ACQUIRED BRAIN INJURY

Partnership Project

2007-2010 Program Review

Completed February 2010

Saskatchewan Health

Acknowledgements

We would like to acknowledge the work of the funded agencies that make up the ABI Partnership Project continuum of service. This review highlights the dedication, commitment and quality focus they take in delivering a wide range of services in order to best meet the needs of brain injured individuals and their families, as well as their work in communities to prevent injuries.

Kealee Playford
ABI Evaluator

Michele Cairns
Provincial Coordinator

Kelly Froehlich
Education and Prevention Coordinator

Table of Contents

EXECUTIVE SUMMARY **1**
INTRODUCTION AND BACKGROUND **2**
THE PARTNERSHIP **2**
FUNDING **7**
2007 – 2010 REVIEW METHODOLOGY **8**
PARTNERSHIP SERVICE PROVISION **9**
OUTCOMES **29**
EDUCATION AND PREVENTION **38**
CONCLUSIONS **50**
RECOMMENDATIONS **51**
UPDATE ON 2004-2006 EVALUATION RECOMMENDATIONS **52**
REFERENCES **56**
APPENDIX 1 – FUNDING CHARTS **57**
APPENDIX 2 – SERVICE MAP **59**
APPENDIX 3 – EVALUATION TOOLS **60**
APPENDIX 4 – EVALUATION RESULTS **66**
APPENDIX 5 – ACRONYMS USED IN THIS REPORT **71**

Executive Summary

The Acquired Brain Injury (ABI) Partnership Project (hereafter referred to as the Partnership) consists of 36 community-based programs located across Saskatchewan. The Partnership funds 71.9 FTEs within these programs, and over the past 14 years the Partnership has served over 3,450 individuals with an ABI.

Saskatchewan Government Insurance (SGI) has provided $51.42 million in funding since the Partnership's beginning in 1996. In addition to SGI funding, Partnership Agencies' global, in-kind contributions averaged $1.89M annually for the 2007-08 and 2008-09 fiscal years. These contributions have augmented the annual financial resources available for ABI Partnership Project programming by an average of 47%.

This review covers the time period of April 1, 2007 to March 31, 2009, and serves to fulfill accountability and program monitoring requirements. During this review period, 1,329 individuals with an ABI received service, of which 54% were new clients. The most common causes of injury were motor vehicle collisions (all types) at 29%, and strokes at 23% of all injuries. A total of 86,564 client service events, and 1,377 family events (1,250 individual events and 127 group events) were recorded. The Partnership made a total of 4,574 referrals to a wide variety of programs, and engaged in 1,827 consultations. A total of 2,820 Community Group and Education and Prevention activities were recorded this period, with a total of 76,273 attendees.

Analyses of the Mayo-Portland Adaptability Inventory – 4th edition (MPAI-4), our client outcome measure, revealed significant improvements between the intake and anniversary measurements. Ninety percent of recorded goals submitted via goal attainment summary sheets attained partial or full achievement. The two most common goal areas, functional independence and community activities, which each accounted for 29% of submitted goals, both had over 80% partial or full achievement. Change in Functional Outcome data revealed that the vast majority of clients maintained their level of function during their involvement with the Partnership.

In conclusion, the Partnership appears to be meeting the unique needs of survivors as indicated by the high level of goal achievement reported. These achievements, in turn, may be facilitating the functional improvements as seen in MPAI-4 ratings. Referral patterns continue to suggest a strong link with other health and human services, and the practice of connecting clients to appropriate services given their unique needs. In addition, the wide variety of education and prevention initiatives and activities illustrates the range of needs that the Education and Prevention programs are addressing, and indicates the importance of our continued efforts in this area.

Recommendations include improving the ABI information system, engaging in research activities, monitoring and reporting on service gaps and barriers for clients and families, improving communication within the Partnership, placing more of the injury prevention focus on community development rather than service provision, and continuing to advance the injury prevention agenda through provincial/national tables.

Introduction and Background

Following the introduction of No Fault insurance by Saskatchewan Government Insurance (SGI) in 1995, SGI changed its procedures for compensating policy holders who had been involved in a motor vehicle collision. Policyholders were no longer eligible to claim for pain and suffering, but were compensated for accident expenses and income replacement, and had substantially greater rehabilitation benefits. SGI formed the Rehabilitation Advisory Board to recommend improvements in rehabilitation services. This board recommended an integrated, community-based rehabilitation program, and the strategy for this program was developed by a multidisciplinary Acquired Brain Injury (ABI) Working Group in 1995.

The purpose of the Acquired Brain Injury (ABI) Partnership Project (the Partnership) as stated by the ABI Working Group was to provide a "comprehensive, integrated system of supports, resources and services that will enhance the rehabilitation outcomes and improve the quality of life for individuals with acquired brain injury and their families" [1, p.5]. The Partnership was to address identified gaps in services which were seen as: co-ordination of services to facilitate access; services to improve life skills; avocational and vocational activities; social, recreational and leisure options; residential service options; supportive services for families; education and training on brain injuries, and prevention activities to reduce the prevalence of traumatic brain injuries.

The Partnership began as a three-year pilot in January 1996 with SGI committing $9.3 million over three years ($3.1M annually) from 1996 to 1998. Since the pilot phase, SGI has renewed funding to the Partnership in three subsequent contracts (1999 to 2003, 2004 to 2006, and 2007 to 2009). Partnership funded agencies have been evaluated since the pilot phase – some have maintained funding levels, some new programs have been developed to address evaluation recommendations, while other agencies have received enhanced funding to improve service to ABI clients. Saskatchewan Health has provided project management and coordination to the Partnership from the beginning. Based on another recommendation of the ABI Working Group, a Provincial Advisory Group was established at the Partnership's inception which provides ongoing consultation and advice regarding Partnership activities.

The Partnership

The ABI Partnership consists of 36 community-based programs including three multidisciplinary outreach teams responsible for three broad regional service areas covering the province, and six education and prevention programs. These programs are located throughout the province and provide a range of services to individuals with ABI, their families, and communities. The Partnership has the unique ability to bring together multiple service providers to address client needs in an integrated manner. The range of services is summarized as follows: assessment; case management; consultation; support; education for individuals, families and service providers; rehabilitation (direct therapy and therapeutic aid/assistance); life enrichment programming; vocational and avocational programming; and crisis management services.

Partnership services fall under the following 11 program categories, excluding project management (see Appendix 1 for proportion of funding by program category and service type, and Appendix 2 for a map that identifies program location).

Outreach Teams (3)

The Partnership funds three regional Outreach Teams based in Prince Albert, Regina, and Saskatoon. These teams coordinate services on a province-wide basis. While at times providing direct client services, the primary function of the Outreach Teams is to provide multidisciplinary assessment, case management/coordination, and consultation services within their respective regional service areas of the province. The outreach teams assist ABI clients and their families in navigating the system of services and supports. A key impact of these teams is their ability to work with clients over the long term. The overall goal of these programs is successful community integration and improved quality of life.

Regional Coordinators (5)

There are five ABI Regional Coordinator positions within the province located in Moose Jaw, North Battleford, Swift Current, Weyburn, and Yorkton. The goal of the Regional Coordinators is to assist clients to reintegrate into their home community and bridge the gap in services between acute care/rehabilitation and the community. Like the Outreach Teams, they provide case management/coordination and consultation services in their region to promote community integration and improved quality of life of the individual with ABI.

Independent Living Worker Programs (3)

There are three Independent Living Worker Programs (ILWPs) operating out of SMILE Services (Estevan), SIGN (Yorkton), and Thunder Creek Rehabilitation Association (Moose Jaw; a newly funded agency as of June 2009). The ILWPs participate in the coordination of services for clients with ABI and provide individualized direct care and support. Services include, but are not limited to, life skills, rehabilitation, recreational activities, and a/vocational support.

Residential Options (2)

There are two Residential programs dedicated to serving the needs of survivors. Phoenix Residential Society – Pearl Manor is situated in Regina and is mandated to act as a provincial resource, and Prince Albert Residential Options serves the northern region. The goal of these programs is to enable individuals with ABI to live more independently in the community with improved quality of life by assisting in the restoration of as much functional ability as possible.

Rehabilitation Programs (6)

These services include the three regional branches of the Saskatchewan Association for the Rehabilitation of the Brain Injured (SARBI) located in Regina, Saskatoon, and Kelvington. These services also include the Speech and Language Pathologist (SLP) located in Melfort and the two Rehabilitation Service programs serving the Keewatin Yatthé and Mamawetan Churchill

River Health Regions that are currently sub-contracted through Prince Albert Parkland Health Region.

The SARBI programs provide staff-directed and volunteer–assisted services focused on increasing independence through slow-stream rehabilitation. The SLP provides assessments and works to improve communication skills of individuals within the Kelsey Trail Health Region. The goal of the two Rehabilitation Service programs is to restore, maintain, and enhance function and quality of life. These two programs were created to provide services to the most remote areas of the province.

Children's Program (1)

Radius Community Centre, located in Saskatoon is the only program within the Partnership that offers programming exclusively for children and adolescents. The goal of Radius' Community Integration Program is to facilitate age-appropriate integration opportunities for children and youth with acquired brain injury in their own community.

Vocational Programs (3)

Partners in Employment, a program of the Saskatchewan Abilities Council, in Regina and Saskatoon, along with Multiworks in Meadow Lake provide individualized support and training/rehabilitation to individuals with ABI who are interested in obtaining or maintaining employment. The goal of the vocational programs is to improve the quality of life of survivors by enhancing community integration and increasing functional productivity.

Life Enrichment Programs (3)

There are three ABI Life Enrichment Programs operating out of the Regina, Saskatoon, and Yorkton branches of the Saskatchewan Abilities Council. These programs promote and facilitate personal and social rehabilitation, through recreation and leisure activities for those that may or may not be capable of returning to the competitive workforce. Based on client interests, activities are organized individually or for a group. These programs assist clients in developing social skills, as well as exposing clients to new experiences.

Crisis Management Services (2)

Mobile Crisis Services located in Regina and Crisis Intervention Services located in Saskatoon, both provide crisis management services for survivors of ABI. These programs provide case management services when mainstream services have been unsuccessful. They also provide crisis intervention services on a 24-hour availability.

Day Program (2)

Lloydminster Acquired Brain Injury Society (LABIS) and Sherbrooke Community Centre "Moving On" program (Saskatoon) are the two day programs funded by the Partnership. These programs both offer programming two days a week. The programming includes physical and

cognitive exercises and life skills with an overall goal to promote independence and community integration.

Education and Prevention (6)

This program category includes three Regional Education and Prevention Coordinators (Regina, Saskatoon, and Prince Albert[1]), the Saskatchewan Prevention Institute (SPI), Saskatchewan Brain Injury Association (SBIA) and the Provincial Education and Prevention Coordinator.

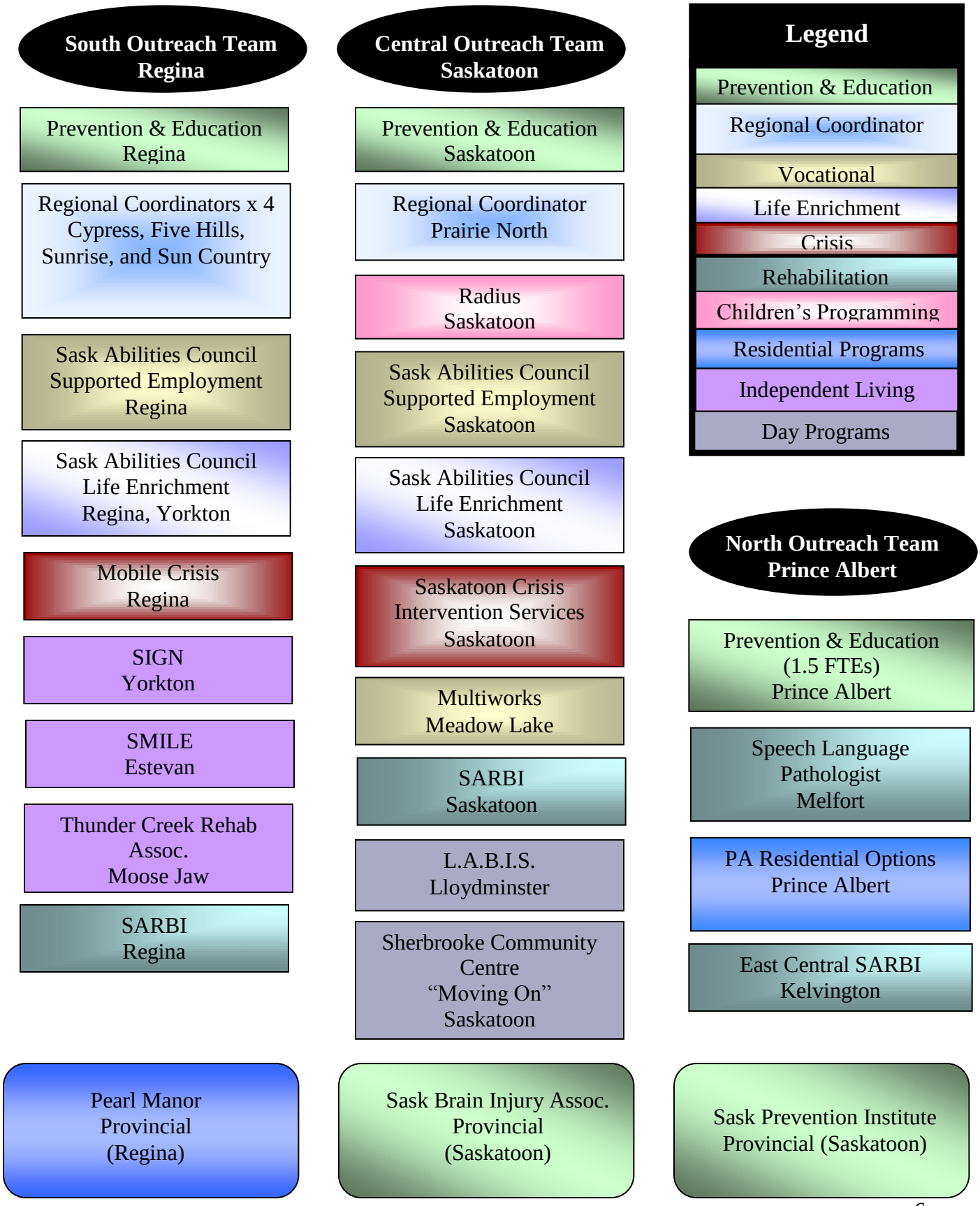
The Regional Education and Prevention Coordinators assist communities in developing and facilitating effective injury prevention strategies and work on raising the awareness of the effects of ABI through ongoing education initiatives.

SPI, a provincial program located in Saskatoon, develops and implements evidence based resources and programs available to professionals and the public to prevent injuries in children.

SBIA is a provincial grassroots organization that receives funding to provide support to survivors and families through support groups, education events and resource development.

[1] While core funding is for 1 FTE, in this contract period PA Parkland Health Region has enhanced human resources on a temporary basis and currently employs 1.5 FTEs to deliver northern Education and Prevention programming.

Figure 1: The ABI Partnership Service Continuum



Partnership Staff

In 2008-09, funded agencies reported that a total of 71.9 FTEs are funded by the Partnership, in addition to 2 FTEs dedicated to project management and 1 FTE dedicated to education and prevention coordination. The following table displays the distribution of FTEs by health region and program category.

Table 1: Acquired Brain Injury FTEs

Region	Outreach Teams	Rehabilitation	Prevention/Education	Regional Coordinator	Vocational	Life Enrichment	Children's Program	Crisis Management	Day Program	Residential Options	Independent Living	Total
Cypress				1								**1**
Five Hills				0.8							1	**1.8**
Heartland												**0**
Keewatin Yatthé		0.82*										**0.82**
Kelsey Trail		2.5										**2.5**
Mamawetan		0.5*										**0.5**
Prairie North				1	0.32				2			**3.32**
Prince Albert Parkland	6.1		1.5							3		**10.6**
Regina	13	1.5	1		1	1		0.5		8.85		**26.85**
Saskatoon	8	1.5	3	1	2	2.0	1.8	0.5	0.61			**20.36**
Sun Country				1							1	**2**
Sunrise				0.75		0.5					0.9	**2.15**
Total	**27.1**	**6.82**	**5.5**	**5.55**	**3.32**	**3.5**	**1.8**	**1**	**2.61**	**11.9**	**2.9**	**71.9**

* Indicates services subcontracted with Prince Albert Parkland Health Region.

Funding

SGI

SGI committed $9.3 million dollars ($3.1M annually) for the initial three-year pilot for 1996 to 1998. After an initial process evaluation was completed for this pilot project, SGI renewed their funding by committing $17.83 million over five years from 1999 to 2003. At the end of the five-year contract, a second evaluation was completed with a focus on program and client outcomes. Upon its completion, SGI once again renewed funding for another three years from 2004 to 2006 and committed an additional $11.36 million dollars. A third evaluation was completed at the end of 2005-06 and informed SGI's funding commitment of $12.91M to the Partnership in the current contract period of 2007 to 2010. To date, SGI has committed a total of $51.42 million in

total funding to the Partnership. Appendix 1 shows how the current funding and client numbers are distributed across the various service and program types.

In-kind Contributions

In order to obtain an accurate picture of the additional inputs that assist in the delivery of ABI programming, ABI Partnership agencies have been asked to submit information regarding their in-kind contributions over the last three contract periods. These contributions demonstrate the degree to which our programs supplement their operations outside of the SGI grant dollars.

Such in-kind contributions include additional grants or fundraising efforts, human resources (administrative, clinical, information technology, volunteer and practicum students), building occupancy, travel, program and office supplies, training, and professional fees.

In the 1999-2003 contract period, these annual in-kind contributions were estimated at $1.194M. In the 2004-06 contract period, a new template was developed in order to simplify the reporting process and global in-kind contributions, and in-kind reporting through this template was shown to average $1.3M annually for 2004-05 and 2005-06 fiscal years. In the first two years of the current 2007-09 contract period, these contributions averaged $1.89M annually for 2007-08 and 2008-09 fiscal years. Put another way, these contributions have augmented the annual resources available for ABI Partnership Project programming by an average of 47%.

These in-kind contributions represent a value-added component of ABI programming. Without these, our programs' capacity to deliver effective ABI services would be much diminished which therefore demonstrates our funded agencies' commitment to partnering to improve the scope and quality of ABI programming.

2007 – 2010 Review Methodology

Since the establishment of the ABI Partnership in 1996, three separate evaluations have been conducted for each contract period. The 1998 evaluation examined the implementation of what was then a pilot project. The 1999-2003 evaluation included site-level process evaluations, a cost-benefit analysis, and focused on client outcomes. For the 2004-06 report, the Provincial ABI Office took over the responsibility of the evaluation activities, and programs' responsibilities were reduced to administering outcome measures and entering service statistics into the Acquired Brain Injury Information System (ABIIS). The 2004-06 evaluation took an in-depth focus on three of the program stakeholder groups: clients, service providers, and based on a prior recommendation, families.

The composition and functioning of the Partnership has been fairly stable since the beginning of the program, and process, outcomes, cost, and stakeholder satisfaction have been thoroughly examined. Thus, the Provincial ABI Office proposed that the current evaluation should take a reduced 'program monitoring' focus. This sentiment was endorsed by the Partnership's Advisory Group, and the data collection plan and review questions reflected in this report were endorsed

by the Partnership's Outcomes Working Group and the Provincial Advisory Group. See Appendix 3 for the tools and questions used in this review.

The current review will reflect the events and activities of 2007 to 2009, and will be separated into three main sections:

1. Review of the Partnership Service Provision
    - client demographics
    - client and family service events
    - service co-ordination activities

2. Client Outcomes
    - Goal attainment
    - Mayo-Portland Adaptability Inventory IV
    - Change in Functional Outcome

3. Education and Prevention
    - Activities undertaken by education and prevention coordinators
    - Community grants to promote education and prevention events
    - Conferences and information sessions
    - Reports and evaluations

Partnership Service Provision

Client Demographics

Since 1996, the ABI Partnership Project has provided service to over 3,450 individuals with ABI. Between April 1, 2007 and March 31, 2009, a total of 1,329 individuals received service, of which 53% (n = 711) were new clients. Refer to Table 2 for demographic information for clients who received service in this period. Consistent with the previous review, the majority of discrete clients were non-aboriginal (72%) males (66%) who live in their own or family home without support (44% without any difficulty, 7% with some reports of difficulty). The most common cause of injury was related to a motor vehicle collision (all types) at 29%.

