

Neurologic Rehabilitation Institute of Ontario

Outcome Validation Study for 2016

Executive Summary

The Study

NRIO has operated an Outcome Validation Study since 1997. This study addresses the functional outcomes of individuals who are treated in the program in terms of post-treatment goal attainment in their return to their social roles, their avocational and vocational return and the amount of living supports they require in the community. The study also considers the role of interfering psychological, psychiatric and substance use factors, both pre- and post-injury, which can affect outcome attainment and stability. Following discharge the study includes a Durability of Outcome component which compares post-discharge status to the individual at the time of their original discharge in the same domains as the study. Other components of the study include the individual, family and referring professional's satisfaction with services from admission through discharge. On an annual basis the staff satisfaction with work-life is measured which provides the organization with another aspect of program evaluation. The Outcome Validation Study contains both Adult and Pediatric benchmarks which are used as a point of comparison with recognized long-term outcome studies. The Outcome Validation Study has been engineered to fit into NRIO's Performance Improvement System and as such contributes to the organization's ability to effectively evaluate quality and safely deliver brain injury rehabilitation services.

The Persons Served

The Outcome Validation Study examines the persons served by cohort. There are four cohorts who are defined in the study: High Functioning, Moderately Impaired, Slow-to-Recover and Pediatric. Each of the outcome domains are applied to all cohorts. In 2016, the average age at injury was 37.5 which represents an increase from the average over the course of the study was 32.4. The period from injury to NRIO admission was 32.1 months which is increased from the average of 27.1 months in this domain and indicative of an increased over the years of the study. The mechanism of injury and gender are within a slight variance from the average and the data from prior years. The severity of injury as measured by an initial Glasgow Coma Scale of <9 at the time of injury decreased to 78.6% from the average of 82.8%.

The Results Attained

In 2016 there were 31 Adults discharged. 14 of the 31 were Moderately Impaired, 13 were High Functioning and 4 were Slow-to-Recover. In terms of outcomes attained, there were 27.6% of the persons served entering employment, volunteering or return to school or technical study as compared to the average of 29.0%. 37.9% were discharged home with two hours per day or less of Attendant Care which is an improvement from the average of 28.8%. 24.1% report no or minimal changes in their primary pre-injury social role as compared to 25.3% in the average over the course of the study. In terms

of interfering factors, there was a rise in individuals with substance use and abuse problems to 34.5% as compared to the average of 27.9%. 24.1% were discharged with psychological problems requiring treatment and/or intervention as compared with 26.0% over the course of the study. There were two cases of mortality of individuals served in 2016. Both these individuals died from conditions unrelated to their brain injury or health problems associated with brain injury.

There were two pediatric cases discharged in 2016. Both of these individuals were regarded as mild impairment and their outcomes demonstrated a return to the school classroom environment and home. The small number of pediatric discharges does not support statistical validity.

Satisfaction with Services

In terms of satisfaction with services, Referring Professionals reported an average of 95.4% as Satisfied or Very Satisfied. Client and Family Satisfaction report 97.9% as Satisfied or Very Satisfied. Staff satisfaction with work-life was 85.1% reporting Satisfied or Very Satisfied with the work setting, leadership, supervision and other domains related to the work place experience.

Achieving Lasting Results

The Outcome Validation Study includes a Durability component which follows the persons served from prior years in the domains measured in the study. There were 27 individuals included in the 2016 Durability Study. 1 of 27 showed a decline in 2 domains. 14 of 27 showed improvement in status in 1 or more domains. 12 individuals remained at their discharge status in the follow-up. The Durability component is critical to the process of evaluating program effectiveness and the production of changes which allow the person to maintain skill and performance levels or to continue to improve. In 2016, 96% of the prior discharges showed sustained or improved status at the follow-up interval.

Creating Effective Quality Programs

In summary, the 2016 Outcome Validation Study demonstrates that the NRIO programs assist individuals to attaining functional and durable changes which will allow greater independence and access to a life of satisfaction and meaning. The presence of interfering factors (behavioral health and substance use/abuse) observed in the 2016 cohorts remains as factors which require the application of unique resources, skills and approaches in the post-acute rehabilitation setting to achieve results. Over the course of the study the outcomes attained by persons served have been consistent and lasting. To that end, the professionals at NRIO continue to achieve the organization's mission.

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