

Outcome Study Highlights 2004-2008



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About the Outcome Validation Study

Since 1997, NRIO has conducted an Outcome Validation Study to evaluate the performance and quality of its services and programming. The study was redesigned In 1999 and continues to use that format. The study looks at various groups that are serviced by NRIO, as well as customer and staff satisfaction. Over the years, the study has evolved to better measure the relevancy of rehabilitation as related to the challenges faced by our clients as they return to independence, family, work and school. An important component of the outcome study is the durability of the outcomes attained by clients over time. The study presented online offers an overview of how NRIO rates as a service provider.

Study Demographics

The table below illustrates the various demographic factors found in the clients we surveyed.

Domain	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	AVG	Jones & Evans Study
Avg. Age at Injury	31.4	29.8	31.1	32.6	30.7	33.7	41.7	25	31.7	35.1	29.4	36.13	32.22	35.4
From injury to admit to NRIO (avg months)	26	29.8	40.7	22.5	15.3	15.7	12.5	12.5	17	7.0	32.6	25	21.09	14.4
Mechanism of Injury (%MVA)	81.8	100	100	83.3	94	95	66.7	87.5	91	100	87	96	89.42	64
Percent Male	75	73	50	100	50	77	67	56	64	83	74	69	68.8	n/a
Percent Female	25	27	50	0	50	23	33	44	36	17	26	31	31.2	n/a
% Glasgow Coma Scale (<9)	100	100	100	100	100	91.2	100	93.5	82	100	96.4	76.29	91.26	65

The NRIO clients are entering into post acute rehabilitation with reduced inpatient rehabilitation stays and closer in time to the acute phase of their recovery from injury. The shift to “sicker and quicker” which has effected the brain injury rehabilitation population impacts significantly on the types and intensity of rehabilitation needs and functional deficits which are addressed in post-acute rehabilitation.

Clinical Outcomes Attained at Discharge

The return to a more independent lifestyle is an important goal sought by many individuals with brain injuries. The table below indicates that individuals receiving services through NRIO have made remarkable strides in social return issues and struggles related to impediments to their success.

	2004	2005	2006	2007	2008	Average	Range 1997-2005
% Employed, Supported Employment or Training	37.5%	25%	34.3%	43%	19%	31.76%	13 - 66.7%
% Discharged home with less than 2 hours of paid care	25%	55%	40%	57.5%	38.1%	43.12%	20 - 77.7%
% Reporting "no change" in primary social role as spouse, parent, caregiver	33.3%	25%	50%	37.5%	33.3%	35.82%	10 - 6.66%
% Experienced change in dependent status requiring more care from family members	33.3%	62.5%	22.1%	24%	25%	47.96%	14.4 - 79%
% Reporting Substance Abuse Problems Post Injury	25%	66.5%	39.5%	32.5%	8.3%	31.67%	18 – 66.5%
% Reporting Psychiatric Problems Post Injury	22.5%	36.5%	45%	52.5%	42%	25.28%	9.1 – 52.2%

For individuals who have experienced a traumatic brain injury, the concept of independence includes the self-management of the disability and an increased ability to participate in community living and social relationships. A person with a brain injury may require ongoing support from others to replace lost functions or to bridge impaired skills. The degree of achieved independence will differ from person to person. In our follow-up studies, post discharge, we continue to see individuals regain independence in their care, social role, and avocational/vocational activities.

NRIO's clients continue to return to a significant level of independence in community living, social relationships, activity participation, and self-direction of care. The global outcomes attained by our clients support NRIO's mission of promoting and enhancing a return to independence.

Satisfaction Results for 2008

NRIO has conducted customer satisfaction surveys since 1993. In 2000, the organization adopted a revised Customer Satisfaction Survey format, which was based on a survey tool in use at a related organization since 1997. The Customer Satisfaction Survey is based on a compressed Likkert scale with the neutral rating removed. The charts below indicate a high degree of consistent satisfaction from both our clients and our professional contacts.