Table 2: Discrete Client Demographics (April 1, 2007 to March 31, 2009)

Demographic Variable	Total (N = 1329)
Client Gender	
Male	872 (66%)
Female	455 (34%)
Client Age (Years)	
17 and under	82 (6%)
18 to 24	133 (10%)
25 to 29	90 (7%)
30 to 39	163 (12%)
40 to 59	516 (39%)
60 to 79	239 (18%)
80 and over	78 (6%)
Not reported	28 (2%)
Ethnicity	
Non-Aboriginal	963 (72%)
Status Indian	217 (16%)
Metis	13 (1%)
Non-status Indian	7 (1%)
Inuit	1 (0.1%)
Unknown	128 (10%)
Cause of Injury*	
Motor Vehicle/Motorcycle (All types)	390 (29%)
Stroke	310 (23%)
Tumour	115 (9%)
Other (not Traumatic Brain Injury)	108 (8%)
Blow to head (assault)	88 (7%)
Aneurysm	87 (7%)
Fall	87 (7%)
Traumatic Brain Injury (other)	65 (5%)
Other	143 (13%)
Home Health Region*	
Regina Qu'appelle	384 (29%)
Saskatoon	308 (23%)
Kelsey Trail	132 (10%)
Prince Albert Parkland	124 (9%)
Sunrise	91 (7%)
Five Hills	83 (6%)
Prairie North	61 (5%)
Sun Country	59 (4%)
Cypress	50 (4%)
Mamawetan Churchill River	30 (2%)
Keewatin Yatthé	19 (1%)
Heartland	10 (1%)
Athabasca	4 (0.3%)

Table 2: Discrete Client Demographics (April 1, 2007 to March 31, 2009) Continued

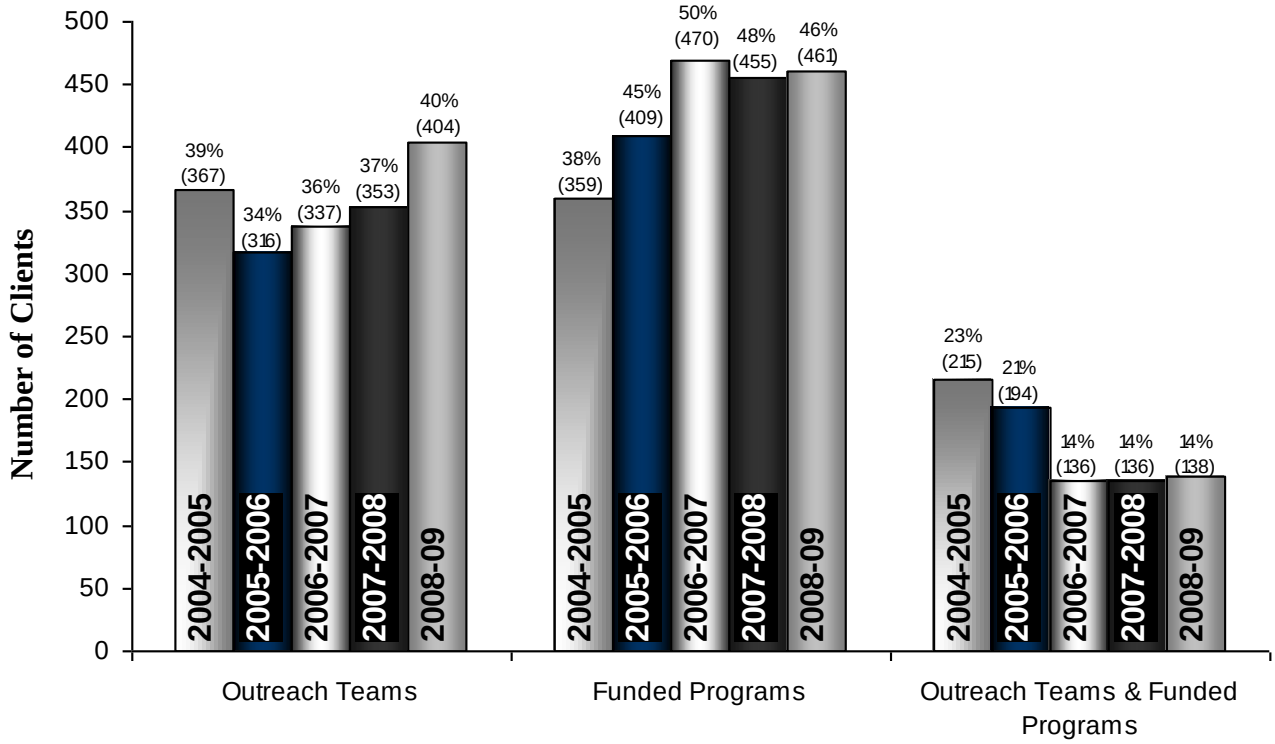
Demographic Variable	Total (N = 1329)	
Employment*		
Unemployable	314	(24%)
Unemployed	300	(23%)
Retired	200	(15%)
Student	157	(12%)
Currently Medically Restricted	156	(12%)
Part Time Competitive	86	(6%)
Full Time Competitive	73	(5%)
Other	241	(18%)
Education Level*		
Secondary School	727	(55%)
Elementary School	368	(28%)
Post-Secondary School	291	(22%)
None	32	(2%)
Preschool/Kindergarten	28	(2%)
Living Situation*		
Independent in own or family home	583	(44%)
Supported in own or family home	243	(18%)
Long Term Care Facility	134	(10%)
Supported with limited assistance	118	(9%)
Supported requiring assistance	116	(9%)
Independent with difficulty	97	(7%)
Personal Care Home	50	(4%)
Other	195	(15%)

* **Note:** Due to coding in the information system, these variables do not add up to the total discrete client count.
Source: ABI Information System

Program Membership

Program types in the ABI Information System (ABIIS) are divided into two categories, outreach and funded programs. The category of "outreach" represents the three Outreach Teams and "funded" represents all other programs. Figure 2 provides a summary of the discrete clients registered with an Outreach Team, a funded program, or with both an Outreach Team and a funded program over the past five years. The fact that almost half of the Partnership's clients (46% in 2008-09) are served solely by a funded program indicates that there is a diverse range of needs outside of case management that the Partnership's funded agencies address. This figure shows that the number of clients served by both Outreach and Funded programs is decreasing, and the number of clients served solely by a funded program is increasing.

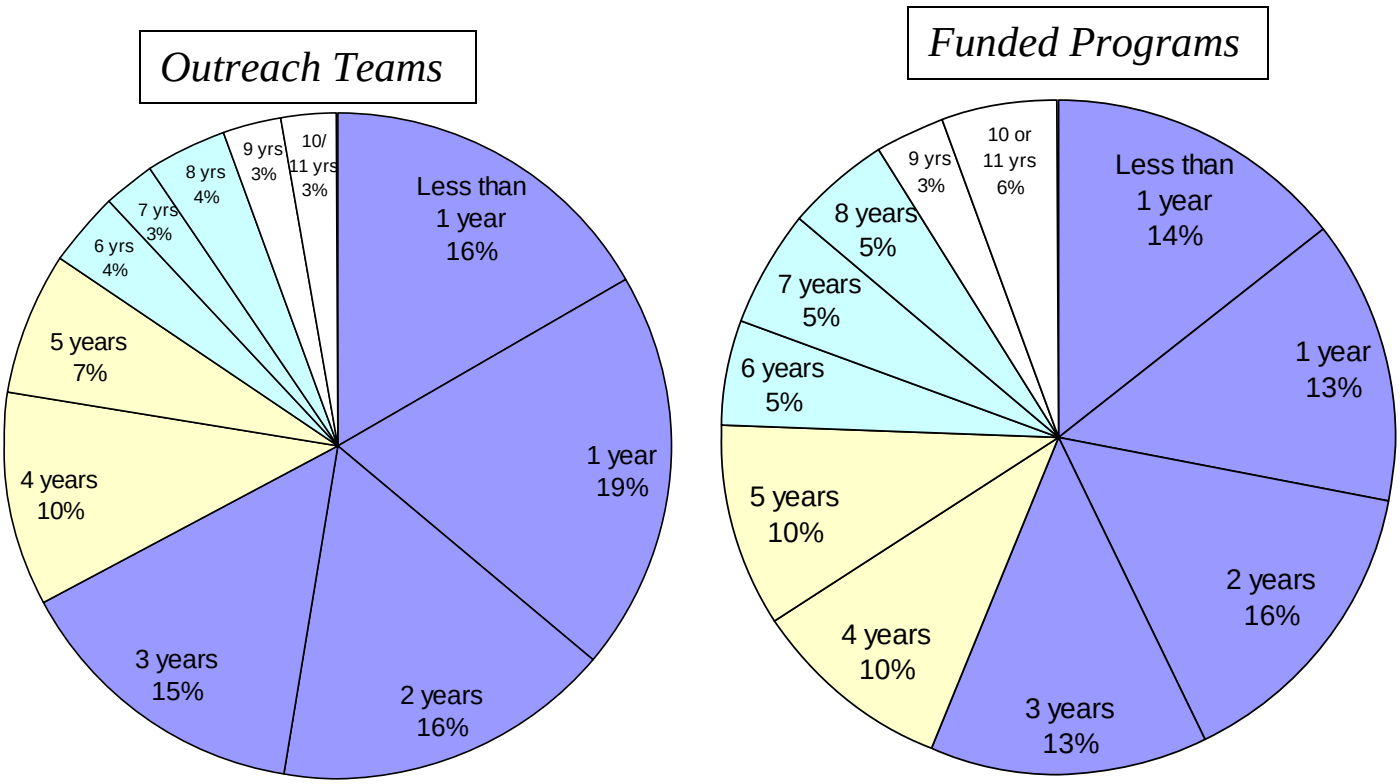
Figure 2: Percentage of Clients seen by Funded Programs, Outreach Teams, or both Funded Programs and Outreach Teams, 2004-09



Source: Corporate Information Technology Branch (CITB) reports

This trend might imply that client service delivery may be more sequential in nature rather than concurrent. That is, clients may no longer remain involved with outreach teams once they become involved with funded programs. However, this trend might also imply that clients remain in funded programs longer than they remain involved with outreach times. As shown in Figure 3, funded programs do see a higher percentage of 'older' clients.

Figure 3: Percentage of Active Client Registrations by Number of Years in Program, 2008-09 (excludes re-activated clients)



Source: ABI Information System

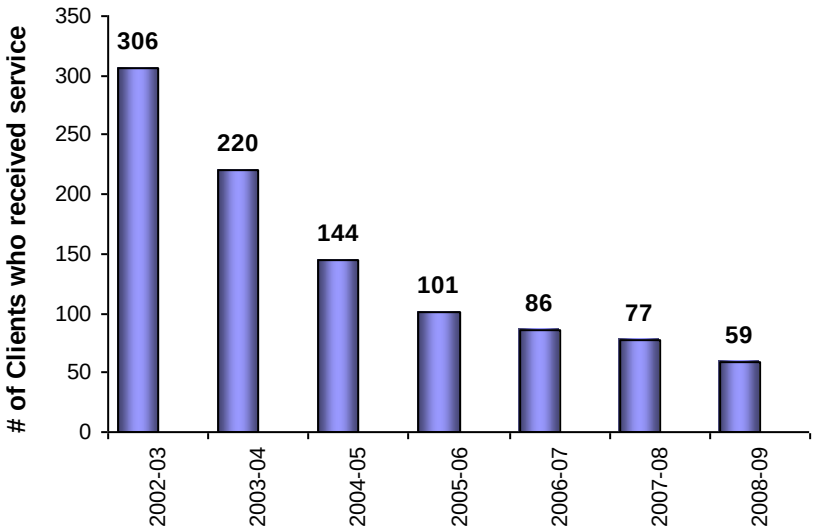
Long-Term Service Use

Impairments that result from ABI are unique, complex, and often permanent. These impairments often create difficulties in multiple life-areas (e.g., unemployment, financial problems, social isolation) [2]. Some experts in the field have suggested that long-term, multidisciplinary outreach support and community-based programs are necessary to assist clients to re-engage with life and re-integrate into society, because of the complexity and long term nature of ABI impairments [2,3]. As shown in Figure 3, the majority of clients are within the first three years of their injury (66% for outreach teams, 57% for funded programs); however, many clients have been receiving service for four or more years (34% for outreach teams, 43% for funded programs).

Clients' length of involvement with the Partnership varies greatly with some clients ending their involvement after a single year, and many remaining involved for many years. This is demonstrated in Figure 4 for clients that were first registered in the 2002-03 fiscal year. This figure shows that while 86 out of 306 clients (28%) stopped receiving service in their first year,

59 individuals (19%) were still receiving service seven years after registration. This demonstrates the variability of ABI clients' long-term support needs.

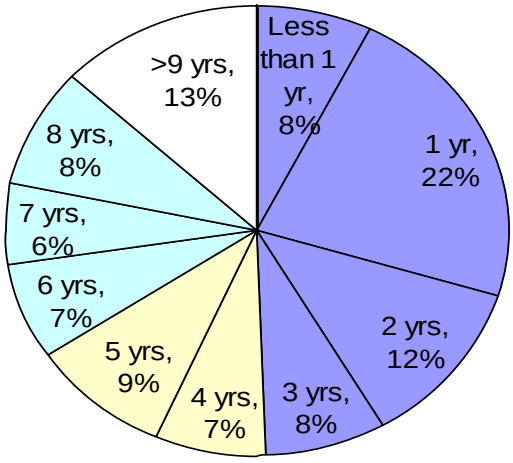
Figure 4: Number of Clients receiving Service each Fiscal Year since being Registered in 2002-03



Source: Acquired Brain Injury Information System

While it would appear from Figure 4 that the majority of clients cease their involvement with the Partnership after their first few years, data on current service use indicates that long-term clients require intensive services. As shown in Figure 5, clients who have been registered for eight or more years account for a small number of registrations (10% of outreach; 14% of funded programs), yet they account for almost a quarter of the Partnership's total service time (21%). This demonstrates the long-term nature of ABI service provision.

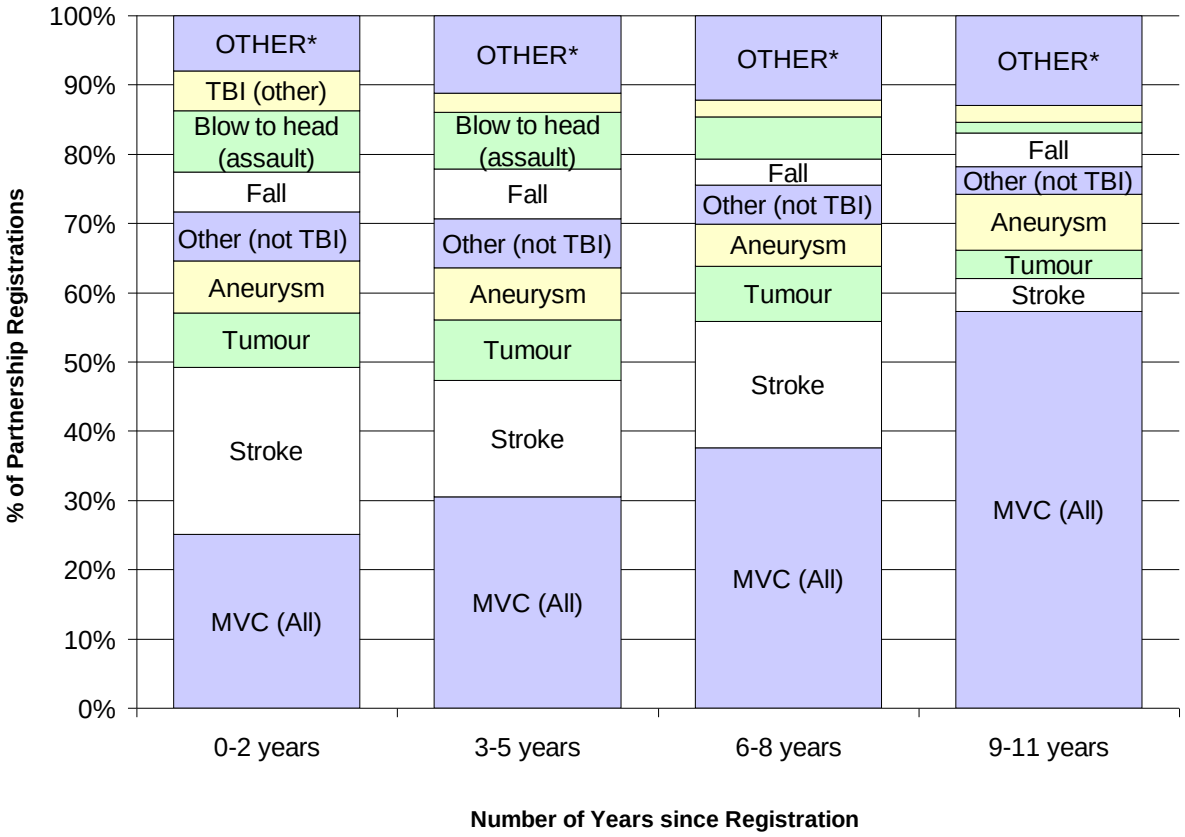
Figure 5: Breakdown of 2008-09 Service Time by Clients' length of Involvement in the Partnership



Source: Acquired Brain Injury Information System

Individuals whose brain injuries are severe and/or complex, such as those sustained in motor vehicle collisions (MVC), are often the clients that require these longer-term supports. Figure 6 shows that close to 60% of the clients who have been involved with the program for nine or more years have sustained their brain injury as a result of a motor vehicle collision (all types).

Figure 6: Percentage of Brain Injury Causes by Time spent in Partnership, 2008-09[*]



Source: Acquired Brain Injury Information System

Client Service Events

The continuum of services provided by the ABI Partnership is designed to address the needs identified by the ABI Working Group, and supported by the research literature. All service events are recorded in the Acquired Brain Injury Information System (ABIIS), whether these events served clients, families, other service providers (consultations, training events), or community groups (education and prevention activities). The service type, recipient, and time are all recorded.

[*] OTHER includes: Anoxia, Snowmobile crash, Shaken Baby Syndrome, Penetrating (missile wounds), Bicycle, Encephalitis/Meningitis, Blow to head (both 'not assault' & 'sports').

Client service types are divided into nine categories. They are as follows:

- **Case Management** – This category includes assessment, re-assessment, care planning, client reviews, service coordination, and discipline-specific assessment. It also includes crisis management services.

- **Therapeutic Activities** – This category represents services that are provided directly to the client. These direct services are divided further into: behavioural interventions, cognitive interventions and training, educational (school) services, exercise and physical interventions, nursing interventions (including medication management), occupational therapy interventions, physical therapy interventions, psycho-social services (including counseling and client support), recreation and leisure activities, and speech language interventions.

- **Administration** – This category documents client-related administration, such as report preparation and funding applications.

- **Community Development** – This category includes networking with community resources, education in the school system, education to the community, advocacy, and organizing and preparing workshops and education/prevention events.

- **Consultation** – This includes providing information to other service providers, agencies or persons in regards to client care and providing specific professional expertise regarding a specific client.

- **Life Skills Training** – This service category includes training in instrumental activities of daily living (IADLs), homemaking, community living skills, social activities, communication skills, financial counseling, and life enrichment activities.

- **Residential Services** – This category includes providing assistance with independent living skills, search for accommodations, home management, respite care, and making housing accessible (financially and physically).

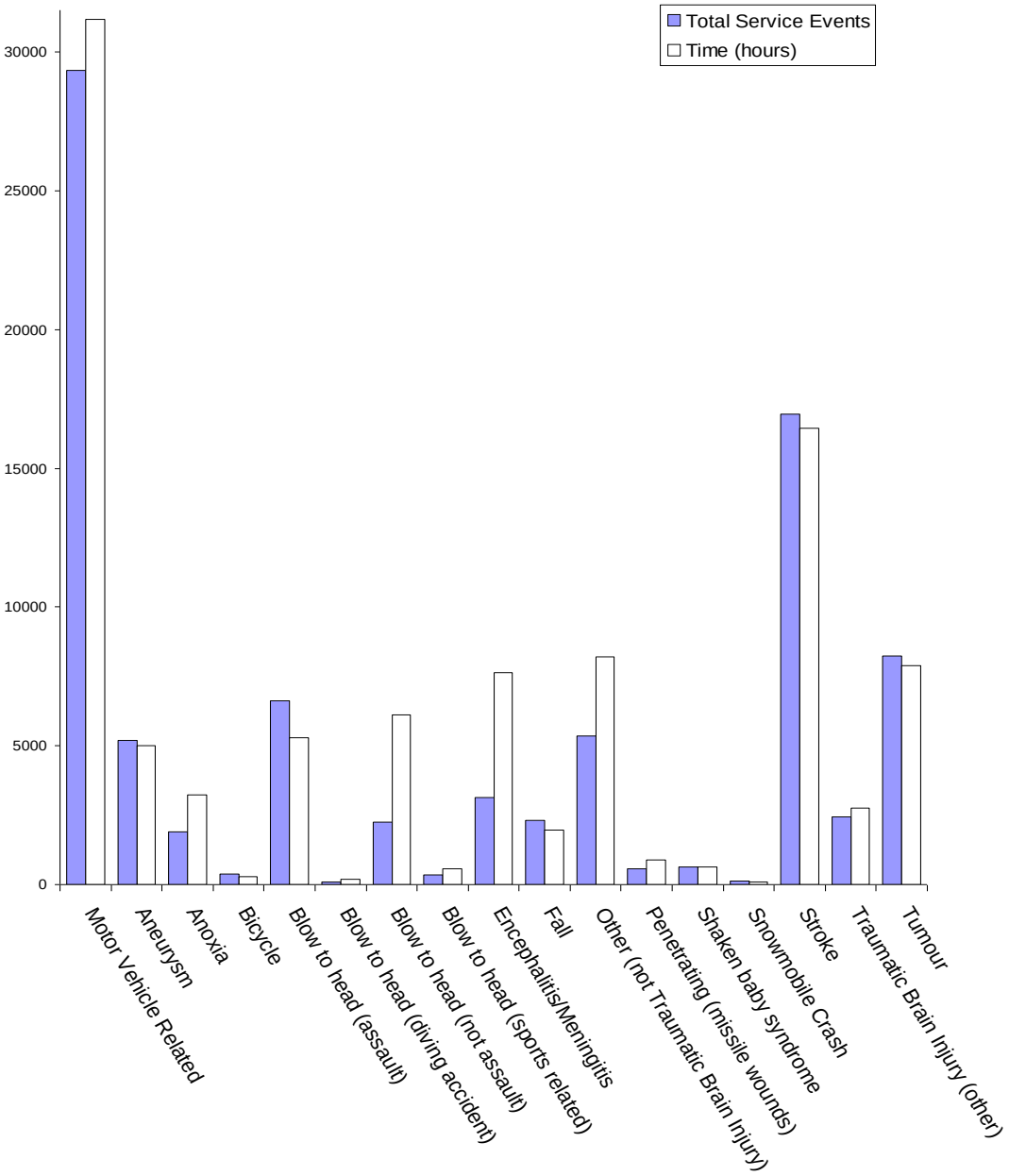
- **Client Specific Education** – This includes educating and training other providers to provide service to a particular client and sharing client information to make service provision possible.

- **Vocational Training** – All activities relating to vocational services, including job coaching, return-to-work programs, work trials, job development, supported employment and vocational counseling are recorded in this category.

A total of 86,564 service events for a total of 99,801 hours of service were provided to clients during the 2007-2009 period. The Outreach Teams provided 31% of the total service events, and 20% of total service time. Total service events and service time by cause of injury were calculated. Individuals whose cause of injury resulted from a motor vehicle collision (all types) received 34% of the total service events accounting for 32% of total service time. This is 14%

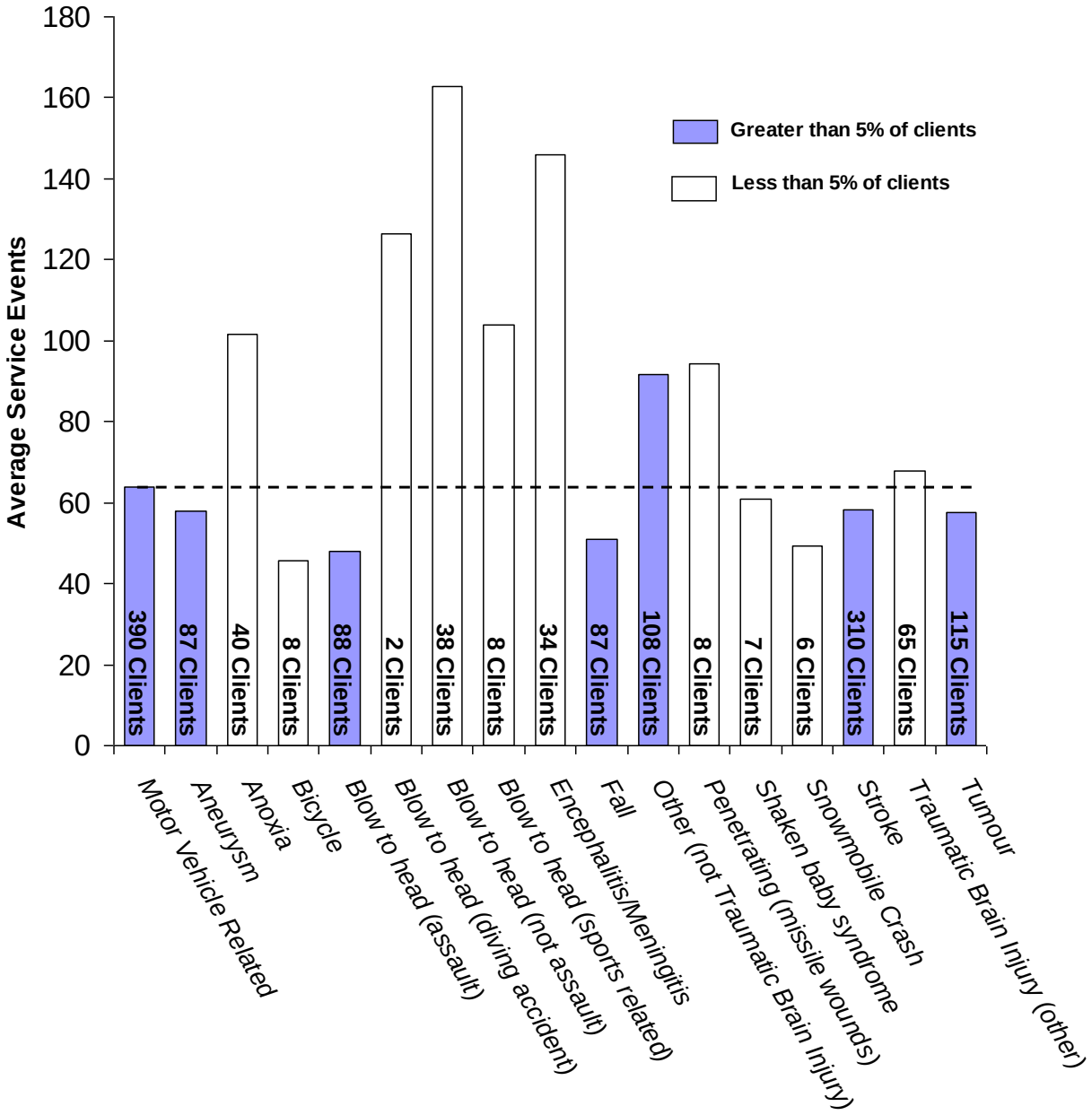
and 15% (respectively) higher than for the next leading cause of injury, strokes, which account for 20% of service events and 17% of service time. Figure 7 summarizes service events and time by cause of injury. Motor vehicle collisions can cause a great deal of trauma and it may be that these injuries create a more extensive and/or complex constellation of needs, and thus require more services and service time. As shown in Figure 8, only one of the common causes of injury (greater than 5% of clients), the category 'Other (not Traumatic Brain Injury)', is associated with a greater number of service events per client than motor vehicle collisions.

