

Neurologic Rehabilitation Institute of Ontario

Outcome Validation Study for 2015

Executive Summary

The Outcome Validation Study model used by NRIO has been in place since 1997 with enhancements to the study made in 2013. The domains of the study include: post discharge life activity; level of support required at discharge; the level of social role return and the presence of interfering psychiatric or substance abuse problems. The study model also includes a durability component which tracks the outcomes of individuals discharged from the program over time. The overall domains of the study and the results observed in the years of its operation remain consistent with the long term studies of adults living with a brain injury (Kreutzer, Dawson and Chipman, Ponsford, Thommsen, Cifu, Sanders, Silver and others) as well as with the pediatric outcome study results (Campbell, Max).

The long trends observed in the study demonstrate a decrease in the age at injury to 27.7 from 36.2 in 2014 and from the average of 41.1 in prior years. Motor vehicles accidents remain as primary causative factor with consistent role distribution (Driver, Passenger, and Pedestrian/Cyclist). Similarly the male/female ratio is consistent with prior years. 63.6% of the people discharged had a Glasgow Coma Scale <9 which is lower than the prior year at 87.5% and the third lowest year in the course of the study. In 2015, the length of time from injury to entry into NRIO increased to 41.3 months from an average of 26.8 months. This increase in the latency period is an important factor to study in forthcoming years as a similar study operated by Community Neuro Rehab has identified that increased time from injury into treatment was associated with greater co-morbidity, a history of multiple failed treatments, lower outcome results and higher recidivism.

In terms of the outcomes attained: 45.8% returned to work, supported employment or volunteer positions. This is slightly lower than 2014 (47.6%) and higher than the average (29.1%). 33.3% of the people served were discharged home with <2 hours/day of care. The care needs of this year's cohort were better than the average of 28.2%. In terms of social role return, 40.7% returned to their primary social role with no to minimal changes in role function as compared to 42.9% in 2014 and 25.4% in the study average. 11.1% presented with interfering substance abuse problems at discharge which was a reduction from 17.6% in 2014 and 27.5% in the study average. Interfering psychological problems affected 14.8% of the persons discharged in 2015 as compared to 19.05% in 2014 and 26.1% in the study average. Overall, the outcomes are favorable and importantly the reduction in interfering factors can enhance long term results and stability. The increase in latency from injury to treatment will need to be better understood in subsequent years to determine the cause of the delayed entry into treatment.

In the Durability component of the study: 13% demonstrated an increase in Vocational/avocational return and 6.5% demonstrated a decrease in function; in the area of Social Role Return 21% demonstrate improvement post-discharge; the Level of Care/Care Environment also improved in 21% of the cases; the Self-Management of Behavior increased by 6.5% and Physical Problems Effecting

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Community Mobility/Access remained as at discharge. In 4 of 5 of the key domains followed in the Durability component we observed gains of 6.5% to 21% occurring following the individual's discharge from NRIO.

NRIO operates Customer and Employee Satisfaction as related performance metrics which contribute to the Outcome Validation Study. Customer Satisfaction is sampled while individuals are participating in the program and at discharge. The Case Manager/Funder/Professional Referral Source 2015 results were lower than the 2014 results by 7.6 points. The results in all but two of 13 sampled categories were above the 80% Threshold established for internal benchmarking. The Client and Family Satisfaction score average was lower than the 2014 results by 5.7 points. There were no scores below the 80% Threshold in the 14 categories sampled.

Employee Job Satisfaction is rated with a 33 category tool developed from the John Hopkins study of healthcare employees. The overall percentage of staff members reporting "Very Satisfied/Satisfied" was 88.4%. These results are above the trending line from 2007 to 2015, but slightly decreased from the previous year.

The 2015 Outcome Validation Study continues to be a central aspect of the organization's self-assessment and performance monitoring. The results attained in 2015 are consistent with prior years with the exceptions noted in this summary and are not regarded as statistically significant variances. The outcomes attained by the persons served and the durability of those outcomes indicates stable results as compared with prior years' results and over the course of time. The NRIO Outcome Study supports the program's mission of enhancing independence and quality in important life domains.

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