Client & Family Satisfaction	% Agree/ Strongly Agree
Oriented to Program	95%
Initial Questions Answered	95%
Participated in Rehabilitation Planning	90%
Agreed with rehabilitation plan	100%
Staff are skilled	100%
The Program is helpful	95%
The program is flexible to meet changing needs	95%
Information is of quality and accessible	100%
Clients treated with dignity and respect	100%
Recommend NRIO to others	100%
External accreditation influenced admission decision	65%
Satisfied with quality of services	100%
Rehabilitation at NRIO was a positive experience	95%
Participated in discharge planning	90%

Case Manager and Referring Professional Satisfaction	% Agree/ Strongly Agree
Initial contact was timely and efficient	100%
Initial questions answered in a thorough manner	100%
Participated in Rehabilitation Planning	86%
Agreed with rehabilitation plan	86%
Knowledgeable and professional staff	100%
Program was helpful to my client/patient	100%
Program was flexible to meet client's changing needs	100%
Information was of high quality and accessible	100%
Costs were comparable to other providers	86%
Recommend program and services to others	86%
Accreditation influenced opinion	43%
Satisfied with overall quality of services	100%
Rehabilitation at NRIO has been a positive experience	100%

Across a wide variety of domains, a consistent majority of clients, family members, and professionals indicate that NRIO has earned their satisfaction. By fostering a culture of strong, supportive communication between all individuals involved in a patient's care, we're able to attain the most effective results.

Highlights

Reduced medical rehabilitation length of stay prior to admission to NRIO increased rehabilitation needs of clients admitted to NRIO. Over the course of the outcome study, NRIO clients have become more medically acute with issues related to increased injury severity.

Paid supports needed for independence and community mobility were reduced for all program cohorts (adults and children) and clients continued to experience positive support reductions.

In the 2008 Outcome Durability component, 100% of the discharged clients from 2006 demonstrated a reduction in paid supports required in the home and community.

In 2008, 50% of the School Re-Entry Service clients returned to their academic placement with either no or low support requirements.

In 2008, 75% of the discharged adults returned to their home with no to moderate paid support levels.

In the 2008 Outcome Durability component, 100% of the discharges from previous years experienced improved functions outside of the home; 100% reported improved social role function since discharge and 100% were maintaining a higher level of independence in the home and community.

In the years 1997 to 2008, the percentage of individuals admitted to NRIO with pre and post injury psychiatric and substance abuse problems continued to increase.

Summary

In general, the people served by NRIO are increasing in age and injury severity. Additionally, the amount of time from injury to NRIO admission is decreasing. This means that people are coming to NRIO with more acute rehabilitation needs having spent less time in an acute medical rehabilitation setting.

Functional outcomes improved for all three adult groups: "Slow-to-Recover; "Moderately Impaired" and "High Functioning". There was a higher rate of return to work, school or vocational training for both the High Functioning and Moderately Impaired groups. 50% of the High Functioning Group returned to their pre-injury Social Roles without any modification of those roles (parent, spouse, friend). Only 50% required occasional support and 25% required no support for activities in the home and community. For the Moderately Impaired group, 38.7% were discharged to home with moderate to no paid support needs. At the time of admission, nearly 50% of these clients came from hospital or chronic care placements. Only 7.8% returned to that level of care.

The "Slow-to Recover" Group experienced gains in the areas of: Improved Ability to Respond to Stimuli; Attention and Focus; Tracking; Producing Meaningful Responses; ADL Independence and Communication. 66.6% were discharged to home or a non-institutional setting. Prior to admission 100% were in hospital or chronic care placements.

Across a variety of measured domains, NRIO continues to offer its clients a dynamic range of services that demonstrably indicate achievement and success. Our satisfaction results serve to underscore our tradition of excellence and quality care, in both our relationships with our clients and our community.



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