Figure 7: Total Service Events and Service Time by Cause of Injury (*April 1st 2007 to March 31st, 2009)*



Source: Corporate Information Technology Branch (CITB) reports

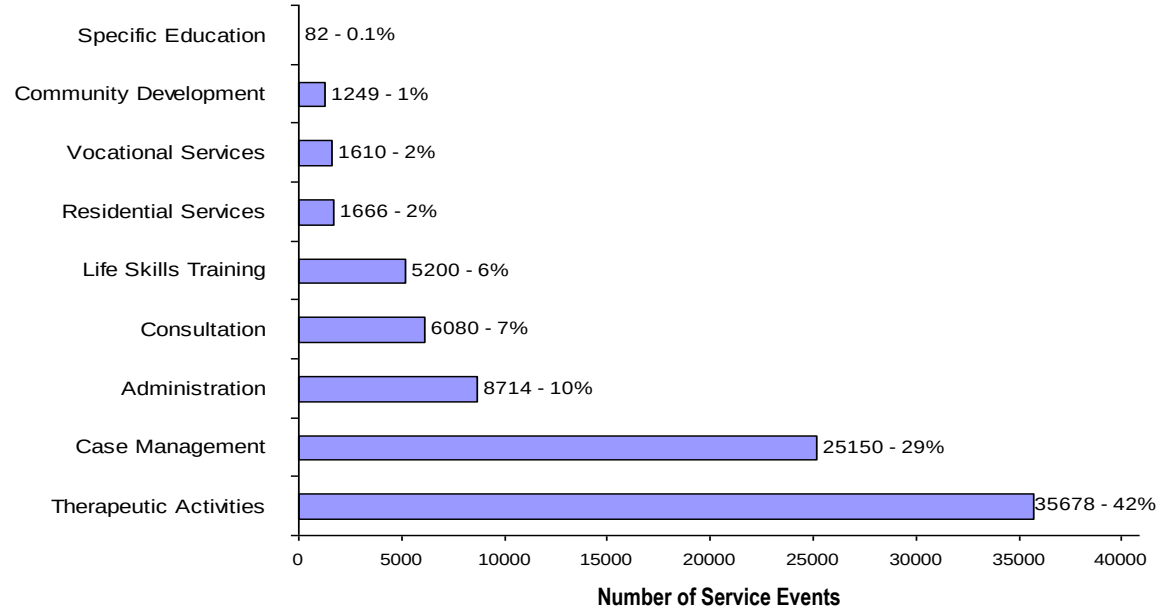
Figure 8: Average service events by Cause of Injury (*April 1st, 2007 to March 31st, 2009)*



Source: Corporate Information Technology Branch (CITB) reports

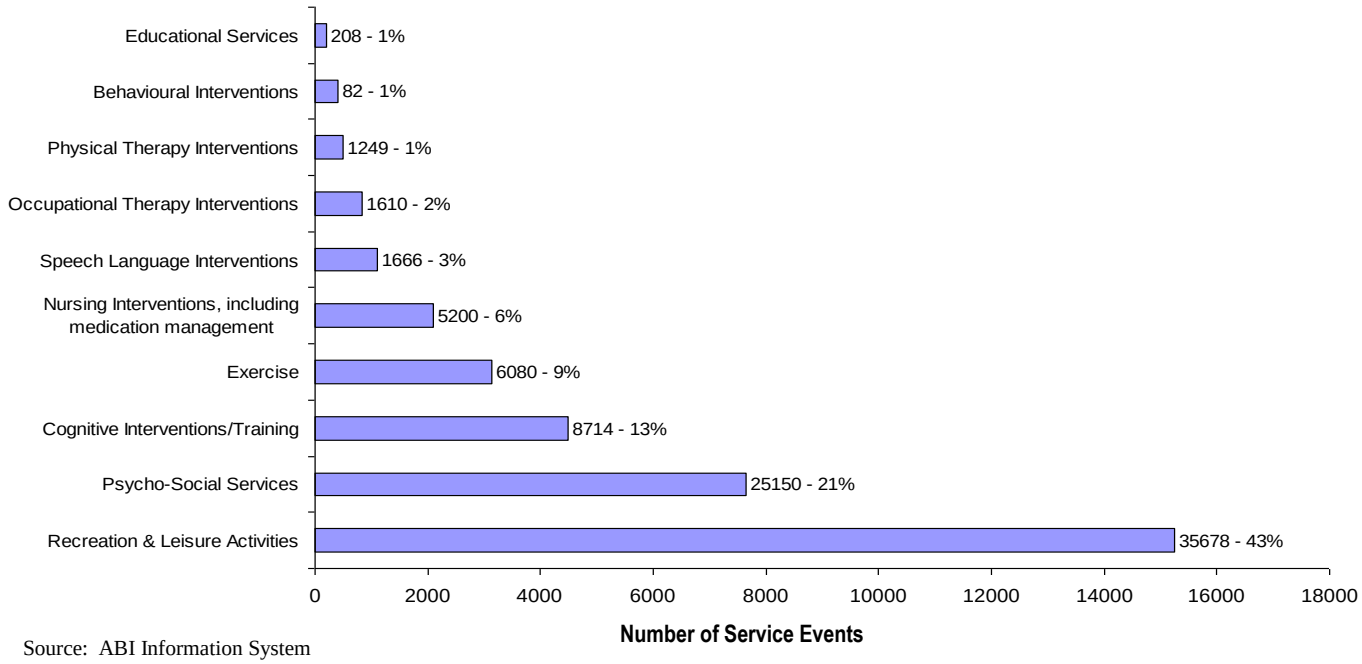
Figure 9 provides a summary of the pattern of service events and Figure 10 provides a summary of the different types of Therapeutic Activities provided over the 2007-09 period.

Figure 9: Client Service Events (April 1, 2007 to March 31, 2009) [2]



Source: ABI Information System

Figure 10: Client Therapeutic Events (April 1, 2007 to March 31, 2009) [3]



Source: ABI Information System

[2] Note that service event numbers reflect the number of services that clients receive, not the number of service events provided. Thus, a group activity provided to 10 clients will be reflected as 10 events because 10 clients received service.

[3] Activities that were often provided in group format included exercise (12%), psycho-social services (44%), and recreation and leisure (58%).

Family Service Events

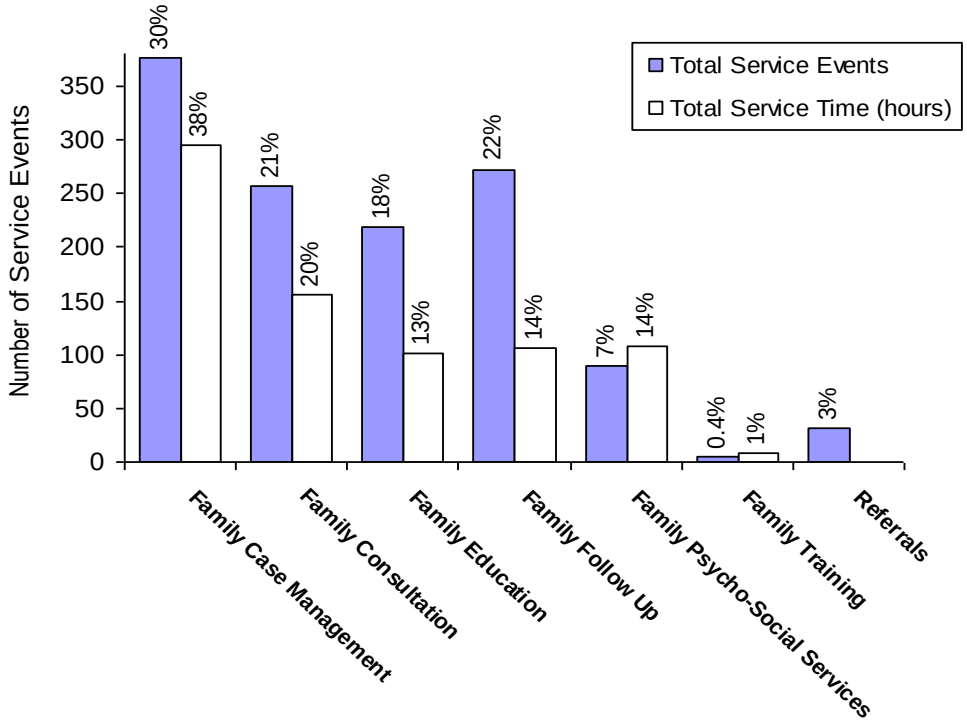
Medical and rehabilitation literature suggests that one of the most difficult tasks that families face is attempting to cope with the impact of an ABI [4,5]. The impact on the family is substantial as over the long-term, the majority of caregiving responsibilities for persons with ABI fall predominantly to informal caregivers such as spouses and parents [6]. Based on this important role and great need, families were included in the Partnership's mandate: "*Saskatchewan will have a comprehensive, integrated system of supports, resources and services that will enhance the rehabilitation outcomes and improve the quality of life for individuals with acquired brain injury and their families*" [1, p.5].

Family members receive service through individual events, but also through support and education group events. A total of 1,250 individual service events for a total of 776 hours of service were provided to family members between April 2007 and March 2009. Similar to past evaluations, the most common type of service was Family Case Management, which accounted for 30% of the total individual family service events. A number of group events (127) were designed solely for families (14 education, 73 support, and 40 were a combination of education and support), with a total of 788 attendees and 168 event hours. The most common event was support groups which accounted for 54% of the total attendees and time. Figure 11 provides a summary of the pattern of individual and group service events provided to families.

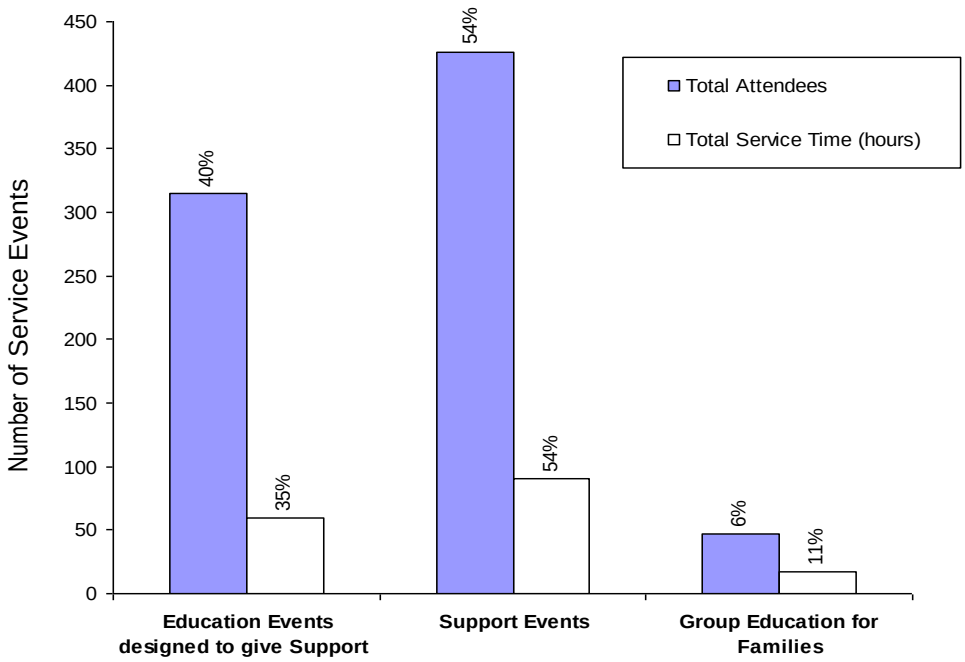
The ratio of client to family service events (individual events) is 69:1, which might point to the need for increased service to families. The majority of services received by individual family members were from individual events (61%) versus group events (39%). Group events would appear to be a valuable resource in that clients receive more service time in a group event versus an individual event (an average of 1.3 hours versus 36 minutes), and group events seem to provide the majority of support services. This is important as the 2004-06 evaluation found that many of the unmet needs that families had were related to emotional and professional support. Thus, increasing the availability of support groups may be an important area of focus for the Partnership. It should be noted that anecdotal feedback from front-line service providers suggests that family service events remain under-reported. Thus, the services outlined above may be an underrepresentation of the total services provided to families.

Figure 11: Family Service Events (April 1, 2007 to March 31, 2009)

INDIVIDUAL EVENTS



GROUP EVENTS



Source: ABI Information System

In follow-up to recommendations arising from the 2004-06 evaluation, in their year-end 2007-08 report, funded agencies were asked to provide qualitative information regarding their work with families. Specifically, they were asked how they worked with families (i.e., what family needs

their program addresses) and to provide examples of family activities they undertake with specifics on the scope (how much and how often) of these activities.

A high level summary of the program feedback indicates that a few programs do not work with families at all (e.g., crisis, vocational programs), but for the majority of programs that do work with family members, it is primarily in conjunction with meeting survivor needs (through, for example, family consult or involvement in case conferencing, and client-specific education around client caregiving). A few programs invite families to joint survivor/family social activities (e.g., BBQs). Many programs run joint survivor/family support groups (reported by nine programs). All three outreach teams have developed family-specific support/educational events (e.g., annual South Saskatchewan Outreach Team Family Panel, monthly Central Saskatchewan Outreach Team Spousal Support Group, ad hoc North Saskatchewan Outreach Team "Caregivers Connections" – five-week educational course). Many programs indicated that they refer families to other agencies for direct service (e.g., counseling) as requested and/or needed. Since the last evaluation, discussions have occurred at a variety of front-line tables about family needs and programs have appeared responsive to changing their practice to better support families. This will remain an ongoing service area to monitor and support.

Service Coordination

The ABI Partnership service continuum is premised on the assumption that both internal and external partnerships are necessary to effectively deliver service and meet client need. At the end of each fiscal year, funded agencies provide narrative information regarding their partnerships and service linkages. Additionally, funded agencies record each referral made or received, and each consultation they are involved in. These three reporting elements help to illustrate the partnerships and service linkages of the ABI Partnership.

Narrative Reporting on Partnerships

Partnerships, as our program name connotes, are the cornerstone of our programming model. Partnering occurs across our service continuum at the local, regional and provincial level in a variety of ways. The following information reflects the narrative feedback from our funded agencies in the last two fiscal years (2007-08 and 2008-09).

In 2007-08 and 2008-09, our funded agencies have partnered in a number of ways to strengthen their programming efforts. Because our program model was intended to augment not replace existing health and human services, these partnerships are integral to our service delivery. Agencies work with health and other human service partners both within the Partnership project and in their local communities to meet immediate client goals and to improve long-term program and client outcomes. Programs work in partnership to address immediate client goals such as psychosocial support, residential support, physical and cognitive rehabilitation, independent living skills development, vocational support, crisis intervention, life enrichment activities and recreational pursuits. They also work to address systemic service gaps and plan for service improvements through agency networking and committee involvement. Long-term client needs addressed at these tables include income support, residential options and vocational opportunities, as well as general injury prevention.

Examples of program partnerships include:

- music and art therapy (through various mediums such as drawing, creating writing, and drumming),
- physical exercise (yoga classes, walking programs),
- meal planning and preparation through Community Kitchens,
- access to and participation with community gardens,
- business sponsorships to allow client participation in a variety of community outings and cultural events (seasonal dinners, plays and concerts),
- community sponsorship of fundraising events for many of our non-profit funded agencies,
- obtaining client counseling,
- client conferencing for children and youth in schools, and with other human service agencies for adult clients,
- unique recreational opportunities such as child and adult camping experiences are enabled through ABI staff support, and
- promoting ABI awareness by:
    - providing education through in-services;
    - cross-training;
    - joint client work with health region programs and staff such as physicians, primary health, health promotion, therapies, home care, long-term care, mental health and addictions;
    - joint client work with schools, service clubs, and vocational programs such as the Saskatchewan Abilities Council; and
    - Education and Prevention and Regional Coordinators collaborating to conduct a variety of safety presentations (bike and bike helmet, child passenger restraint, All Terrain Vehicle, snowmobile and boat safety), and programming (Brain Walk and PARTY).

Our funded agencies have proven very creative in fostering and maintaining a wide variety of community networks. These partnerships allow an enriched level of programming from which survivors of brain injury and their families greatly benefit.

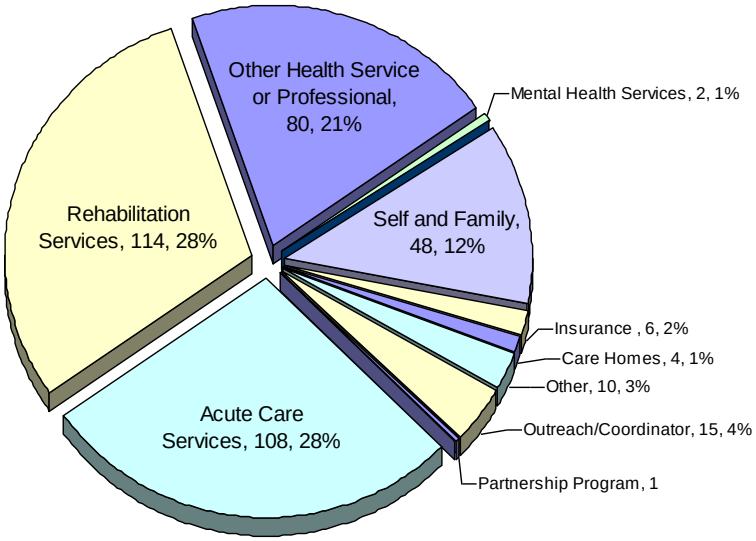
Referral Patterns

A total of 858 referrals to the Partnership programs for new clients[4] were recorded during this review period (see Figure 12). Referrals to the ABI Partnership Project Outreach Teams predominately came from Rehabilitation services (28%) and Acute care (28%). Referrals to the ABI Partnership funded programs predominantly came from Outreach Teams (35%) and other Health Care services and professionals (27%). This is consistent with the service continuum as it was originally conceptualized whereby clients would primarily enter the Partnership by being referred to Outreach Teams by the Health Care System (primarily through Rehabilitation services), and clients would then be referred to appropriate services based on their needs, both within and outside of the Partnership.

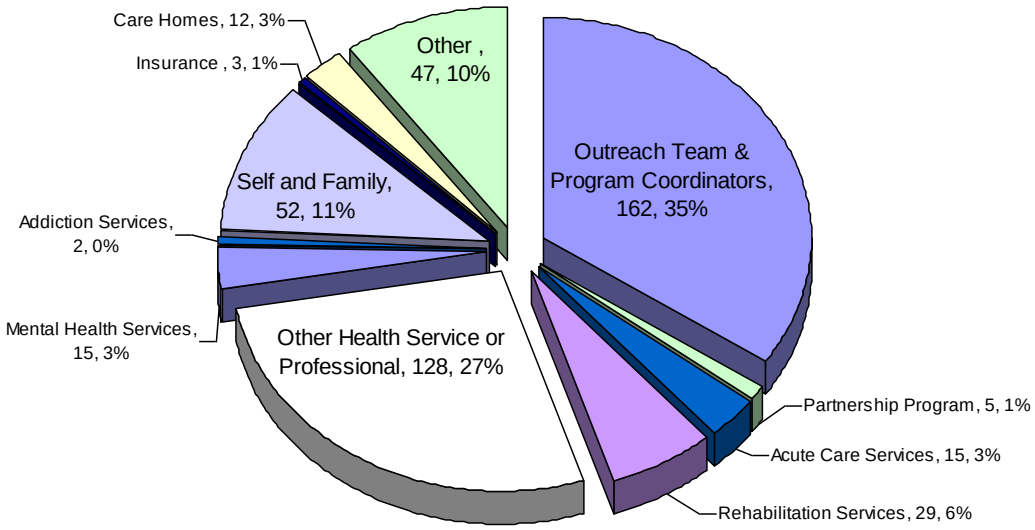
[4] Excludes Re-activated Clients

Figure 12: Referrals to ABI Partnership Project Programs received between April 1st, 2007 and March 31st, 2009

Referrals received by Outreach Teams



Referrals received by Funded Programs

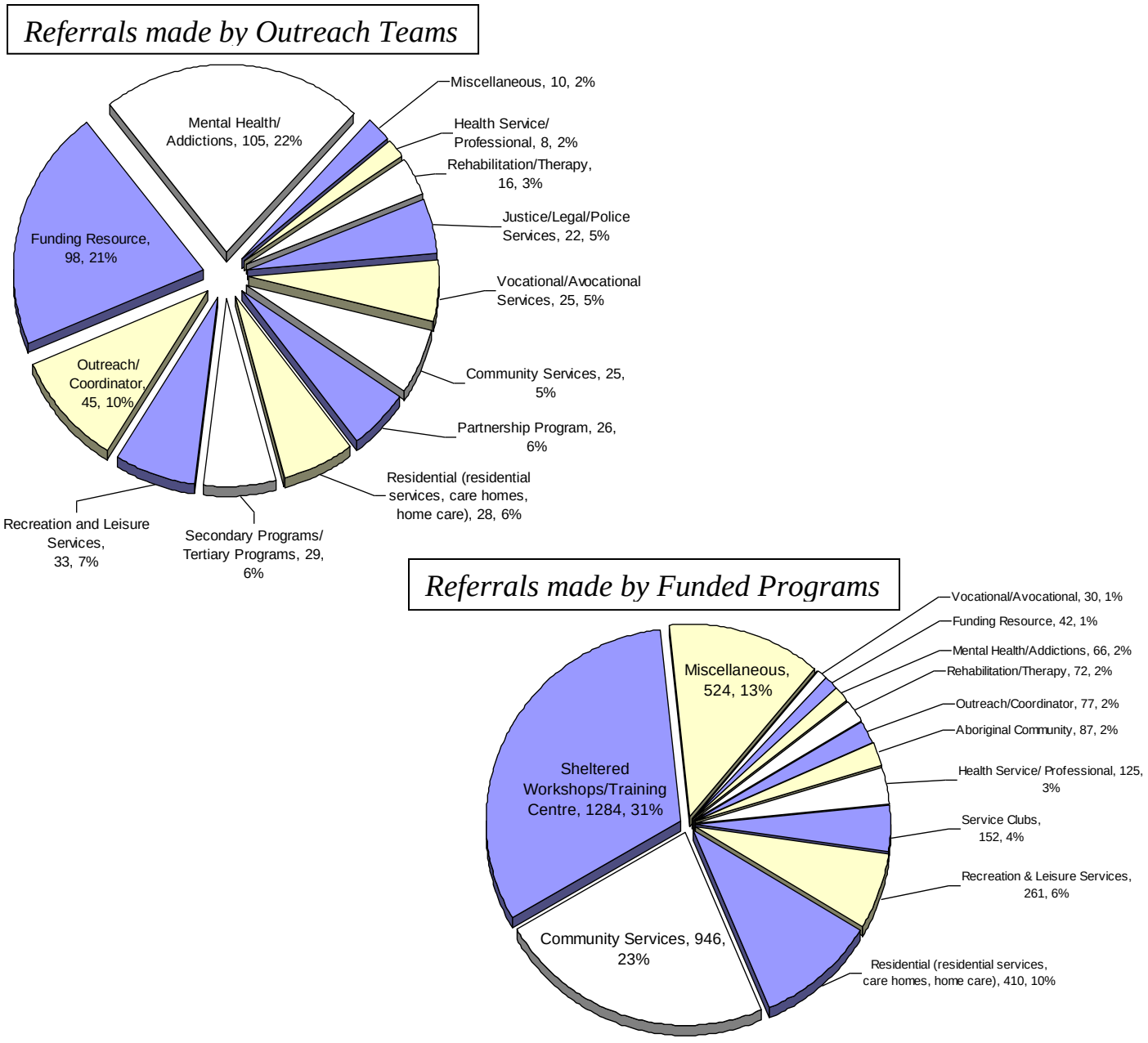


Source: ABI Information System

A core function of the ABI Outreach Teams and Regional Coordinators is to provide case coordination. Individual ABI programs within the ABI Partnership Project also make referrals to other programs. In the last two fiscal years, the Partnership made a total of 4,574 referrals to a wide variety of services (Figure 13 summarizes the referral patterns of the Partnership for 2007-09). This variety illustrates the extent of partnering that the Partnership has achieved. The majority of Outreach Team referrals were to addictions and mental health (22%), and the

majority of funded program referrals were to sheltered workshops and training (31%). A number of referrals were also made to programs within the ABI Partnership Project.

