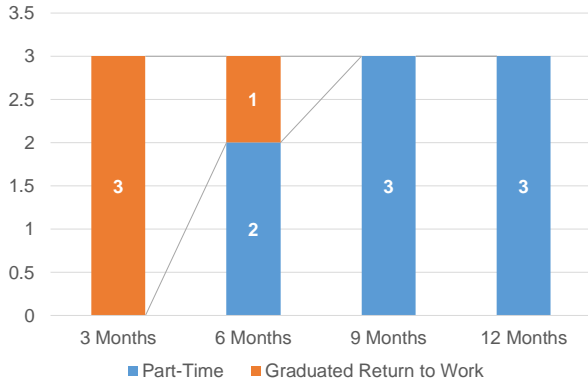
Work and Study Status at Injury



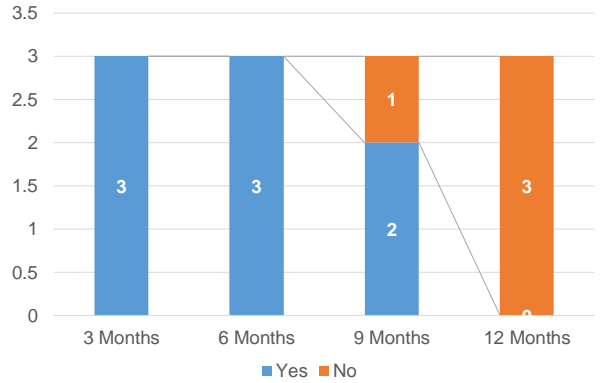
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Return to Part-Time Work (n = 3)

Part-Time Work Status Across 12-mos.



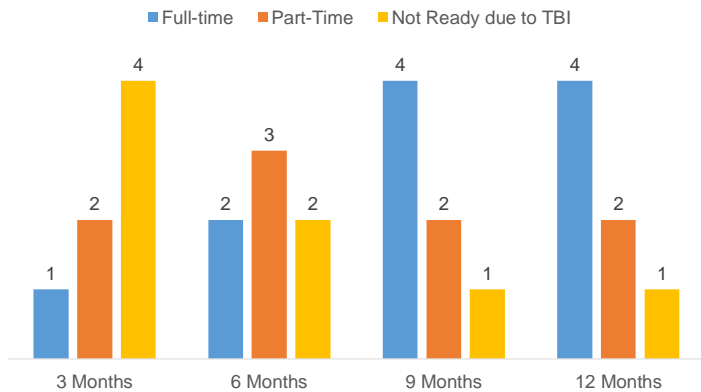
Community Rehabilitation Across 12 mos.



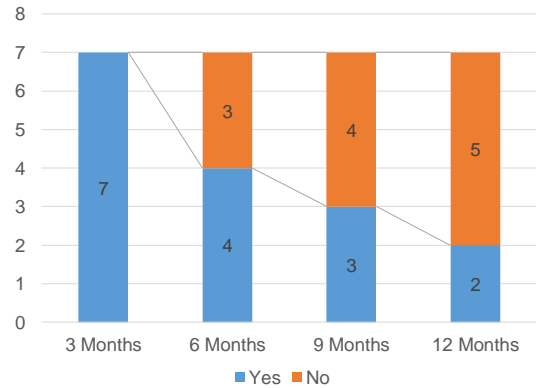
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Return to Study (n = 7)

Study Status Across 12-mos.



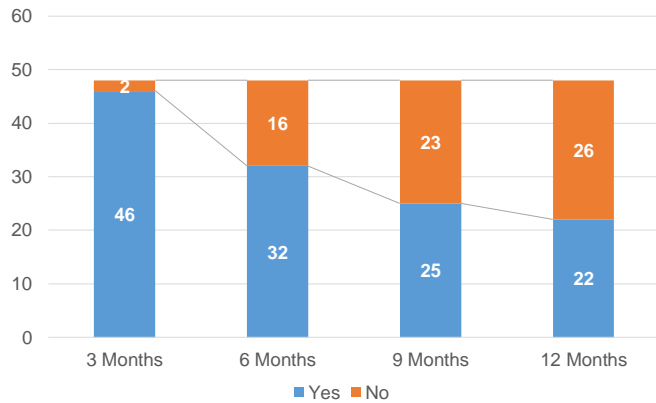
Community Rehabilitation Across 12 mos.



