

## Summary Report

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**Title:** A Retrospective Audit of Admissions to the Transitions Unit at the Burwood Spinal Unit

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**Introduction:** A spinal cord injury (SCI) is a life changing event, which is followed by a lengthy process of rehabilitation. In New Zealand this rehabilitation takes place in one of two Spinal Unit facilities. Research has found that SCI patients discharging from a Spinal Unit struggle with the process of transitioning back into the community. Patients reported feeling as though they had not been prepared with the life-skills necessary to allow a smooth re-integration home.

Thus to combat these issues, the Burwood Spinal Unit along with the Burwood Academy of Independent Living and the New Zealand Spinal Trust initiated the Transitional Rehabilitation (TR) Programme in March 2009. The programme involves an intermediary step in the last four weeks prior to discharge. Patients are transferred to the Transitional Rehabilitation Unit, which is set up to resemble a 'home-like' environment but is still located on the Burwood Hospital campus to provide medical care if necessary.

The unit can hold 4 patients at a time, each in their own bedroom with a shared wheel-chair accessible kitchen and living space. Patients learn to cook, access public transport and public spaces, grocery shop and go on day and overnight excursions.

Since the programme began, there has been no clear information about the people who have transitioned through it. Thus my project sought to provide insight into the programme population to be used in a wider study aiming to evaluate the TR programme and the factors that impact on the experience of transitioning.

**Aim:** To provide a demographic and clinical picture of the population that accesses the TR programme, using patient notes and other clinical data.

**Impact:** The audit will make an important contribution towards completing the overall programme evaluation. Ultimately the wider study will lead to both an improvement in service delivery and outcomes for people with an SCI in New Zealand.

**Method:** This study is a retrospective audit looking at clinical records and patient files from the Burwood Spinal Unit. From the information obtained from these records we aimed to answer a series of research questions:

- How many and who has accessed the TR programme? (demographic characteristics)
- How long did they stay in the TR Unit?
- Diagnosis and impairment level mix
- Outcome measures used over time
- Patient outcomes using outcome measures.

Data analyses included descriptive statistics, linear regressions and plotting trends over time.

**Results:** From our statistical analysis we were able to describe the characteristics of the TR programme population and answer the research questions.

Since 2009 235 people have been through the TR programme, and they were predominantly male (77.4%), employed prior to admission (74.0%), had a mid-lower back injury (52.8%) with an average age of 42 years. The ethnic distribution is very similar to the general New Zealand population in terms of ethnic makeup; 66.8% were New Zealand European/Pākeha, 15.7% were New Zealand Māori and 6.8% and 3.0% were Other European and Pasifika respectively. It was also found that the average length of stay in the programme was 25 days, consistent with the 30 days the programme intends to provide.

Clinical outcome measures used were the COVS (Clinical Outcome Variables Scale) and the FIM (Functional Independence Measure). These measures were plotted across various time points and showed that there were significant increases in the scores, reflecting the gains the patients made in their rehabilitation.

Linear regression models showed no significant associations between the demographic variables and the outcome measures. Those with higher neurological injuries did not stay any longer in the programme compared to those with lower neurological injuries. Regression results also showed, consistent with expectations, that those with higher levels of impairment made fewer gains, showing significantly less improvement at the different measurement points.

**Conclusion:** To find that none of the demographic characteristics impacted significantly on the outcome measure results, particularly age indicates that the TR programme seems to be equally beneficial for both older and younger people – dispelling myths that suggest that older people, after sustaining a SCI might regain less functional abilities and see less improvement in their rehabilitation.

The outcome measures looked at in this study may not measure the TR programme's aim to improve a patient's transition home, as the COVS and the FIM only look at functional abilities. Due to the amount of missing data; we were unable to look at measures of community participation, re-integration or quality of life following the patient's injury. Before introducing a new health service it is important to choose the outcome measures carefully, considering what exactly the service is intending to deliver.

Despite this, the results indicated that the TR programme did not appear to prolong a patient's length of stay in the Spinal Unit and showed that patients continue to improve functionally, counteracting initial concerns that the programme could disrupt expected discharge plans.