Figure 13: Referrals Made by ABI Partnership Project Programs between April 1st, 2007 and March 31st, 2009



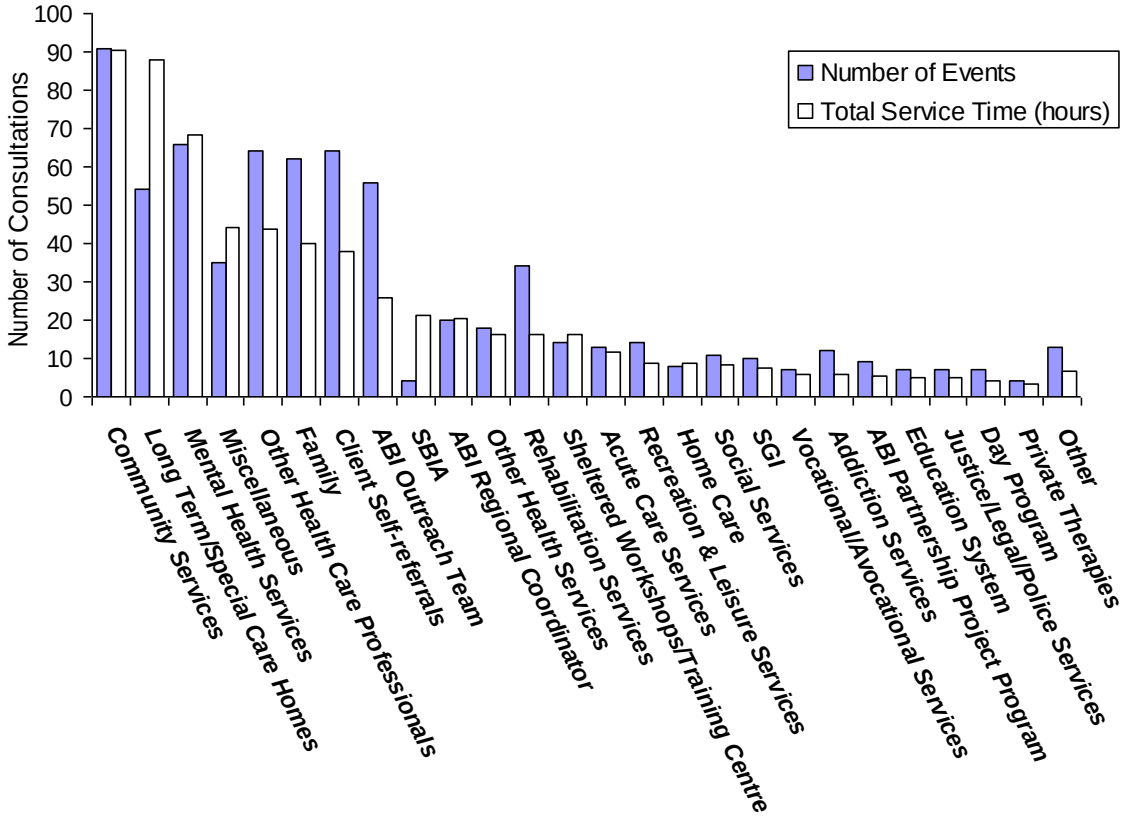
Source: ABI Information System

Consultations

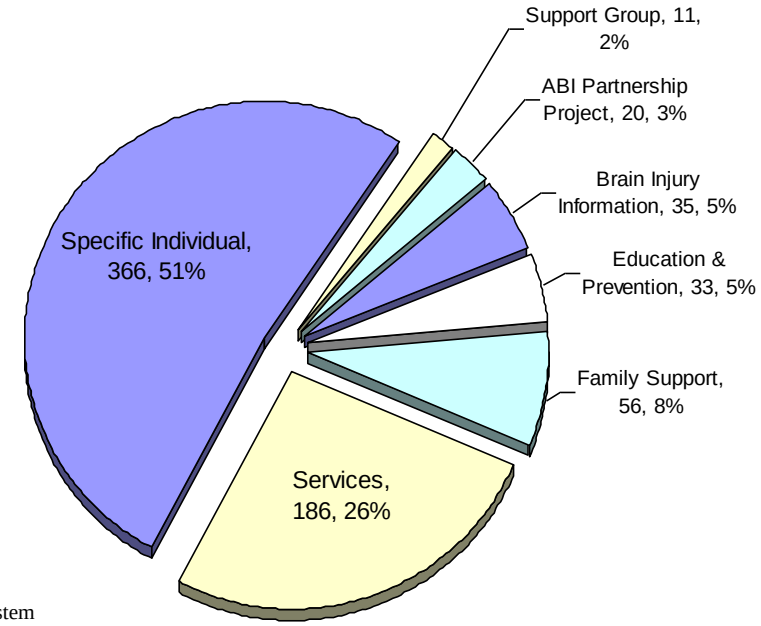
Case coordination can also be seen through the 1,827 consultation events recorded in the ABIIS during the 2007-09 period. Figure 14 shows consultations initiated by funded programs, and Figure 15 shows consultations initiated by Outreach Teams. The majority of consultations are regarding a specific individual (51% for funded programs, and 57% for Outreach Teams); and thus are related to case coordination. The diverse range of recipients shows the extent of partnering that the Partnership has achieved.

Figure 14: Consultations made by ABI Partnership Project FUNDED PROGRAMS between April 1st, 2007 and March 31st, 2009

RECIPIENTS



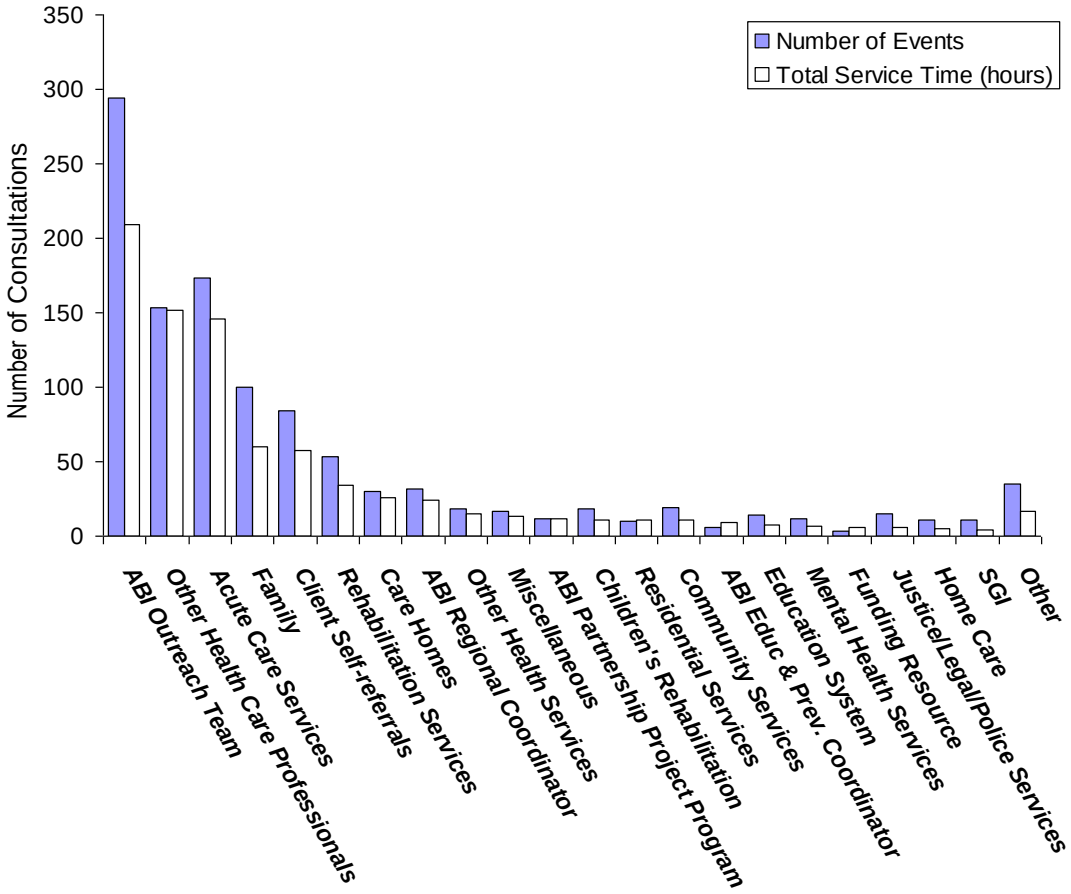
PURPOSE OF CONSULTATION



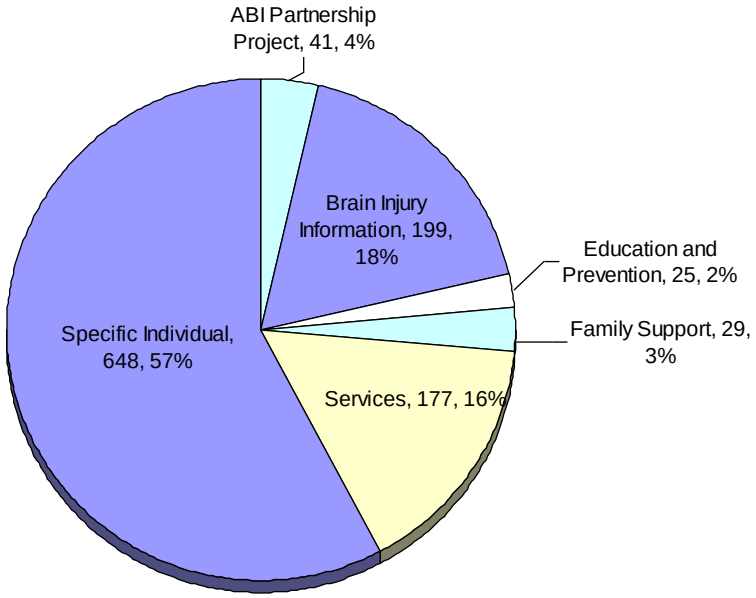
Source: ABI Information System

Figure 15: Consultations made by ABI Partnership Project OUTREACH Teams between April 1st, 2007 and March 31st, 2009

RECIPIENTS



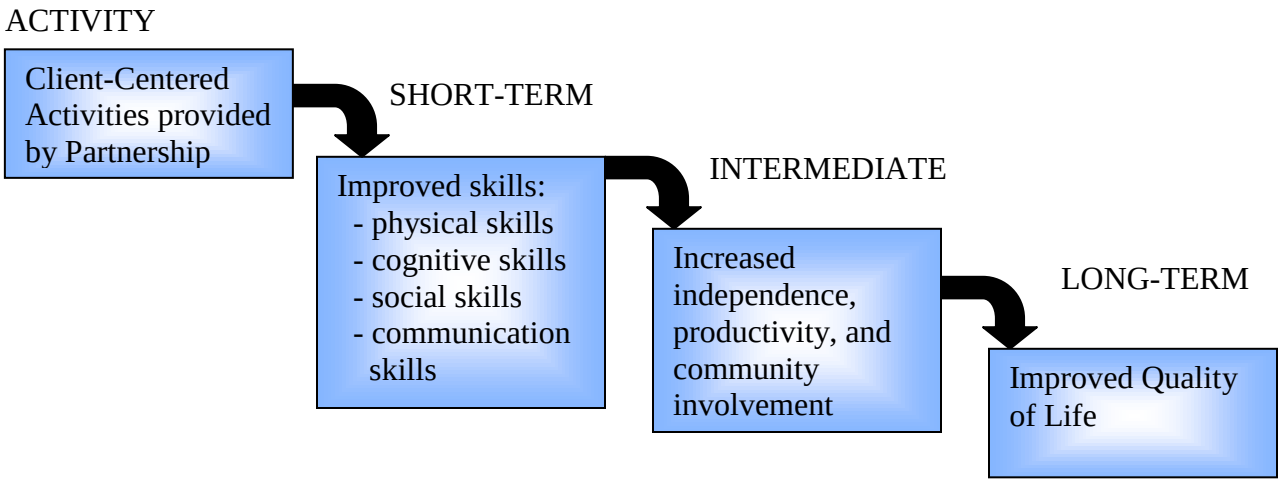
PURPOSE OF CONSULTATION



Source: ABI Information System

Outcomes

A major objective put forth by the ABI Working Group was that "after program implementation, both rehabilitation outcomes and quality of life will be improved for people with acquired brain injury and their families" [1, p.23]. As such, evaluations of the partnership continue to measure these important outcomes. Rehabilitation outcomes can be separated into short-term outcomes, intermediate outcomes, and long-term outcomes.



Clients need to engage in Partnership services to improve skills, and find opportunities to practice them. For example, a client can work with a speech language pathologist to improve their communication skills, and then engage in a recreation and leisure program to practice them by interacting with other participants. Once clients have improved their skills, they can utilize them to achieve intermediate goals of increasing their independence (both by requiring less supervision at home and by obtaining financial independence through employment). Being able to achieve these goals for independence and re-engagement with society (made possible with the improved skills) would then presumably lead to improved quality of life.

Skill improvement was assessed using the Mayo-Portland Adaptability Inventory – 4th edition (MPAI-4), which assesses improvement in abilities (e.g., sensory, motor, and cognitive abilities), adjustment (e.g., controlling anger, fatigue), and participation (e.g., engagement with recreation and leisure). Intermediate outcomes were assessed with the Change in Functional Outcome data. Goal Attainment bridges both short-term and intermediate goals, but was seen as an important area of study given the unique nature of each brain injury, and the tool's ability to capture improvement over a wide variety of client needs and goals.

Mayo-Portland Adaptability Inventory IV

A number of outcome measures were utilized in the 2004-06 evaluation report. However, it was decided by the Outcomes Working Group to reduce the Outcomes Questionnaire Package to one measure in order to make the evaluation process less cumbersome for program staff and clients. This measure is the Mayo-Portland Adaptability Inventory – 4th edition (MPAI-4).

The MPAI-4 is a measure of long-term (post-acute) outcome following an ABI [8]. It provides an indication of challenges in terms of impairments, activity, and participation of the client [7]. In the 2004-06 evaluation, the MPAI-4 was administered at intake and either at clients' one-year anniversary in the program or at their inactivation date. However, the protocol was changed in 2007 so that the second administration took place at clients' 18-month anniversary in the program (or inactivation date). It was hoped that this longer timeframe might detect statistically significant improvements.

A total of 28 complete (intake and anniversary; both staff and survivor) packages have been returned since 2007 for the current analysis. The demographic information that follows is based on the 24 outcome packages that included this information. The age at time of injury ranged from 16-86 years (Average= 44.6 years; Standard Deviation of 19.6 years). The gender of respondents was identified as primarily male (75%). The most common cause of ABI was a result of a Stroke (33%) followed by motor vehicle collisions (21%). Forty-six percent of respondents had no insurance and 21% were insured under SGI No Fault. Most of the respondents had a Home Health Region of Saskatoon (38%), followed by Regina Qu'Appelle (29%).

The MPAI-4 consists of three subscales: **Ability** (i.e., sensory, motor, and cognitive abilities); **Adjustment** (i.e., mood, interpersonal interactions); and **Participation** (i.e., social contacts, initiation, money management). A paired sample t-test was conducted on the available data to detect any statistically significant reductions in difficulties arising from an ABI.

Significant improvements were noted for both the participation subscale, and for the total score for ratings made by survivors and staff. Although there were reductions in the average scores for the ability and adjustment subscale, they were not found to be significant. This implies that survivors and staff were reporting relatively the same level of ability and adjustment difficulties at Time 2 as they were reporting at intake.

Fifteen of the 28 complete packages included ratings from significant others. Analysis of significant other ratings revealed significant improvements on all subscales and the total score. Analyses of these same 15 outcome packages for self and staff ratings show only significant improvements for participation and total scores, similar to the analyses for the 28 packages. Thus, it cannot be argued that this subset of clients obtained more improvement than clients for whom significant other ratings were not included. This indicates that significant others perceived more improvement in clients' functioning than either clients or program staff noted. According to the developer of the MPAI-4, this could be the result of the significant other's sensitivity to the impact of their loved one's deficits that neither program staff (because of limited exposure) nor the survivor (because of lack of insight) share [8]. This finding supports a possible benefit of involving clients' significant other(s) in program planning due to their potentially greater insight into clients' present state.

Improvement for each item of the MPAI-4 was examined using t-tests (see Appendix 4). These tests seemed to indicate that survivors were living more independently at Time 2. Average scores for all three raters (survivor, staff, and significant other) showed improvement in independent living and homemaking. The staff and significant other ratings showed improvement for

managing money/finances and independent transportation. Staff ratings indicated improvement in self care. Table 3 lists which MPAI-4 items showed improvement, and by which raters.

Table 3: Significant Improvements for each MPAI Item by Rater Source

		Area of Improvement	Sources for which improvement was found:
ABILITY	***Physical Abilities***	Mobility	All Raters
		Use of hands	Survivor & Significant Other
		Dizziness	Survivor & Significant Other (Staff marginal)
		Motor Speech	Survivor (Significant Other marginal)
		Audition	Significant Other
		Vision	*No significant improvement*
	Cognitive Abilities	Verbal Communication	Survivor
		Fund of Information	Significant Other
		Visuospatial abilities	Significant Other
		Novel problem solving	*No significant improvement*
		Non verbal communication	*No significant improvement*
		Attention/concentration	*No significant improvement*
		Memory	*No significant improvement*
Adjustment	***Mood***	Irritability/ Anger	Significant Other
		Depression	Significant Other
		Family/ Significant Relationships	Significant Other
		Anxiety	Staff
	Symptoms	Fatigue	Staff & Significant Other
		Sensitivity to mild symptoms	Significant Other
		Pain and headache	*No significant improvement*
		Impaired self awareness	*No significant improvement*
	Behaviours	Initiation	*No significant improvement*
		Inappropriate social interaction	*No significant improvement*
Participation	***Independence***	Residence	All Raters
		Managing money and finances	Staff & Significant Other
		Transportation	Staff & Significant Other
		Self Care	*No significant improvement* (Staff marginal)
	Reintegration	Leisure and Recreation	Staff
		Significant Other Contacts	*No significant improvement*
	Employment	Paid employment	*No significant improvement*
		Other employment	*No significant improvement*

In the 2004-06 evaluation report, there were no significant improvements detected; although there was a decrease in the average scores for the Physical/Medical and the Daily Activities subscales.[5] This supports the need for providing long-term support to clients as it would appear that clients continue to improve past one year. That is, significant improvement was noted for the one-and-a-half year pre-post measurement, but not for the one year pre-post measurement used in the 2004-06 report.

Goal Attainment

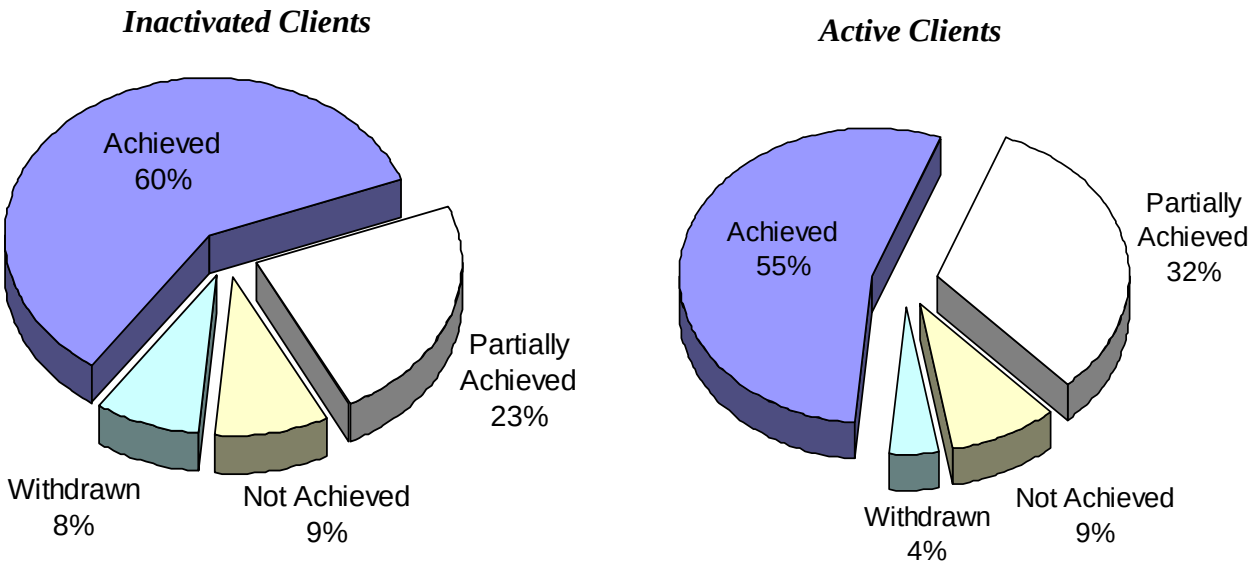
Arising out of the 1999-2003 evaluation was a recommendation to develop a standard tracking tool that could be used to measure goal attainment. As brain injuries are unique and result in unique sets of deficits and needs, client work done in the ABI Partnership is, by necessity, client-centered. Goal setting, which involves the client, family and staff member, is fundamental to directing the services provided. At the individual client level, goals are the foundation to identifying and working toward potential outcomes [9].