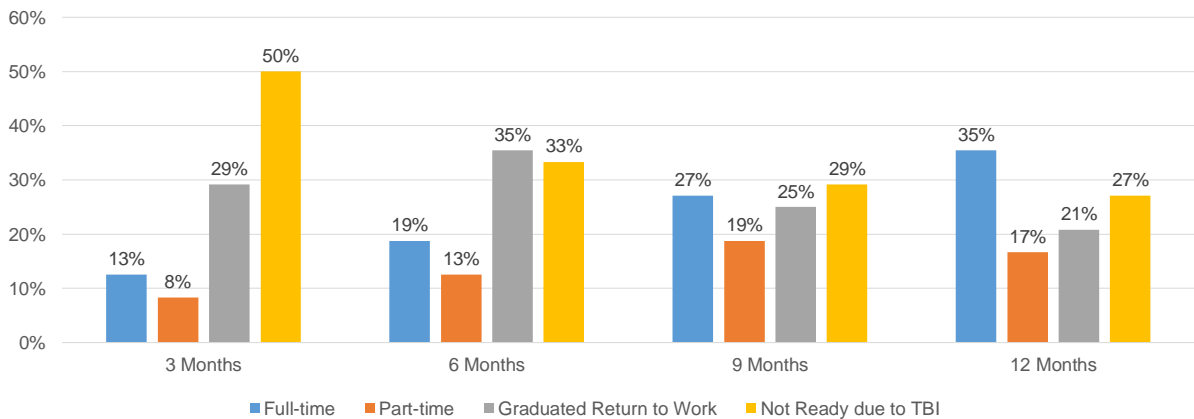
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Community Rehabilitation in Full-time Employees

- 46% remained in community rehabilitation 12 months following their injury ($n = 22$).

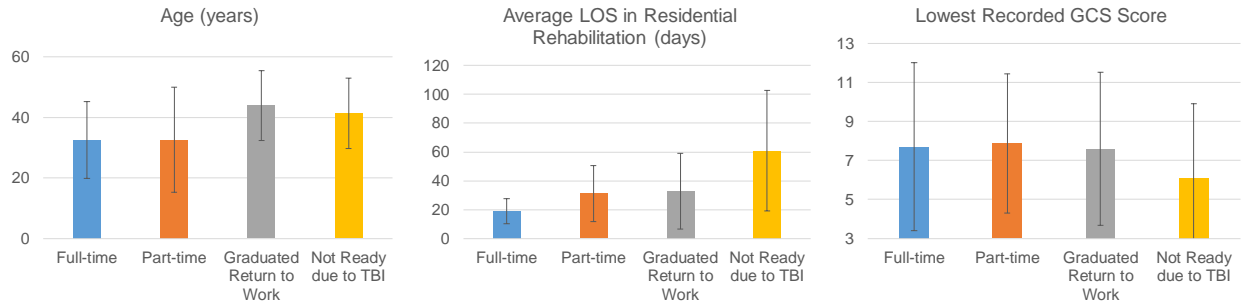


Return to Full-time Employment (n = 48)



Return to Full-time Employment

- In individuals who returned to full-time work:
 - Shorter length of stay (LOS) during residential rehabilitation ($\chi^2(3) = 12.90$; $p = 0.005$)
 - Younger at time of injury ($\chi^2(3) = 7.90$; $p = 0.048$)
 - No differences found for lowest recorded Glasgow Coma Scale (GCS) Score



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Discussion

- Results indicate approximately one-third of individuals returned to full-time work one-year following moderate-to-severe TBI
 - Critical to ensure accurate expectations for the individual, family/whānau, funders, employers and rehabilitation team
- Need to develop meaningful community integration options for individuals who want to achieve but are not ready to return to work.



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Limitations

- Retrospective review with small sample size
 - Cohort of individuals lost to follow-up
 - Possible influence of stand-down periods for individuals in driving-based professions.
 - Collection of longer-term data needed



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Conclusion

- Difficulty resuming work one-year following moderate-to-severe TBI, consistent with international research (Van Velen et al., 2009)
 - Likely marked impact on quality of life and sense of purpose
- Further research is needed to support best-practice in vocational rehabilitation and employment maintenance
 - For example, deficits in interpersonal and communication skills are one of the most frequent cause of job loss (Sake et al., 1991)



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Thank you!

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