As a result of this recommendation, programs began tracking goal attainment after April 1st of 2004, and have been submitting annual goal attainment summaries since 2005 using the Goal Attainment Template (see Appendix 3). The first evaluation of this measure showed very positive results. Of the 5,342 goals submitted (n = 777), 91% of these goals were at least partially achieved (62% achieved, 29% partially achieved), and 10% were not achieved. The present evaluation mirrors these findings in that of the 4,426 goals submitted (n = 969), 90% were at least partially achieved (62% achieved, 28% partially achieved)[6], and 10% were not achieved.

As can be seen in Figure 16 below, there were more goals recorded as 'withdrawn' or 'achieved' for inactivated clients, and 'not achieved' by active clients. This can be expected as it takes time to both achieve goals, and to obtain the insight required to withdraw inappropriate goals.

[5] The version of the Mayo Portland Adaptability Inventory used in the present evaluation is newer than the version used in the previous evaluation report. The previous version was composed of six subscales, whereas the present version has collapsed these subscales down to three: Ability, Adjustment, and Participation.
[6] The total number of goals does not include the goals that were withdrawn.

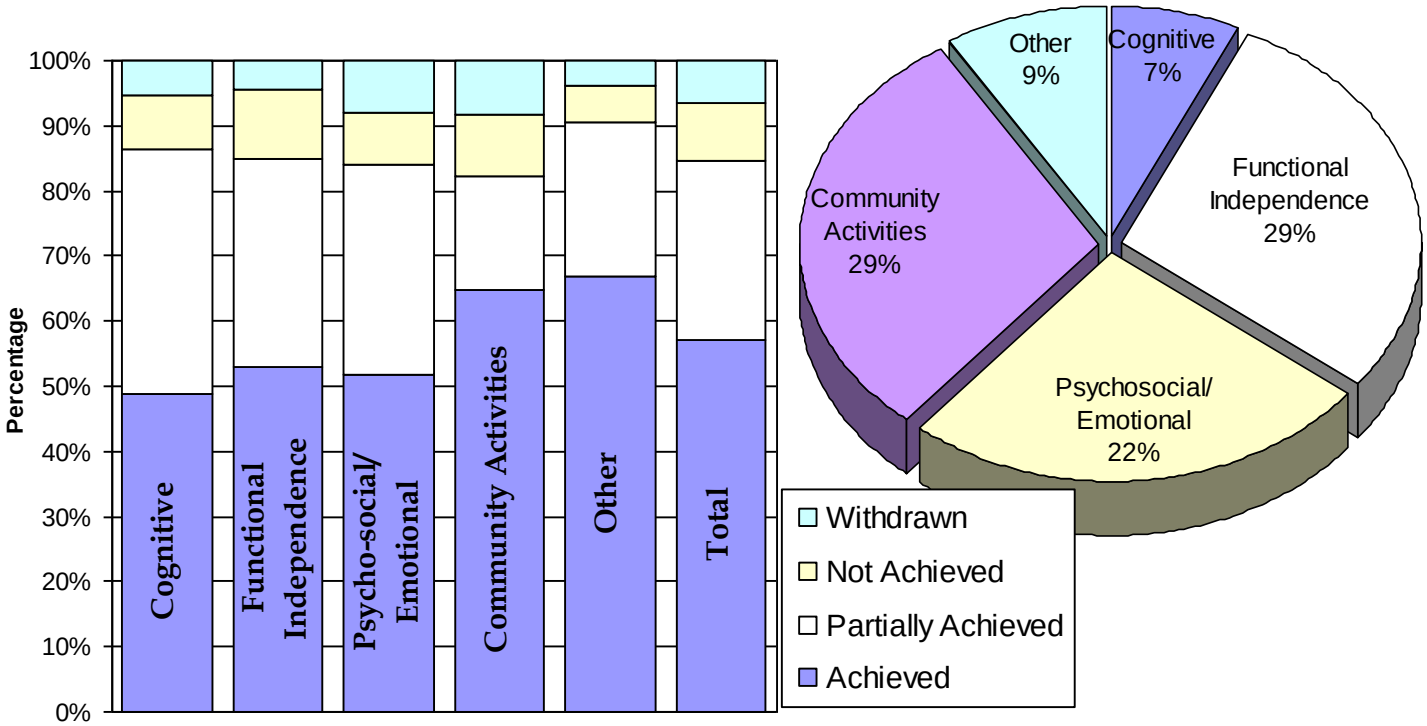
Figure 16: Client Goal Attainment 2007-09



The goals are divided into five areas: Cognitive, Functional Independence, Psychosocial/Emotional, Community Activities, and Other. As can be seen in Figure 17, all goal areas had at least partial achievement in over 80% of cases.

The two most common goal areas both had a satisfactory level of achievement; employment accounted for 18% of recorded goals and 88% of these goals were at least partially achieved (70% achieved, 18% partial), and leisure activities accounted for 12% of recorded goals and were at least 87% partially achieved (75% achieved, 12% partial). These results would indicate that the ABI Partnership Project programs are able to meet most client goals.

Figure 17: Breakdown of 2007-09 Client Goals by Area



Change in Functional Outcome

Also arising out of recommendations made in the 1999-2003 evaluation was the formulation of a report within the data system to track changes in client functional status. Starting in 2005, the Acquired Brain Injury Information System (ABIIS) was altered to track changes in employment, education, and living situation. These changes were reflected in the Change in Functional Outcome report which compares clients' initial status at registration to their recorded status on the last day of the report date range.[7] Two reports were generated for the current review which included clients registered: 1) since April 1, 2007; and 2) since April 1, 2004 when changes started being tracked. These reports use discrete client information, and thus disregard multiple program registrations per client.

Short-Term Outcomes

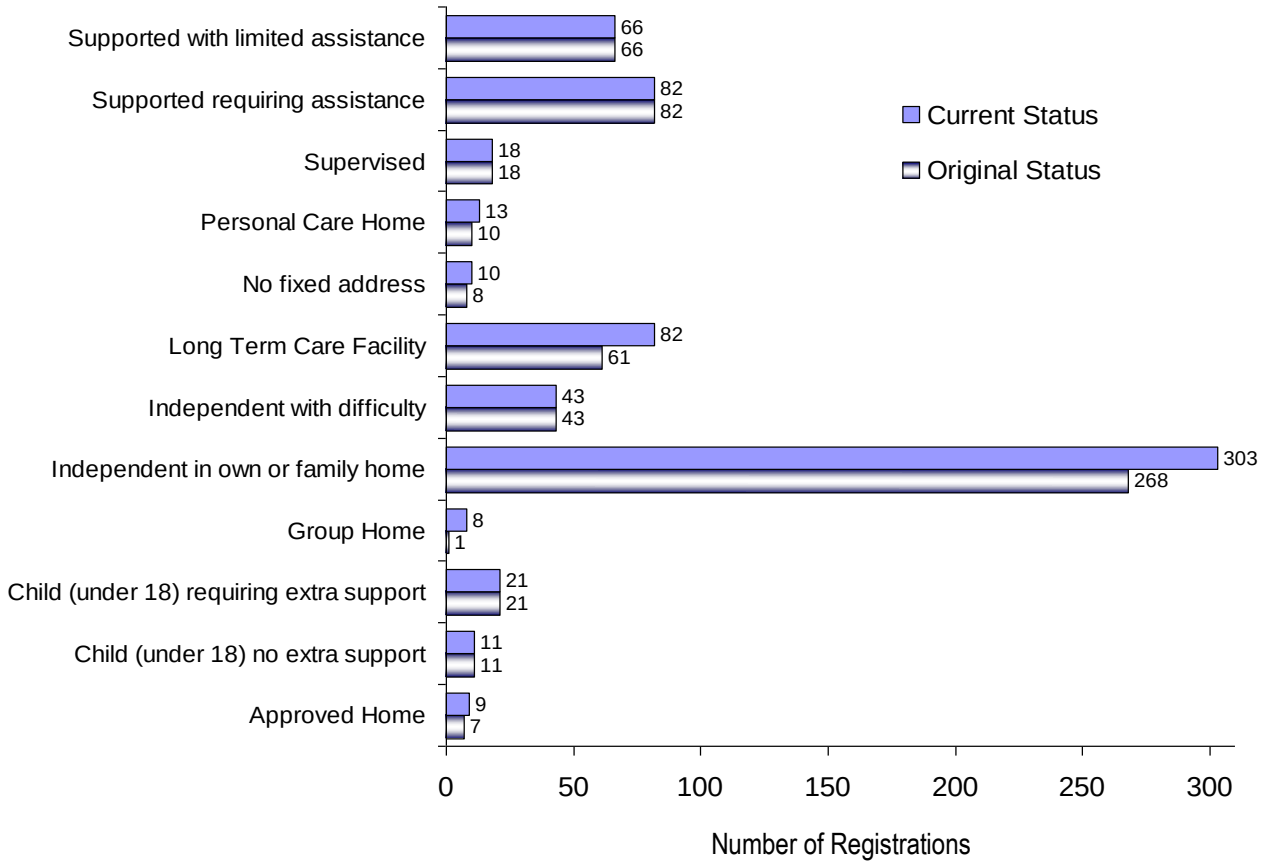
The first report was run with the date range of April 1st of 2007 to April 30th of 2009,[8] and reflected the 737 client registrations that occurred within this date range. The following reflects the recorded registration data for these clients.[9]

[7] Only clients who were registered between the start and end date specified are aggregated into the report.
[8] All other data runs had the range of April 1st, 2007 to March 31st, 2009. However, because the registration data is not tagged with a date of change, and programs have until April 30th to enter their statistics for the previous fiscal year, April 30th was used as an end date to ensure capture of all registration changes for the previous year.

Four percent of clients (n=32) had a recorded increase in education level. One percent of clients first registered with either no education or with preschool/kindergarten made advancements (one to preschool, one to elementary, and one to secondary). Nine percent of clients first registered with an elementary education advanced (15 to secondary, and two to post-secondary), and 12 clients (3%) first registered with a secondary education advanced to post-secondary.

Before examining living situation changes, data for 32 clients whose living situation was either unchangeable or necessarily had to change were removed from analysis[10], leaving 705 clients in the report. Figure 18 displays client status at registration and as of April 2009 (current status).

Figure 18: Living Situation Status at Registration versus Current Status (April1st, 2007 to April 30th, 2009)



[9] The data reflected may contain some inaccuracies due to limitations in the types of registration categories that ABIIS tracks, and when clients' status change is not recorded for any reason (e.g., when program staff are not made aware of changes).

[10] Changes from a hospital resident status (n = 31) cannot be viewed as improvements or declines as this is a temporary category and not a true baseline status. Changes in living status for clients who reside in a correctional facility (n = 1) are out of the hands of program staff AND clients, and so changes are not appropriate to include to reflect the Partnership's effectiveness.

Eighty-four percent of clients (n = 596) had no recorded change in living situation, and 45% of these clients (n = 268) maintained a status of *living independently within their own or family home*. An additional 17% of clients (n = 120) maintained a status of *living with limited supports*. Three percent of clients (n = 21) increased their independence to *living independently within their own or family home*, for a total of 39% of clients who were recorded as living independently by April 30th, 2009. Only 1% of clients had a recorded decline from living in their own or family home (with no supports or difficulties, with limited support, or with some difficulty) to a form of home or facility (n=6) or to no fixed address (n=2).

Of special note is that of 12 clients registered with no fixed address, eight had no recorded change in status and two additional clients declined to this status, indicating that 1% of clients registered since 2007 now have a status of no fixed address. This reflects front-line reports of a shortage in adequate housing resources.

For the 737 employment records, 169 records were removed from the following analysis where clients would not be expected to change: 22 clients where employment was recorded as "Not Applicable", and 147 clients that were registered as "Retired". This left 568 records. Of these clients, three percent (n=15) had a recorded improvement in productivity. Twenty percent of clients (n = 116) maintained a form of productivity (including all forms of paid employment, being a student, and volunteering). Forty-three percent of clients remained either unemployed (n=129) or unemployable (n=118). Only two percent of clients (n=10) declined from some sort of productivity to being unemployed/unemployable.

Long-Term Outcomes

The second report was run with the date range of January 1st of 1997 to April 30th of 2009,[11] to capture changes in status for ALL Partnership clients that were registered in the Partnership since ABIIS was implemented. This report returned registration data for 4,087 clients, and the following reflects the recorded registration data for these clients.[12]

Two percent of clients (n=73) had a recorded increase in education level. Thirteen percent of clients who were first registered with no education advanced in educational status (five to elementary, two to secondary, and one to post-secondary), and twenty percent of clients first registered as having attained a preschool/kindergarten level advanced (eight to elementary, and three to secondary). Four percent of clients first registered with an elementary education made advancements (31 to secondary, three to post-secondary), and one percent of clients first registered with a secondary education attained a post-secondary one.

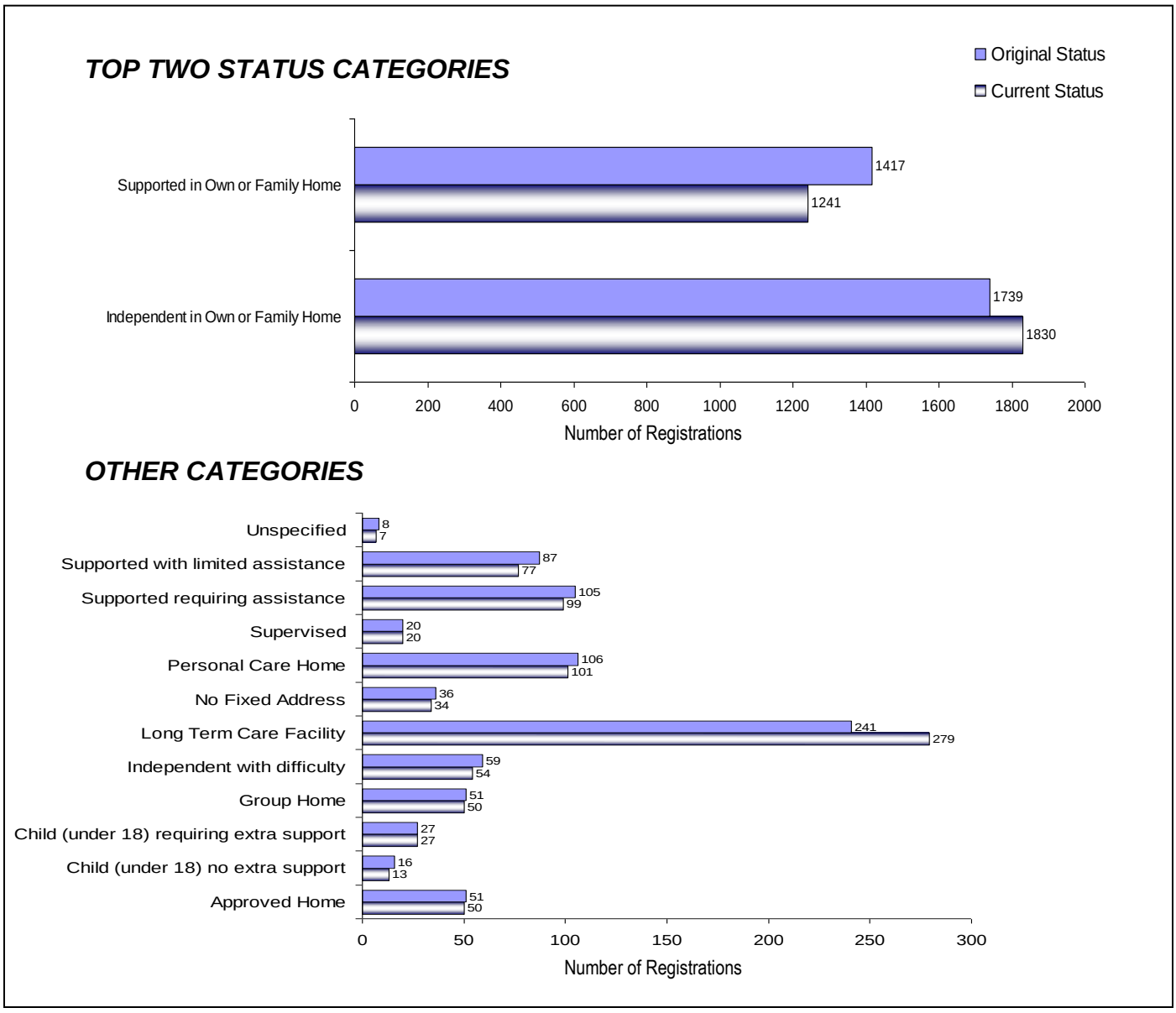
Before examining living situation changes, registrations for 124 clients were removed where living situation was either unchangeable or necessarily had to change (104 hospital residents and

[11] All other data runs had the range of April 1st, 2007 to March 31st, 2009. However, because the registration data is not tagged with a date of change, and programs have until April 30th to enter their statistics for the previous fiscal year, April 30th was used as a end date to ensure capture of all registration changes for the previous year.

[12] The data reflected may contain some inaccuracies due to limitations in the types of registration categories that ABIIS tracks, and when clients' status change is not recorded for any reason (e.g., when program staff are not made aware of changes).

20 from a correctional facility), leaving 3,963 client registrations. Figure 19 reflects the original versus current registrations.

Figure 19: Living Situation Status upon registration versus Current Status (January 1, 1997 to April 30, 2009)



Of the clients who maintained the same status, forty-six percent are clients who are *living independently within their own or family home*. Four percent of clients (n = 155) increased their independence to *living independently within their own or family home*; thus, 46% of all clients were recorded as living independently by April 30th, 2009. Only 4% of clients first registered as *living independently within their own or family home* had a recorded decline in independence to

needing support in their own home (n=18) or a form of home or facility (n=19) or to no fixed address (n=1).

Similar to the findings of the 2007-09 report, of the 36 clients registered with no fixed address, 31 had no recorded change in status and three additional clients declined to this status, indicating that 1% of clients registered since 1997 have a current status of no fixed address.

For the 4,087 employment records, 688 records were removed from the following analysis where clients would not be expected to change: 173 clients where employment was recorded as "Not Applicable", and 515 clients that were registered as "Retired". This left 3,399 records. Of these clients, five percent (n=176) had a recorded improvement in productivity. Thirty-four percent of clients (n = 1,151) maintained a form of productivity (including all forms of paid employment, being a student, and volunteering). Forty-six percent of clients remained either unemployed (n=799) or unemployable (n=769). Only three percent of clients (n=104) declined from some sort of productivity to being unemployed/unemployable.

Education and Prevention

When compared to other Canadian provinces, Saskatchewan has a high unintentional injury rate. The province's injury hospitalization rate is twice the national average, its death rate is 1.4 times higher, and its workplace injury rate is one of the highest in Canada. The number of unintentional injuries that occur in Saskatchewan represents approximately 7% of all injuries that occur in Canada, yet its population represents only 3%. Unintentional injuries may well be Saskatchewan's number one health problem. The human cost of pain and suffering is immeasurable. The economic cost in Saskatchewan is $.8 billion annually [10] which does not include the costs incurred by third party payers such as SGI and WCB.

In order to address these concerns, the ABI Partnership Project funds three Regional Education and Prevention Coordinators and two provincial education and prevention programs (Saskatchewan Brain Injury Association and Saskatchewan Prevention Institute). In addition, the Partnership funds a Provincial Education and Prevention Coordinator.

It is very difficult to directly attribute reductions in injuries to education and prevention activities. For this reason, this section will include reports on various initiatives that have occurred, and where outcomes are available they will be reported.

Provincial Education and Prevention Coordinator

In August of 1996, a Provincial ABI Education and Prevention Coordinator position was awarded to the former Moose Jaw Thunder Creek Health District. The original document developed to guide the Acquired Brain Injury (ABI) Project, *Acquired Brain Injury: A Strategy for Services* [1], called for the appointment of an educational, injury prevention and research person for the province. The primary role of this position is to coordinate prevention, education

and research activities related to ABI with regional health authorities, community agencies, survivors, and family members throughout Saskatchewan.

In addition to provincial activities, the Provincial Coordinator is also on several national working committees. These include two Canadian Standards Association technical committees, an injury prevention task group for the Public Health Agency, and the Canadian Collaborating Centres on Injury Prevention Committee.

Provincial Conference

Brain Trust is the annual provincial conference hosted by the ABI Partnership Project. The goal of the conference is to provide affordable, world-class clinical training to the staff of the funded projects, cross-training opportunities to other human service sectors and information and education to survivors and their family members.

The fall 2007 Brain Trust theme was *Supporting Clients in the Community*, and had three speakers:

- The keynote speaker was Dr. Harvey Jacobs, a psychologist with special expertise in behavioural rehabilitation for individuals with neurological, psychiatric, medical and developmental disorders, who is well known for his pragmatic approach to treatment in the community.

- Dr. Shaun Gray, a physiatrist and Department Chief at the Halvar Jonson Centre for Brain Injury in Ponoka, Alberta, is a physical medicine and rehabilitation specialist with a particular interest in the rehabilitation of acquired neurologic injury. Dr. Gray's recent research interests have focused on the outcomes and effectiveness of rehabilitation in severe brain injury, community service needs of brain injury survivors, and the effectiveness of telehealth as a delivery medium for caregiver education.

- Paul Nadler survived a severe traumatic brain injury resulting from a motor vehicle collision in Egypt. Paul came to present the edgy documentary that he produced and starred in *Braindamadj'd…Take II* which gives a candid look at his rehabilitation following his brain injury.

The fall 2008 Brain Trust conference theme was *Concurrent Issues and Brain Injury* and also featured three excellent presenters:

- Dr. John Corrigan from the Ohio Valley Centre was the keynote speaker who came back on a 10-year anniversary visit to Saskatchewan to discuss substance abuse and ABI.

- Dr. Vern Bennett, a psychiatrist, spoke on mood disregulation and ABI.

- Dr. Lindy Kilik spoke on sleep and fatigue management and ABI. Evaluations of the conference indicated that Dr. Kilik's presentation was the most positively received, with feedback indicating the information was practical and easy to understand.

The top five most common future Brain Trust themes requested in the 2008 evaluation (in rank order) were:

1) Managing Difficult Behaviours
2) Family Issues
3) Return to work/return to school
4) Cognitive Interventions
5) Outcomes in Brain Injury

These conferences will continue to be provided annually, with equally high-caliber presenters, and with topics that are responsive to the needs identified by the Partnership's services providers.

Introduction to ABI

The Provincial Education and Prevention Coordinator, in partnership with various Partnership staff, provides an introductory course on the basics of ABI. The Introduction to Acquired Brain Injury course provides a basic level of knowledge in the following areas:

- Anatomy and function of the brain
- Mechanics of brain injury and indicators of impairment
- Neuropsychological testing
- Stages of recovery
- The brain and behaviour
- Return to work/school
- Addictions and ABI
- Survivor and family perspective
- Cognitive interventions and communication
- Seizures and medication
- Communication

This is another example of the cross-training provided by the ABI Partnership Project. The original purpose of this course was to provide introductory information to new staff of the Partnership Project, but training seats have expanded to include individuals from other sectors. Two courses have been held this contract period. The most recent course was held in Saskatoon on May 26-27, 2009 and a prior course was held May 2007. Including May 2009 registrations, to date, 798 participants have attended Introduction to ABI from across the province. The May 2009 session has been videotaped in order to provide timely introductory brain injury information when requested between course offerings.

Education Days/Support

The Provincial Education and Prevention Coordinator organizes and/or partners with other agencies by direct sponsorship and promotion of education sessions on specific injury prevention and educational topics when necessary.

Sport Concussion Road Show, Saskatoon 2007

On May 5th, 2007 the Acquired Brain Injury Partnership Project partnered with Think First Saskatoon and the Saskatoon Health Region to successfully host the Sport Concussion Road Show. The event was held at the University of Saskatchewan Physical Activity Centre (PAC). This symposium has been presented in major cities across Canada with very positive reviews. It was originally sponsored by Think First Canada and conceived by Dr. Karen Johnston and Dr. Jamie Kissick, drawing on their expertise in the area of sport concussion.

The seminar was designed to enhance concussion education and awareness, particularly for physicians, nurses, therapists, coaches, and trainers. However, it was open to everyone and was offered free of charge. There were a variety of different interests in attendance, ranging from interested public to neurosurgical residents. There were 52 registered participants and each one received a certificate of attendance.

Brain Tumour Information Day (Future)

There are plans to hold an *Information Day* on working with brain tumour survivors. This opportunity is currently being explored in partnership with the Brain Tumour Foundation of Canada. Nothing has been confirmed at this time.

Conference Registration Grants

The Provincial Education and Prevention budget also supports other educational opportunities identified by funded agency representatives. Beginning two contract periods ago and continuing in this one, grants have been provided for conference registrations to a maximum of $500. These grants have assisted programs with limited education budgets to attend courses or conferences that met their educational needs.

Some examples are:

- Substance Abuse Conference, Hamilton, ON
- Vocational Outcomes in Traumatic Brain Injury Conference, Vancouver, BC
- Alberta Brain Injury Conference, Edmonton, AB

Safe Saskatchewan

Safe Saskatchewan is a public/private sector coalition that was officially launched January 20, 2005. The objective of this coalition is to achieve a continuous reduction in the number of unintentional injuries in Saskatchewan. The ABI Provincial Education and Prevention Coordinator represents Saskatchewan Health on the Safe Saskatchewan Steering Committee. The Regional Education and Prevention Coordinators and members of the Saskatchewan Prevention Institute also participate with Safe Saskatchewan activities.

Saskatchewan Health is a founding member of Safe Saskatchewan, and is represented on Safe Saskatchewan's Board by Health's Deputy Minister. Safe Saskatchewan's key result areas are: 1) to increase awareness of Safe Saskatchewan and our province's unintentional injury epidemic through social marketing; 2) to facilitate a provincial strategy to reduce the injury hospitalization rate attributed to seniors' falls; and 3) to support the creation of a provincial agricultural injury prevention strategy through Saskatchewan Alliance for Safety and Health in Agriculture (SASHA) membership.

Public and private sector founding partners to date include: IPSCO Inc., Mosaic Potash, Prairie Mines & Royalty Ltd., Saskatchewan Government Insurance, Sask Power, Saskatchewan Health, SaskFerco Products Inc, WorkSafe Saskatchewan (WCB), Access Communications and Saskatchewan Labour. Each founding partner has contributed a minimum of $25,000 to assist in effecting the Safe Saskatchewan strategy and have committed to subsequent annual contributions over the next three to five years. Endorsements have also been received by many other organizations across a variety of sectors.

Community Grants

Since 1997, the ABI Partnership Project and Saskatchewan Government Insurance have been involved in a joint program to provide community grants for traffic safety and ABI prevention programs. The goal of the Community Grants program is to enable community groups to establish, enhance, and deliver programs that address safety issues in their communities.

SGI and Saskatchewan Health, through the ABI Partnership Project, each provide $50,000 annually toward this program. In recent grant cycles, SGI has provided additional funding specifically aimed toward road safety issues. Since 1997, 1,473 projects have been funded across the province with grants totaling approximately $1.1M. On average, 95 applications are received per deadline, and approximately 60% of these applications are awarded.

In the last two fiscal years, 2007-08 and 2008-09, 274 grants totaling $366,500 were awarded. Figure 4 shows the funding breakdown for the last two funding cycles, October 2008 and February 2009, as a representation of how funding is broken down by project category and area. As can be seen in this figure, the top three project categories account for over half of the total

funding. Additionally, there is a relatively equal distribution of funding between rural and urban[13] communities.

Table 4: Community Grant Funding Awarded in October 2008 and February 2009 by Project Category and by Location (rural/urban)

Project Type	Rural	Urban	Total Funding	Percentage of Total Funding
Alcohol/Drug/Impaired Driving	$ 9,178	$ 7,730	$ 16,908	20%
General Injury Prevention	$ 9,950	$ 6,700	$ 16,650	20%
Child Passenger Restraint	$ 6,598	$ 7,247	$ 13,846	16%
Falls in Seniors	$ -	$ 11,197	$ 11,197	13%
Bike/Skateboard/Inline Skating Safety	$ 4,585	$ 4,300	$ 8,885	10%
Snowmobile Safety	$ 7,100	$ 1,500	$ 8,600	10%
Other Traffic Safety	$ 470	$ 3,000	$ 3,470	4%
ATV/Motorcycle Safety	$ 800	$ 2,000	$ 2,800	3%
Sport and Recreation Safety	$ 500	$ 700	$ 1,200	1%
Farm Safety	$ 1,100	$ -	$ 1,100	1%
First Aid / CPR	$ -	$ -	$ -	0%
Playground Safety	$ -	$ -	$ -	0%
Shaken Baby Prevention	$ -	$ -	$ -	0%
Water Safety	$ -	$ -	$ -	0%
Workplace Safety	$ -	$ -	$ -	0%
Grand Total	**$ 40,281**	**$ 44,375**	**$ 84,656**	**100%**

Falls Prevention Training

The Canadian Falls Prevention Curriculum (CFPC) provides those working with older adults the knowledge and skills needed to apply an evidence-based approach to the prevention of falls and fall-related injuries. Participants learn how to design, implement and evaluate a fall prevention program tailored to their work or community setting. Facilitated instruction leads learners through a process for involving seniors as partners in the development of effective strategies and interventions; applying current effective programs; and understanding the reliability and validity of existing resources and tools for screening and assessing fall risk.

Currently this course is provided as a two-day workshop coordinated through the Canadian Falls Prevention Education Collaborative (CFPEC), centered at the BC Injury Research & Prevention Unit (www.injuryresearch.bc.ca). In the spring of 2009, this course became available for the first time as a distance online course from the University of Victoria. This online version enables participants to complete the course at their own pace and at their preferred location.

[13] For the purpose of this report, rural is defined as a community with a population of less than 5,000, and urban as a population greater than 5,000.

The CFPC workshop and online versions are available in English and French and are developed by a national collaborative of fall prevention experts, health care providers and community leaders from across Canada. Funding for the development of the CFPC is provided by the Population Health Fund of the Public Health Agency of Canada.

In the Fall of 2008, three of the Regional Education and Prevention Coordinators were trained as facilitators as well as two additional Saskatoon Health Region employees. This training was arranged and funded by the ABI Partnership. The facilitators offered the first course in Saskatchewan in March of 2009. Another course is planned for September of 2009. Falls training is a particularly important initiative as falls are the leading cause of injury hospitalization in Saskatchewan.

Regional Education and Prevention Coordinators

Three Regional Education and Prevention Coordinators are located in Regina, Saskatoon, and Prince Albert. The Regional ABI Education & Prevention Coordinators support community-based injury prevention initiatives. The goals of the coordinators include:

- To promote the need for injury prevention and ABI education initiatives in communities.
- To engage communities to become involved in injury prevention.
- To assist communities to plan, implement, and evaluate injury prevention initiatives.

In general, the ABI Education & Prevention Coordinators provide research, education, promotion, community development, and resources to communities on the following topics:

- Acquired Brain Injury
- All-Terrain Vehicle Safety
- Bicycle Safety
- The Brain
- Child Passenger Safety
- Fall Prevention
- Farm Safety
- Helmet Usage
- Home Safety
- Impaired Driving Prevention
- Mild Brain Injury
- Playground Safety
- Snowmobile Safety
- Sports & Recreation Safety
- Traffic Safety (pedestrian, bus)
- Water & Boating Safety

The primary activities of the ABI Education & Prevention Coordinator are to:

- Facilitate the introduction of Brain Walk and PARTY programs to communities;
- Build capacity within communities to identify and address injury issues using available resources and data;
- Initiate and maintain partnerships with other agencies, community members, other health professionals, and other ABI funded projects;
- Research, develop, and distribute information and resources about the brain, brain injury, and injury prevention.

Evaluation of the Prevent Alcohol and Risk Related Trauma in Youth (PARTY) Program

In response to a high annual rate of impaired driving-related crashes in young drivers as well as other high-risk behaviour, the Regional Coordinators obtained and began implementing a new program in the province in 2004 to address alcohol and risk-related injuries in youth.

Students 14-19 years old experience a full-day session that involves following the path of an injury survivor and meeting the professionals that would care for them in a trauma situation. Paramedics, Police, Nurses and Therapists describe the painful journey of a trauma patient. Facts are presented about head and spinal cord injury, and the students have hands-on experience with the equipment used in trauma care and rehabilitation. The most powerful part of the day is the injury survivor presentation. Young people talk frankly about their injuries, the events that lead to the injury and what their lives are like now. Students have the opportunity to ask questions of these speakers and learn what life is really like after an injury.

A recent evaluation of this program by the Saskatoon Health Region looked at the attitude change of Grade 10 students [11]. These students were from one of 17 schools in the Saskatoon Health Region, and attended the program between 2006 and 2009. Students who participated in the PARTY program were given a questionnaire one week prior to the event, and two weeks after the event. Four-hundred and eight questionnaires were returned. There was a significant increase in the number of attitudinal questions answered ideally, and the number of knowledge questions answered correctly before versus after the event. Of those students who filled out the questionnaires, 95% said that they would not drive after consuming alcohol. While this change in knowledge and attitudes is encouraging, it should be noted that evidence for *behavioural* changes following PARTY programs is not available. More research is needed to establish the long term impact of this program.

Brain Walk

Brain Walk is based on the "Body Walk" model that was developed by the Saskatchewan Northern Health Services Branch (Mamawetan Churchill River and Keewatin Yatthé Health Regions). Brain Walk is an interactive walk through of the brain, which helps students learn

about the brain's functions and about keeping the brain safe. It is targeted toward kindergarten to grade 6 students, but is easily adapted for audiences of all ages.

Brain Walk sends students through 10 different stations highlighting the different areas of the brain and its functions. It also includes stations that demonstrate how to protect the brain, how alcohol and drugs affect the brain, and what it would be like if you hurt your brain. Each station involves demonstrations, activities, displays, and questions. The students travel around the stations in groups of 5 or 6, and have 5 or 6 minutes at each station. Each station is managed by a volunteer facilitator.

The students, teachers, and volunteers evaluate each session. In addition, a questionnaire is administered to the students, pre- and post-presentation, that measures change in knowledge. Results were profiled in the 2004-06 evaluation with no plan to re-evaluate Brain Walk during this contract period.

Between 2007-09, anecdotal program feedback indicates that Brain Walk continues to be a popular and oft-requested activity. School (teachers and volunteers) and student feedback continues to be very positive. Brain Walk has become a core educational activity of the Partnership targeting elementary-school aged children. Based on past feedback, it is expected it will continue to be frequently delivered and positively received for many years to come.

Safety Resource Kits

Teachers, public health nurses and other community members are regularly seeking out and requesting resources, information, presentations and agency linkages on a variety of injury prevention and safety topics. Many of these requests were of a similar nature in terms of either topic area (i.e., bicycle safety), resource requested (i.e., examples of different helmets), agency information, or presentation requests.

The ABI Education and Prevention Safety Resource Kits provide educators within the province with demonstration equipment and interactive activities to assist in the delivery of injury prevention initiatives. Borrowers within each health region have timely access, at no cost, to a variety of resource kits that include, but are not limited to, topics such as: Falls, Bicycle Safety, Blade/Board/Scooter Safety, The Brain, Playground Safety, School Bus and Pedestrian Safety, Water and Boating Safety, Winter Sport Safety, Helmet Usage, Home Safety (for children, adults, and seniors), Farm and ATV Safety, General Injury Prevention, Child Passenger Restraint, and Impaired Driving.

The Resource Kits are a collection of established and readily available resources, such as videos, posters, fact sheets, and safety equipment. These kits provide communities with access to resources and alleviates pressure on the ABI Education & Prevention Coordinators to prepare a presentation, travel to a community, and deliver a presentation. This saves time and resources. It also gives the community members ownership of the information and puts responsibility on the community to follow up with the issue.

Each Regional Coordinator has developed one complete set of 15 different safety resource kits. Feedback obtained from comment forms continues to be very positive lending support to the continued value of this resource to the province.

Saskatchewan Prevention Institute (SPI)

The Saskatchewan Prevention Institute (SPI) is a provincial non-profit organization located in Saskatoon that is funded to raise awareness and deliver education about the prevention of acquired brain injury in children.

The focus areas of the child injury prevention program were determined based on the evidence and supporting research on the main causes of acquired brain injury among children as well as what interventions are most effective in reducing these types of injuries. Injury prevention interventions include education, legislation, and engineering approaches. The SPI strives to implement multifaceted strategies combining these three methods whenever possible in order to successfully reduce acquired brain injuries among children in Saskatchewan.

Some of the key target areas focused on by SPI - Child Injury Program include:

- Child Passenger Safety, including technician training, car seat clinics, and continuing education.
- Bicycle Safety, including involvement with the Saskatchewan Coalition on Bicycle Safety, conducting helmet usage surveys, and participation in Bicycle Safety Week.
- Million Messages - The Million Messages program is the development of a comprehensive plan to standardize messages given to parents about injury by public health nurses and community health nurses.
- Playground Safety, including the development of the Playground Safety Workshop Resource Manual and other resources.
- Home Safety, including presentations and distribution of resource materials and checklists.
- Resource Development – the Prevention Institute distributed 76,006 prevention resources during the first two years of this contract period (April 1, 2007 to March 31, 2009), covering the three broad topic areas of Bicycle Safety, Child Passenger Safety and General Injury Prevention. The most commonly requested resource (with a quantity of 4,383 distributed) was *When Your Baby Can't Stop Crying* – a resource developed to prevent pediatric abusive head trauma.

Saskatchewan Brain Injury Association (SBIA)

SBIA is a provincial organization that works in partnership with other community organizations to create and enhance services and programs for people with ABI and their families. SBIA offers education and support services to ABI survivors and their families.

SBIA provides assistance to the various survivor and/or family support groups located throughout the province. Support groups involved with SBIA are currently located in Regina, Saskatoon, Prince Albert and Moose Jaw. Additionally, support groups in North Battleford, and

Kelvington operate with limited assistance from SBIA, and SBIA has plans to start an ABI information group in Meadow Lake. These support groups utilize the self-help/mutual aid model. Partnership Program staff facilitate additional support groups in various locations throughout the province, and a number of support groups run throughout the province that are not formally involved with the Partnership, but Partnership clients/families attend.

SBIA also provides educational/support events each year. The main event is the Survivor and Family Camp that is held every year in May. Camp provides survivors and their families an opportunity to meet with other people who have shared a similar experience. Family and survivor feedback regarding their camp experience is obtained by questionnaire. Past feedback has been positive, revealing that survivors and family feel the camp helps them deal with the challenges they experience and assists with stress reduction. Many families and survivors look forward to attending camp each year.

Personal development conferences are also held most years. Conference content is developed based on previous feedback and covers a variety of topics to promote learning and self-care.

The third annual educational event that is held is the Caregiver's Reprieve. This event provides caregivers with the opportunity and strategies to reduce their levels of stress. Past comments shared with SBIA have been very positive and reflect how important it is for caregivers to take time for themselves.

SBIA also provides telephone support by providing information and referral services. This could be providing basic information on ABI or directing individuals to appropriate services. SBIA maintains a Resource Library that is utilized by survivors, health care professionals and students. SBIA also conducts presentations on brain injury awareness and education.

Education, Prevention & Community Group Service Events

A total of 2,820 Community Group and Education and Prevention activities were recorded in the 2007 to 2009 period, for a total of 8,027 hours of service. A total of 76,273 individuals attended the various events. Most attendees were the general public (25,056; 33%), or children, youth, and students (23,697 = 31%). A variety of services or activities were provided. Table 5 summarizes these activities by event topic.

Table 5: Education, Prevention and Community Activities from April 2007 to March 2009

Activity/Event Topic	Number of Events	Number of attendees
PARTY/Impaired Driving Prevention	760	16,066
General Injury Prevention	327	16,950
Acquired Brain Injury	303	9,180
Brain Walk	302	13,396
ABI Partnership Project	274	2,779
Child Passenger Safety	195	5,756
Fall Prevention	171	2,401
Bicycle Safety/Helmet Use	114	2,814
Mild Brain Injury	65	1,077
The Brain	49	370
Snowmobile, Water & Boating, and All Terrain Vehicle Safety	111	1,200
Stroke Prevention	26	183
Safe Communities	21	249
Farm Safety	19	266
Support Group	18	130
Home Safety	16	66
Sports & Recreation Safety	16	864
Pedestrian/Traffic Safety	21	2,413
Other	12	113
TOTAL	**2, 820**	**76, 273**

Source: ABI Information System

In the area of education and prevention, as this section outlines, a number of activities and initiatives have been offered over the last two years. In the upcoming years, the focus will continue to be reducing injuries in Saskatchewan, particularly ABIs, and to improve the ability of service providers, community, clients, and their families to cope with the impacts of acquired brain injuries.

Conclusions

Before drawing conclusions regarding the findings of the current report, certain limitations must be addressed:

- Analyses of the MPAI-4 inventories were based on a limited sample size (n=28 for survivor and staff, and n=15 for significant other analyses). Additionally, this examination was quasi-experimental as improvement could not be compared to the improvement that would naturally occur without the Partnership (i.e., there was no control group).
- There may be slight variations in the data provided by different service providers where ambiguity exists as to where and how to enter certain types of information into ABIIS.
- And finally, the authors of this evaluation are employed to project manage the ABI Partnership Project, and may have biased attitudes regarding the success of the Partnership.

Thus, the following conclusions should be viewed with these limitations in mind.

The ABI Partnership Project continues to be a valuable service to individuals with ABI and their families. A total of 1,329 individuals received services during this review period, and of those, 711 (53%) were new clients.

Over the current and past two contract periods, there has been a decrease in the number of clients seen solely by both Outreach Teams and funded programs, and an increase in the number of clients seen only by a funded program. This could imply that client access to Partnership services may be more sequential in nature, or that clients remain in funded programs longer than they remain in contact with Outreach Teams. Further investigation is needed to reveal the typical service pathways undertaken by Partnership clients.

Client service event patterns have changed since the 1999-2003 evaluation which indicated that *case management* was the most common type of service. In the current and last evaluation period, *therapeutic activities* has been the most common service type. Within this category, 43% of service events were recorded as recreation/leisure activities. This finding may reflect the increased membership in funded programs (whose focus is not case management), but may also reflect a general shift in service for both funded and outreach programs. Further investigation is required to understand this finding.

The ratio of client to family service events (individual events) is 69:1, which might suggest the need for increased service to families, or to the fact that family services are not being adequately captured through our ABI Information System (ABIIS). The majority of services were from individual vs. group events; however, group events seem to provide the majority of support services. This latter finding might support the utility of enhancing family support services through group service delivery.

The Partnership has continued to partner with other service providers both within and outside of the Partnership. This is illustrated by the 4,574 referrals made by Partnership programs from 2007-09 to a wide variety of service providers. The Partnership also engaged in 1,827 consultations, the majority of which were regarding a specific individual.

Significant improvements were not found by the previous evaluation on MPAI-4 ratings made at intake and after one year. It was decided that program impacts may not be seen over the year-long timeframe, so the protocol was changed so that the second measurement was obtained after one-and-a-half versus one year. And indeed, the current evaluation showed a significant improvement on the total score for all three raters: clients, staff, and significant others. Only significant other ratings showed significant improvement on all three subscales. This might indicate that significant others have a unique ability to detect improvements before staff and clients do.

Examination of the goal attainment summaries showed a high level of goal achievement. The two most common goal areas, functional independence and communities activities, and the two most common goals, employment and leisure activities, were at least partially achieved in greater than 80% of cases. An examination of intake versus current status indicates that most clients maintain their level of function during their involvement with Partnership programs, but a small percentage of clients (3-5%) do improve their independence.

The ABI Partnership Project appears to be meeting the unique needs of survivors as indicated in goal attainment reporting, and these achieved goals may be facilitating the functional improvements as seen in MPAI ratings. The Partnership has continued to engage with other programs to provide a more informed service (as shown by consultation activities regarding specific individuals), and to connect clients to appropriate services given their unique needs (as indicated by the range of service referrals that were made this review period).

In addition to the Partnership's work in direct client service, the Education and Prevention programs have been involved in a wide variety of initiatives and activities over the past two years. This variety illustrates the range of education/prevention needs that the Partnership has, and continues to, address.

RECOMMENDATIONS

1. The ABI Provincial Office should continue to initiate improvements to the ABIIS to:
    - reduce data entry errors (e.g., institute safeguards in the client registration page to eliminate the possibility of a single client getting entered into the system twice with two different client IDs), and
    - by allowing additional information to be recorded (e.g., a comments box on the registration page) which will improve future analysis

2. Due to the lack of research and best practice information regarding long-term service utilization and needs of clients, the Partnership should engage in additional research activities that will provide information on these topics.

3. The Provincial Education and Prevention Coordinator should continue to advance the injury prevention agenda through their representation at provincial and national tables.

4. The ABI Provincial Office should continue to request funded agency information regarding service barriers and gaps, and continue to bring these issues forward to a variety of tables in order to create solutions.

5. The ABI Provincial Office should explore alternate forms of information sharing within the Partnership (both among funded agencies, and between the ABI Provincial Office and these agencies).

6. The ABI Provincial Office should continue to monitor family needs, and support the delivery of services to address them.

7. The Education and Prevention Coordinators should place more focus on *community development* work in the area of injury prevention rather than being a *service provider*.

Update on 2004-2006 Evaluation Recommendations

A number of recommendations arose from the 2004-06 evaluation phase. Since this time, continued work has been completed at many levels to address these recommendations.

SURVIVORS

1. **Form a Complex Needs Client Working Group.**

This has happened at an inter-sectoral level and on an ad hoc basis (Social Services, Health, Health Regions, Corrections and Public Safety) and ABI, as one of Health's representatives, has been at the table.

2. **Review the working relationship of the Partnership with Addictions and Mental Health.**

This is an ongoing issue and no formal plan has been developed. ABI Provincial Office staff were involved with the development of a new Addictions Recovery Model with a section specific to working with individuals with ABI (this remains in draft form). The ABI Provincial Coordinator has had internal discussions with Addictions and Mental Health consultants regarding concurrent clients and partnerships, including a database linkage exercise. A presentation to the Regional Directors of Mental Health and Addictions occurred in March 2009 regarding prevalence of concurrence in ABI and the need to partner better.

3. **Review the outcomes survey administration protocol.**

This was completed in November 2006. A new protocol and tool has been introduced (MPAI-4). An in-service was held prior to the start of this contract period (late March 2007) to provide detailed instruction to the programs.

4. Review the Goal Attainment methodology.

This was completed in November 2006, and a new protocol and tool was then introduced. An in-service was held prior to the start of this contract period (late March 2007) to provide detailed instruction to the programs.

5. Site level programs to analyze outcome data for program improvement.

This has begun. Programs only send copies of completed MPAI-4s to the ABI Provincial Office and retain another copy for their records and clinical use. The Evaluator developed and distributed a scoring template for funded agency use and offered individual assistance when requested.

6. Individual programs responsible for utilization of appropriate evaluation tools.

This was completed in November 2006. A new protocol and tool has been introduced. An in-service was held at the end of March 2007 to provide detailed instruction to the programs.

7. Individual programs should develop client orientation materials.

This has been left with the programs to address. This is an item in the Guidelines that were distributed in February 2007.

8. Implement a recreation and leisure services outcome tool.

The MPAI-4 covers this area adequately and therefore a separate tool was not required. An in-service was held at the end of March 2007 to provide detailed instruction to the programs.

9. Develop a consultation tracking tool in the ABI Information System.

This was completed and became available to programs at the beginning of April 2007.

10 Review admission criteria.

This information was added to the service schedule in the contracts. It has been an agenda item at the Provincial Advisory Group table.

FAMILY

11 Family needs should be assessed separately.

This has been left for the programs that serve families to address.

12 Family should be seen independently, as necessary.

This has been left for the programs that serve families to address.

13 Involve family members in more educational/psycho-educational and formal support opportunities.

A special educational session for families was held with Jeffrey Kreutzer in November 2006. Feedback solicited from funded agencies in April 2008 revealed that many involve family members with their ABI clients and address family needs on an ad hoc basis through referral to other agencies. Some programs have formalized family support through regular support groups and many others provide education and support sessions on an ad hoc (as needed) basis. SBIA

continues to play a key role in family education and support through their annual events (Caregiver's Reprieve and survivor/family camp). Work will continue in this area.

14 Programs to examine public relations to families.
This has been left for the programs that serve families to address.

15 Develop new family service tracking in the ABI Information System.
This was completed and became available to programs at the beginning of April 2007.

SERVICE PROVIDERS

16 Make reporting requirements proportionate to funding level.
This was done at the beginning of this contract period. Depending on funding level, programs report quarterly, semi-annually, or annually.

17 Increase public relations activities.
Program feedback on activities was solicited at end of the 2007-08 fiscal year. Preliminary discussions have occurred with Health Communications and SGI on a new logo but this item is still in progress.

18 Develop a communication plan for shared clients.
This has been left for individual programs to deal with.

19 Review service gaps.
Gaps are identified on an annual basis and are presented to the ABI Advisory Group for discussion and potential action.

20 Develop a tool to communicate evaluation and reporting purposes.
An in-service was held in March 2007 to communicate this information. Additionally, the newsletter and regular emails have been used to continue this information sharing.

EDUCATION AND PREVENTION

21 Develop a future service delivery plan for the PARTY program.
It continues to be a challenge to achieve community ownership over PARTY. Some regions have succeeded, but the majority of them continue to rely heavily on the Education and Prevention Coordinators to play a key role in coordinating and delivering PARTY. We will continue to examine the role of the ABI Partnership in the delivery of PARTY both from a funding and a resource perspective.

22 Review and update prevention and education materials.

Materials are updated as the need arises. The pamphlet series has been reproduced and updated. Adding additional pamphlets to the series is being considered. Other resources have been created by funded programs as the need has been identified.

23 Enhance Prevention and Education links to SK Health website.

There have been additional resources added to the Health website, including the new Comprehensive Injury Surveillance Report. Continued work needs to be done to ensure easy public access to ABI resources.

24 Develop a communication plan for upcoming events.

This has begun. Email address listings of past event participants are continually revised in order to notify interested parties of upcoming Intro to ABI, Brain Trust and other educational events. The Partnership newsletter features an Upcoming Events section. As well, funded programs are sent educational event information on a regular basis and are always asked to forward this information on to all of their community partners.

25 Continue to provide education sessions and conferences.

The provision of educational events is an ongoing activity. Annual Brain Trust conferences continue to be held, and during this contract period occurred in the fall of 2007 and 2008. Introduction to ABI was held in May of both 2007 and 2009. The 2009 session was videotaped in order to have general ABI training available in-between sessions. Introduction to ABI is currently organized on an 18-month to two-year cycle.

26 Update provincial injury report with lifespan data.

The Provincial Education and Prevention Coordinator acted as the co-chair and coordinated the development of the Comprehensive Injury Surveillance Report released in 2008. The report was the product of an inter-sectoral working group and several data sources.

27 Continue to monitor injury rates in order to target injury prevention services.

With the injury report now complete, current and detailed injury trends are available that will aid in work planning and activity prioritization of the Education and Prevention programs, as well as health regions and other community agencies.

References

[1] Acquired Brain Injury Working Group (1995). *Acquired Brain Injury: A Strategy for Services*. Regina, SK: Government of Saskatchewan.

[2] Hoofien, D., Gilboa, A., Vakil, E., & Donovick, P. (2001). Traumatic brain injury (TBI) 10-20 years later: a comprehensive outcome study of psychiatric symptomatology, cognitive abilities and psychosocial functioning. *Brain Injury*, 15(3), 189-209.

[3] Powell, J., Heslin, J., & Greenwood, R. (2002). Community based rehabilitation after severe traumatic brain injury: A randomized controlled trial. *Journal of Neurology, Neurosurgery, and Psychiatry*, 72(2), 193-203.

[4] Florian, V. & Katz, S. (1991). The other victims of traumatic brain injury: consequences for family members. *Neuropsychology*, 5(4), 267-279.

[5] Florian, V., Katz, S., & Lahav, V. (1989). Impact for traumatic brain damage on family dynamics and functioning: A review. *Brain Injury*, 3(3), 219-233.

[6] Harris, J., Godfrey, H., Partridge, F., & Knight, R. (2001). Caregiver depression following traumatic brain injury (TBI): a consequence of adverse effects on family members? *Brain Injury*, 15(3), 223-238.

[7] Malec, J. & Thompson, J. (1994). Relationship of the Mayo-Portland Adaptability Inventory to functional outcome and cognitive performance measures. *Journal of Head Trauma Rehabilitation*, 9(4), 1-15.

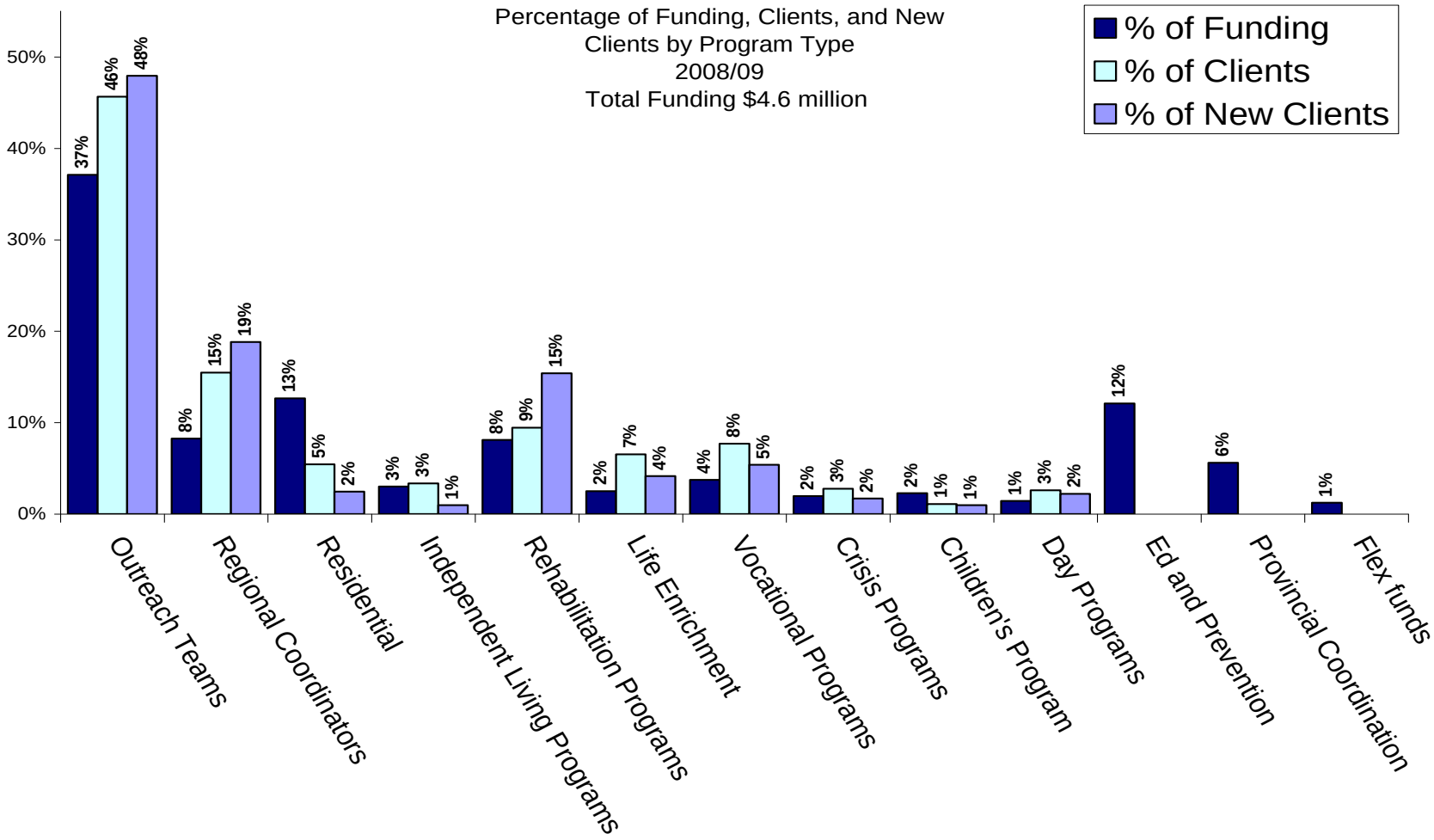
[8] Malec, J. & Lezak, J. (2008). Malec, J. (2005). The Mayo-Portland Adaptability Inventory. *The Center for Outcome Measurement in Brain Injury.* http://www.tbims.org/combi/mpai (accessed May 28, 2009).

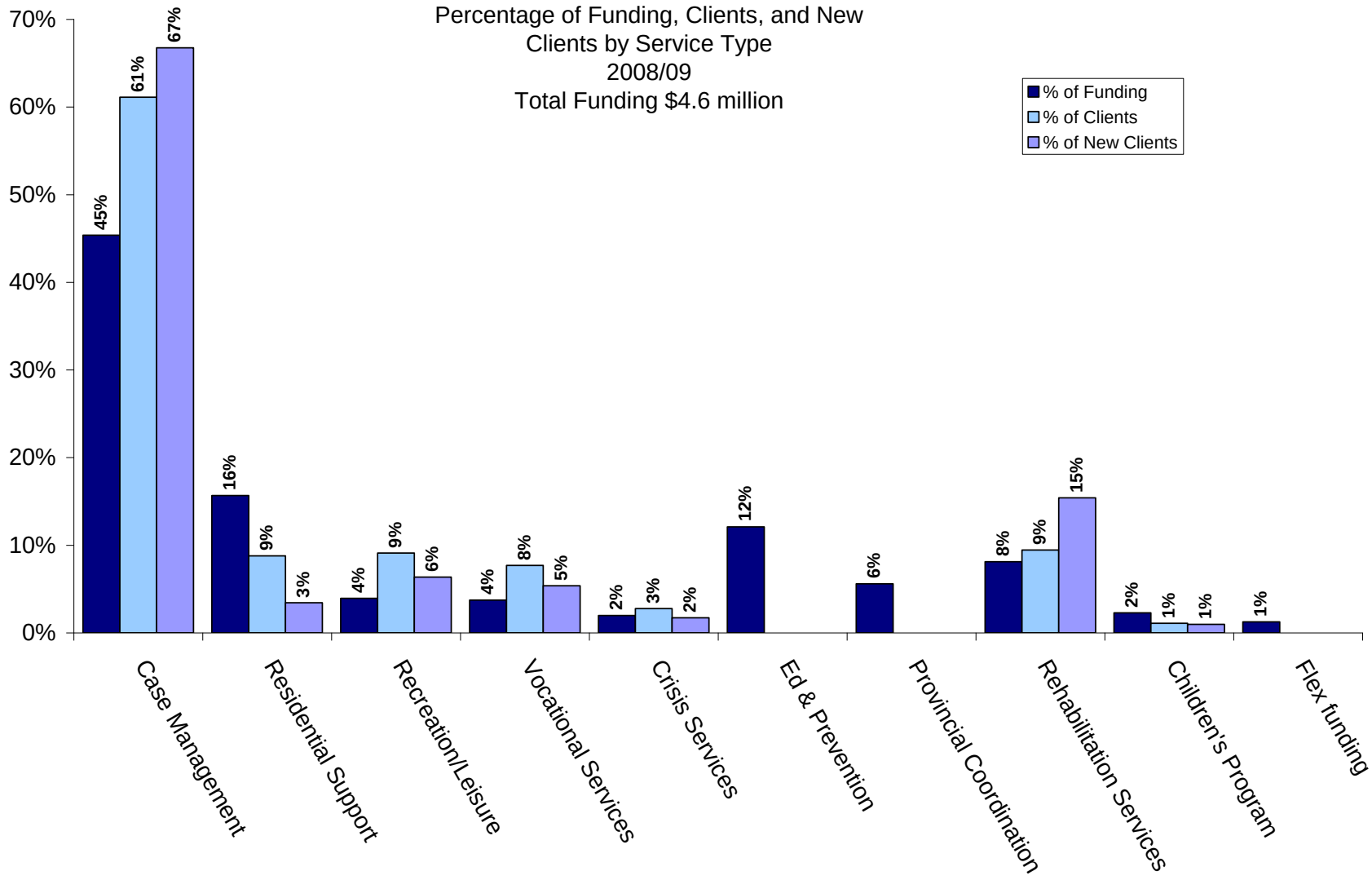
[9] Kuipers, P., Foster, M., Carlson, G., & May, J. (2003). Classifying client goals in community-based ABI rehabilitation: A taxonomy for profiling service delivery and conceptualizing outcomes. *Disability and Rehabilitation*, 25(3), 154-162.

[10] SMARTRISK, *The Economic Burden of Injury in Canada,* Toronto 2008.

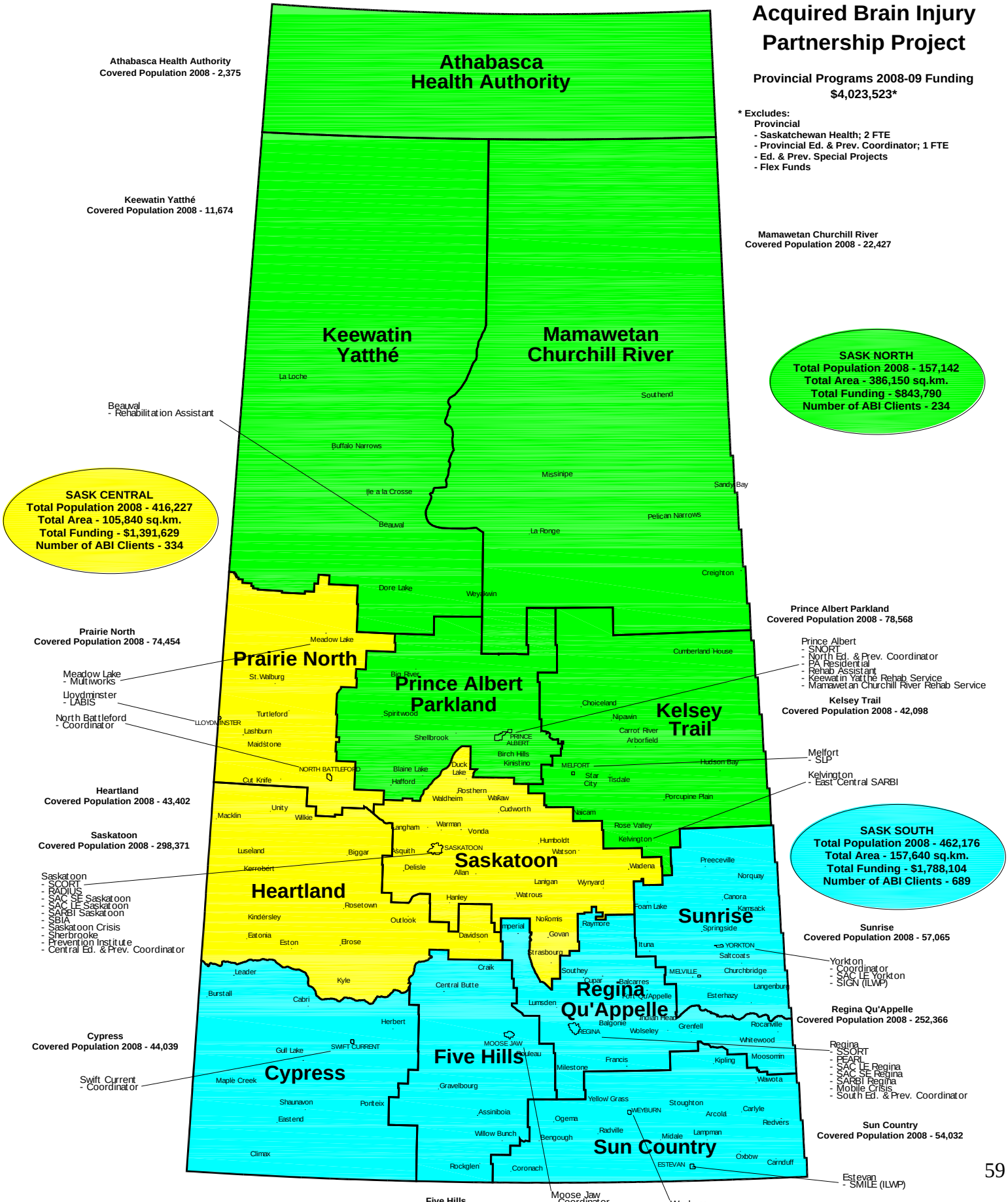
[11] Saskatoon Health Region, *PARTY Evaluation*, Saskatoon 2009.

APPENDIX 1 – Funding Charts




Percentage of Funding, Clients, and New Clients by Service Type
2008/09
Total Funding $4.6 million
% of Funding
% of Clients
% of New Clients
70%
60%
50%
40%
30%
20%
10%
0%
45%
61%
67%
16%
9%
3%
4%
9%
6%
4%
8%
5%
2%
3%
2%
12%
6%
8%
9%
15%
2%
1%
1%
1%
Case Management
Residential Support
Recreation/Leisure
Vocational Services
Crisis Services
Ed & Prevention
Provincial Coordination
Rehabilitation Services
Children's Program
Flex funding

APPENDIX 2 – Service Map



APPENDIX 3 – Evaluation Tools

Mayo Portland Adaptability Inventory- 4

Muriel D. Lezak, PhD, ABPP & James F. Malec, PhD, ABPP

HSN: _____ Program # _____ Date _____ Time: ___Intake ___Anniversary

Person reporting (circle one): Single Professional Professional Consensus Person with brain injury Significant other:

Below each item, circle the number that best describes the level at which the person being evaluated experiences problems. Mark the greatest level of problem that is appropriate. Problems that interfere rarely with daily or valued activities, that is, less than 5% of the time, should be considered not to interfere. Write comments about specific items at the end of the rating scale.

For Items 1-20, please use the rating scale below.

0 None	**1** Mild problem but does not interfere with activities; may use assistive device or medication	**2** Mild problem; interferes with activities 5-24% of the time	**3** Moderate problem; interferes with activities 25-75% of the time	**4** Severe problem; interferes with activities more than 75% of the time

Part A. Abilities

1. Mobility: Problems walking or moving; balance problems that interfere with moving about
0 1 2 3 4

2. Use of hands: Impaired strength or coordination in one or both hands
0 1 2 3 4

3. Vision: Problems seeing; double vision; eye, brain, or nerve injuries that interfere with seeing
0 1 2 3 4

4. *Audition: Problems hearing; ringing in the ears
0 1 2 3 4

5. Dizziness: Feeling unsteady, dizzy, light-headed
0 1 2 3 4

6. Motor speech: Abnormal clearness or rate of speech; stuttering
0 1 2 3 4

7A. Verbal communication: Problems expressing or understanding language
0 1 2 3 4

7B. Nonverbal communication: Restricted or unusual gestures or facial expressions; talking too much or not enough; missing nonverbal cues from others
0 1 2 3 4

8. Attention/Concentration: Problems ignoring distractions, shifting attention, keeping more than one thing in mind at a time
0 1 2 3 4

9. Memory: Problems learning and recalling new information
0 1 2 3 4

10. Fund of Information: Problems remembering information learned in school or on the job; difficulty remembering information about self and family from years ago
0 1 2 3 4

11. Novel problem-solving: Problems thinking up solutions or picking the best solution to new problems
0 1 2 3 4

12. Visuospatial abilities: Problems drawing, assembling things, route-finding, being visually aware on both the left and right sides
0 1 2 3 4

Part B. Adjustment

13. Anxiety: Tense, nervous, fearful, phobias, nightmares, flashbacks of stressful events
0 1 2 3 4

14. Depression: Sad, blue, hopeless, poor appetite, poor sleep, worry, self-criticism
0 1 2 3 4

15. Irritability, anger, aggression: Verbal or physical expressions of anger
0 1 2 3 4

16. *Pain and headache: Verbal and nonverbal expressions of pain; activities limited by pain
0 1 2 3 4

17. Fatigue: Feeling tired; lack of energy; tiring easily
0 1 2 3 4

18. Sensitivity to mild symptoms: Focusing on thinking, physical or emotional problems attributed to brain injury; rate only how concern or worry about these symptoms affects current functioning over and above the effects of the symptoms themselves
0 1 2 3 4

19. Inappropriate social interaction: Acting childish, silly, rude, behavior not fitting for time and place
0 1 2 3 4

20. Impaired self-awareness: Lack of recognition of personal limitations and disabilities and how they interfere with everyday activities and work or school
0 1 2 3 4

Use scale at the bottom of the page to rate item #21

21. Family/significant relationships: Interactions with close others; describe stress within the family or those closest to the person with brain injury; "family functioning" means cooperating to accomplish those tasks that need to be done to keep the household running

0 Normal stress within family or other close network of relationships	**1** Mild stress that does not interfere with family functioning	**2** Mild stress that interferes with family functioning 5-24% of the time	**3** Moderate stress that interferes with family functioning 25-75% of the time	**4** Severe stress that interferes with family functioning more than 75% of the time

Part C: Participation

22. Initiation: Problems getting started on activities without prompting				
0 None	**1** Mild problem but does not interfere with activities; may use assistive device or medication	**2** Mild problem; interferes with activities 5-24% of the time	**3** Moderate problem; interferes with activities 25-75% of the time	**4** Severe problem; interferes with activities more than 75% of the time
23. Social contact with friends, work associates, and other people who are not family, significant others, or professionals				
0 Normal involvement with others	**1** Mild difficulty in social situations but maintains normal involvement with others	**2** Mildly limited involvement with others (75-95% of normal interaction for age)	**3** Moderately limited involvement with others (25-74% of normal interaction for age)	**4** No or rare involvement with others (less than 25% of normal interaction for age)
24. Leisure and recreational activities				
0 Normal participation in leisure activities for age	**1** Mild difficulty in these activities but maintains normal participation	**2** Mildly limited participation (75-95% of normal participation for age)	**3** Moderately limited participation (25- 74% of normal participation for age)	**4** No or rare participation (less than 25% of normal participation for age)
25. Self-care: Eating, dressing, bathing, hygiene				
0 Independent completion of self-care activities	**1** Mild difficulty, occasional omissions or mildly slowed completion of self-care; may use assistive device or require occasional prompting	**2** Requires a little assistance or supervision from others (5-24% of the time) including frequent prompting	**3** Requires moderate assistance or supervision from others (25-75% of the time)	**4** Requires extensive assistance or supervision from others (more than75% of the time)
26. Residence: Responsibilities of independent living and homemaking (such as, meal preparation, home repairs and maintenance, personal health maintenance beyond basic hygiene including medication management) but not including managing money (see #29)				
0 Independent; living without supervision or concern from others	**1** Living without supervision but others have concerns about safety or managing responsibilities	**2** Requires a little assistance or supervision from others (5-24% of the time)	**3** Requires moderate assistance or supervision from others (25-75% of the time)	**4** Requires extensive assistance or supervision from others (more than 75% of the time)
27. *Transportation				
0 Independent in all modes of transportation including independent ability to operate a personal motor vehicle	**1** Independent in all modes of transportation, but others have concerns about safety	**2** Requires a little assistance or supervision from others (5-24% of the time); cannot drive	**3** Requires moderate assistance or supervision from others (25-75% of the time); cannot drive	**4** Requires extensive assistance or supervision from others (more than 75% of the time); cannot drive
28A. *Paid Employment: Rate either item 28A or 28B to reflect the primary desired social role. Do not rate both. Rate 28A if the primary social role is paid employment. If another social role is primary, rate only 28B. For both 28A and 28B, "support" means special help from another person with responsibilities (such as, a job coach or shadow, tutor, helper) or reduced responsibilities. Modifications to the physical environment that facilitate employment are not considered as support.				
0 Full-time (more than 30 hrs/wk) without support	**1** Part-time (3 to 30 hrs/ wk) without support	**2** Full-time or part-time with support	**3** Sheltered work	**4** Unemployed; employed less than 3 hours per week
28B. *Other employment: Involved in constructive, role-appropriate activity other than paid employment. Check only one to indicate primary desired social role: Childrearing/care-giving Homemaker, no childrearing or care-giving Student, Volunteer, Retired (Check retired only if over age 60; if unemployed, retired as disabled and under age 60, indicate "Unemployed" for item 28A.)				
0 Full-time (more than 30 hrs/wk) without support; full-time course load for students	**1** Part-time (3 to 30 hrs/ wk) without support	**2** Full-time or part-time with support	**3** Activities in a Supervised environment other than a sheltered workshop	**4** Inactive; involved in role appropriate activities less than 3 hours per week
29. Managing money and finances: Shopping, keeping a check book or other bank account, managing personal income and investments; if independent with small purchases but not able to manage larger personal finances or investments, rate 3 or 4.				
0 Independent, manages small purchases and personal finances without supervision or concern from others	**1** Manages money independently but others have concerns about larger financial decisions	**2** Requires a little help or supervision (5-24% of the time) with large finances; independent with small purchases	**3** Requires moderate help or supervision (25-75% of the time) with large finances; some help with small purchases	**4** Requires extensive help or supervision (more than 75% of the time) with large finances; frequent help with small purchases.

Part D: Pre-existing and associated conditions. The items below do not contribute to the total score but are used to identify special needs and circumstances. For each rate, pre-injury and post-injury status.

30. Alcohol use: Use of alcoholic beverages.

Pre-injury _____ Post-injury _____

0 No or socially acceptable use	**1** Occasionally exceeds socially acceptable use but does not interfere with everyday functioning; current problem under treatment or in remission	**2** Frequent excessive use that occasionally interferes with everyday functioning; possible dependence	**3** Use or dependence interferes with everyday functioning; additional treatment recommended	**4** Inpatient or residential treatment required

31. Drug use: Use of illegal drugs or abuse of prescription drugs.

Pre-injury _____ Post-injury _____

0 No or occasional use	**1** Occasional use does not interfere with everyday functioning; current problem under treatment or in remission	**2** Frequent use that occasionally interferes with everyday functioning; possible dependence	**3** Use or dependence interferes with everyday functioning; additional treatment recommended	**4** Inpatient or residential treatment required

32. Psychotic Symptoms: Hallucinations, delusions, other persistent severely distorted perceptions of reality.

Pre-injury _____ Post-injury _____

0 None	**1** Current problem under treatment or in remission; symptoms do not interfere with everyday functioning	**2** Symptoms occasionally interfere with everyday functioning but no additional evaluation or treatment ecommended	**3** Symptoms interfere with everyday functioning; additional treatment recommended	**4** Inpatient or residential treatment required

33. Law violations: History before and after injury.

Pre-injury _____ Post-injury _____

0 None or minor traffic violations only	**1** Conviction on one or two misdemeanors other than minor traffic violations	**2** History of more than two misdemeanors other than minor traffic violations	**3** Single felony conviction	**4** Repeat felony convictions

34. Other condition causing physical impairment: Physical disability due to medical conditions other than brain injury, such as, spinal cord injury, amputation. Use scale below #35.

Pre-injury _____ Post-injury _____

35. Other condition causing cognitive impairment: Cognitive disability due to non-psychiatric medical conditions other than brain injury, such as, dementia, developmental disability.

Pre-injury _____ Post-injury _____

0 None	**1** Mild problem but does not interfere with activities; may use assistive device or medication	**2** Mild problem; interferes with activities 5-24% of the time	**3** Moderate problem; interferes with activities 25-75% of the time	**4** Severe problem; interferes with activities more than 75% of the time

Comments:
Item #

_____

_____

_____

Mayo Portland Adaptability Inventory- 4
Demographic Information
ABI Partnership Project

Client Health Service Number (HSN): _____

Ethnicity: ☐ **Metis** ☐ **Non Aboriginal** ☐ **Non Status** ☐ **Status Indian** ☐ **Unknown** ☐ **Inuit**

Gender: ☐ **female** ☐ **male**

Cause of Injury:

- ☐ **Aneurysm**
- ☐ **Anoxia**
- ☐ **Bicycle**
- ☐ **Blow to head (assault)**
- ☐ **Blow to head (diving)**
- ☐ **Blow to head (not assault)**
- ☐ **Blow to head (sports related)**
- ☐ **Encephalitis/Meningitis**
- ☐ **Fall**
- ☐ **Motorcycle (driver)**
- ☐ **Motorcycle (passenger)**
- ☐ **MVC (bicycle)**
- ☐ **MVC (driver or passenger)**
- ☐ **MVC (pedestrian)**
- ☐ **Other (not TBI specify _____)**
- ☐ **Penetrating (missile wound)**
- ☐ **Shaken Baby Syndrome**
- ☐ **Stroke**
- ☐ **Snowmobile**
- ☐ **Traumatic Brain Injury (other)**
- ☐ **Tumour**

Age at time of Injury: _____ **Years since injury: _____**

Living Situation:

- ☐ **Approved Home**
- ☐ **Correctional Centre**
- ☐ **No Fixed Address**
- ☐ **Child no extra support**
- ☐ **Child extra support**
- ☐ **Group Home**
- ☐ **Hospital Resident**
- ☐ **Independent in home or family home**
- ☐ **Independent with difficulty**
- ☐ **Long Term Care Facility**
- ☐ **Personal Care Home**
- ☐ **Supported with limited assistance**
- ☐ **Supported requiring assistance**
- ☐ **Supervised in home or family home**

Insurance: ☐ **No Insurance** ☐ **Other** ☐ **SGI No Fault** ☐ **SGI Tort (2003)** ☐ **SGI Tort (pre-1995)** ☐ **WCB**

Current Employment:

- ☐ **Currently Medically Restricted**
- ☐ **Full time Competitive**
- ☐ **Homemaker**
- ☐ **Not Applicable**
- ☐ **Part time Competitive**
- ☐ **Retired**
- ☐ **Seasonal Employment**
- ☐ **Self Employed**
- ☐ **Sheltered**
- ☐ **Student**
- ☐ **Supported**
- ☐ **Transitional**
- ☐ **Unemployable**
- ☐ **Unemployed**
- ☐ **Volunteer Work**

Education Level: (Highest Level)

- ☐ **Elementary School**
- ☐ **None**
- ☐ **Post-Secondary School**
- ☐ **Preschool/Kindergarten**
- ☐ **Secondary School**

Home Health Region:

- ☐ **Athabasca**
- ☐ **Cypress**
- ☐ **Five Hills**
- ☐ **Heartland**
- ☐ **Kelsey Trail**
- ☐ **Keewatin Yatthé**
- ☐ **Mamawetan**
- ☐ **Prairie North**
- ☐ **Prince Albert Parkland**
- ☐ **Regina Qu'Appelle**
- ☐ **Saskatoon**
- ☐ **Sun Country**
- ☐ **Sunrise**
- ☐ **None**

Goal Attainment Summary Sheet

Summary Report of Goal Attainment for:
Program Name: _____ Date: _____

Goal Area	# Achieved	# Partially Achieved	# Not Achieved	# Withdrawn
Cognitive				
Memory				
Attention/concentration				
Functional Independence				
Transportation				
Handling money				
Nutrition/Meal Prep				
Dressing/Grooming/Hygiene				
Time/Fatigue Management				
Home Management				
Eating Skills				
Physical				
Housing				
Other:				
Psycho-social/Emotional				
Anger Management				
Stress Management				
Behaviour Management				
Pain Management				
Mood Management				
Relationships with others				
Sexuality				
Communication				
Recovery Activities				
Other:				
Community Activities				
Employment				
Education				
Leisure Activities				
Volunteering				
Community Involvement/Groups				
Spirituality				
Other:				
Other (Please specify)				
Maintenance				
Understanding ABI				

Total Goals: _____ Total Clients: _____
Total Goals Achieved: _____
Total Goals Partially Achieved: _____
Total Goals Not Achieved: _____
Total Goals Withdrawn: _____
% Achieved: _____ (Total goals achieved/(Total goals-Goals withdrawn) x 100

APPENDIX 4 – Evaluation Results

Analysis of the Mayo Portland Adaptability Inventory IV (MPAI-4)

Sub-Scale	Time 1 Mean (SD)	Time 2 Mean (SD)	t-test
Survivor – Ability	11.7	9.6	t(29) = 1.6; p = .2
Staff – Ability	12.1	10.9	t(33) = 1.2; p = .2
Significant Other - Ability	14.9	9.4	t(14) = 2.9; p = .01*
Survivor – Adjustment	10.6	9.0	t(28) = 1.2; p = .2
Staff – Adjustment	14.1	11.9	t(32) = 1.7; p = .1
Significant Other – Adjustment	19.0	13.5	t(14) = 2.7; p < .05*
Survivor – Participation	8.8	6.3	t(29) = 3.1; p < .01*
Staff – Participation	12.4	9.6	t(33) = 3.4; p < .01*
Significant Other – Participation	14.6	10.3	t(14) = 3.3; p < .01*
Survivor – Total	27.5	22.1	t(28) = 2.2; p < .05*
Staff – Total	34.6	29.3	t(32) = 2.2; p < .05*
Significant Other – Total	42.9	28.9	t(14) = 3.9; p < .01*

*Significant at $p \leq .05$

Item by Item T-tests for the Mayo Portland Adaptability Inventory IV (MPAI-4)

Inventory Item	Rater	Time 1	Time 2	Change	T-Test
1. Mobility	**Survivor**	**1.6**	**1.1**	**-0.5**	**T (33) = 2.1; p < .05**
	Significant Other	**1.2**	**0.7**	**-0.5**	**T (14) = 3.5; p < .01**
	Staff	**1.9**	**1.4**	**-0.5**	**T (36) = 2.9; p < .01**
2. Use of hands	**Survivor**	**1.4**	**1**	**-0.4**	**T (33) = 2.3; p < .05**
	Significant Other	**1.3**	**0.7**	**-0.6**	**T (14) = 3.5; p < .05**
	Staff	**1.4**	**1.4**	**0**	**T (36) = 0.6;** *NS*
3. Vision	**Survivor**	**0.9**	**0.8**	**-0.1**	**T (33) = 0.8;** *NS*
	Significant Other	**1.3**	**0.7**	**-0.6**	**T (14) = 0.1;** *NS*
	Staff	**0.8**	**0.5**	**-0.3**	**T (35) = 1.7;** *NS*
4. *Audition	**Survivor**	**0.6**	**0.5**	**-0.1**	**T (33) = 0.4;** *NS*
	Significant Other	**0.7**	**0.3**	**-0.4**	**T (14) = 2.8; p = .01**
	Staff	**0.2**	**0.3**	**0.1**	**T (36) = -1.0;** *NS*
5. Dizziness	**Survivor**	**0.9**	**0.5**	**-0.4**	**T (33) = 2.9; p < .01**
	Significant Other	**0.8**	**0.2**	**-0.6**	**T (13) = 2.3; p < .05**
	Staff	**0.7**	**0.4**	**-0.3**	**T (36) = 1.9; p = .06**
6. Motor speech	**Survivor**	**1.1**	**0.5**	**-0.6**	**T (33) = 3.07; p < .01**
	Significant Other	**1**	**0.4**	**-0.6**	**T (14) = 2.1; p = .06**
	Staff	**0.9**	**0.9**	**0**	**T (36) = 0.0;** *NS*
7A. Verbal communication	**Survivor**	**1.1**	**0.7**	**-0.4**	**T (33) = 1.7; p < .01**
	Significant Other	**1.5**	**1.1**	**-0.4**	**T (14) = 1.2;** *NS*
	Staff	**0.8**	**0.9**	**0.1**	**T (36) = -0.4;** *NS*
7B. Nonverbal communication:	**Survivor**	**0.5**	**0.5**	**0**	**T (33) = 0;** *NS*
	Significant Other	**1**	**1.2**	**0.2**	**T (14) = -0.6;** *NS*
	Staff	**0.7**	**0.8**	**0.1**	**T (36) = -.4;** *NS*
8. Attention/Concentration	**Survivor**	**1.2**	**1.3**	**0.1**	**T (33) = -.5;** *NS*
	Significant Other	**1.6**	**1.6**	**0**	**T (15) = -0.2;** *NS*
	Staff	**1.2**	**1.1**	**-0.1**	**T (36) = 0.6;** *NS*
9. Memory	**Survivor**	**1.4**	**1.5**	**0.1**	**T (33) = - 0.6;** *NS*
	Significant Other	**1.6**	**1.4**	**-0.2**	**T (15) = 1.1;** *NS*
	Staff	**1.5**	**1.4**	**-0.1**	**T (36) = 0.8;** *NS*

10. Fund of Information: Problems remembering information learned	**Survivor**	**0.8**	**0.7**	**-0.1**	**T (33) = 0.8;** *NS*
	Significant Other	**1.5**	**0.9**	**-0.6**	**T (15) = 2.4; p < .05**
	Staff	**0.8**	**0.6**	**-0.2**	**T (36) = 1.1;** *NS*
11. Novel problem-solving	**Survivor**	**1**	**1.1**	**0.1**	**T (33) = -0.6;** *NS*
	Significant Other	**1.5**	**1**	**-0.5**	**T (15) = 1.5;** *NS*
	Staff	**1.5**	**1.4**	**-0.1**	**T (36) = 0.5;** *NS*
12. Visuospatial abilities	**Survivor**	**0.9**	**0.7**	**-0.2**	**T (32) = 0.7;** *NS*
	Significant Other	**1.4**	**0.3**	**-1.1**	**T (15) = 2.8; p = .01**
	Staff	**1.1**	**0.9**	**-0.2**	**T (34) = 1.1;** *NS*
13. Anxiety	**Survivor**	**1**	**0.9**	**-0.1**	**T (32) = 0.3;** *NS*
	Significant Other	**1**	**0.8**	**-0.2**	**T (15) = 0.8;** *NS*
	Staff	**1.1**	**0.7**	**-0.4**	**T (35) = 2.5; p < .05**
14. Depression	**Survivor**	**1**	**1.1**	**0.1**	**T (31) = 0.3;** *NS*
	Significant Other	**1.8**	**1.1**	**-0.7**	**T (15) = 3.2; p < .01**
	Staff	**1.4**	**1.2**	**-0.2**	**T (36) = 0.8;** *NS*
15. Irritability, anger, aggression	**Survivor**	**1**	**1.1**	**0.1**	**T (32) = - 0.5;** *NS*
	Significant Other	**1.4**	**1.1**	**-0.3**	**T (15) = 2.1; p < .05**
	Staff	**0.9**	**0.7**	**-0.2**	**T (34) = 1.6;** *NS*
16. *Pain and headache	**Survivor**	**0.9**	**0.9**	**0**	**T (32) = 0.3;** *NS*
	Significant Other	**1.4**	**0.8**	**-0.6**	**T (15) = 1.6;** *NS*
	Staff	**1.2**	**1**	**-0.2**	**T (36) = 1.05;** *NS*
17. Fatigue	**Survivor**	**1.7**	**1.4**	**-0.3**	**T (33) = 1.0;** *NS*
	Significant Other	**2.4**	**1.7**	**-0.7**	**T (15) = 2.3; p < .05**
	Staff	**2.1**	**1.6**	**-0.5**	**T (34) = 0.6; p < .01**
18. Sensitivity to mild symptoms	**Survivor**	**1**	**0.9**	**-0.1**	**T (32) = 0.6;** *NS*
	Significant Other	**2.1**	**1.2**	**-0.9**	**T (15) = 2.5; p < .05**
	Staff	**1.02**	**0.76**	**-0.26**	**T (33) = 1.2;** *NS*
19. Inappropriate social interaction	**Survivor**	**0.27**	**0.27**	**0**	**T (32) = 0.0;** *NS*
	Significant Other	**0.75**	**0.91**	**0.16**	**T (16) = -0.5;** *NS*
	Staff	**0.3**	**0.6**	**0.3**	**T (35) = -1.6;** *NS*
20. Impaired self-awareness	**Survivor**	**0.6**	**0.6**	**0**	**T (32) = 0.0;** *NS*
	Significant Other	**1.2**	**0.9**	**-0.3**	**T (15) = 0.9;** *NS*
	Staff	**0.9**	**0.7**	**-0.2**	**T (34) = 1.2;** *NS*
21. Family/significant relationships	**Survivor**	**1.1**	**0.9**	**-0.2**	**T (31) = 0.9;** *NS*
	Significant Other	**1.9**	**1.2**	**-0.7**	**T (15) = 3.5; p < .01**
	Staff	**1.4**	**1.2**	**-0.2**	**T (35) = 1.3;** *NS*

22. Initiation	**Survivor**	**1.1**	**0.9**	**-0.2**	**T (31) = 0.9;** *NS*
	Significant Other	**1.9**	**1.5**	**-0.4**	**T (15) = 1.1;** *NS*
	Staff	**1.4**	**1.2**	**-0.2**	**T (35) = 1.3;** *NS*
23. Social contact with friends, work associates, and other people (not family)	**Survivor**	**0.9**	**0.9**	**0**	**T (32) = 0.0;** *NS*
	Significant Other	**1.6**	**1.3**	**-0.3**	**T (15) = 3.5;** *NS*
	Staff	**1.5**	**1.3**	**-0.2**	**T (35) = 1.0;** *NS*
24. Leisure and recreational activities	**Survivor**	**1.4**	**1.2**	**-0.2**	**T (32) = 1.1;** *NS*
	Significant Other	**1.9**	**1.4**	**-0.5**	**T (15) = 1.5;** *NS*
	Staff	**1.9**	**1.4**	**-0.5**	**T (35) = 2.4; p < .05**
25. Self-care	**Survivor**	**0.6**	**0.5**	**-0.1**	**T (25) = 0.9;** *NS*
	Significant Other	**0.9**	**0.7**	**-0.2**	**T (15) = 0.8;** *NS*
	Staff	**1.1**	**0.9**	**-0.2**	**T (34) = 2.0; p = .06**
26. Residence	**Survivor**	**1.4**	**0.9**	**-0.5**	**T (32) = 2.3; p < .005**
	Significant Other	**2.1**	**1.1**	**-1**	**T (14) = 3.8; p < .005**
	Staff	**1.8**	**1.1**	**-0.7**	**T (35) = 0.6; p = .001**
27. *Transportation	**Survivor**	**1.7**	**1.1**	**-0.6**	**T (31) = 1.7;** *NS*
	Significant Other	**2.6**	**1.2**	**-1.4**	**T (15) = 3.2; p < .01**
	Staff	**2.1**	**1.4**	**-0.7**	**T (35) = 2.8; p < .01**
28A. *Paid Employment	**Survivor**	**2.6**	**2.3**	**-0.3**	**T (20) = 1.2;** *NS*
	Significant Other	**3**	**2.8**	**-0.2**	**T (9) = 1.0;** *NS*
	Staff	**2.8**	**2.4**	**-0.4**	**T (22) = 1.3;** *NS*
28B. *Other employment	**Survivor**	**2.3**	**1.7**	**-0.6**	**T (5) = 0.9;** *NS*
	Significant Other	**2.5**	**2**	**-0.5**	**T (1) = 1.0;** *NS*
	Staff	**2.7**	**2.5**	**-0.2**	**T (10) = 1.5;** *NS*
29. Managing money and finances	**Survivor**	**1.2**	**0.8**	**-0.4**	**T (32) = 1.8; p = .08**
	Significant Other	**1.9**	**1.3**	**-0.6**	**T (15) = 2.3; p < .05**
	Staff	**1.8**	**1.2**	**-0.6**	**T (36) = 2.6; p = .01**

APPENDIX 5 – Acronyms used in this Report

ABI	Acquired Brain Injury
ABIIS	Acquired Brain Injury Information System
CFPC	Canadian Falls Prevention Curriculum
CFPEC	Canadian Falls Prevention Education Collaborative
FTE	Full-Time Equivalent
ILWP	Independent Living Worker Program
MPAI-4	Mayo-Portland Adaptability Inventory - 4th edition
MVC	Motor Vehicle Collision
MVC (ALL)	All types of Motor Vehicle Collisions
PARTY	Prevent Alcohol and Risk Related Trauma in Youth
SGI	Saskatchewan Government Insurance
SLP	Speech Language Pathologist
TBI	Traumatic Brain Injury

PROGRAMS

LABIS	Lloydminster & Area Brain Injury Society
SARBI	Saskatchewan Association for the Rehabilitation of the Brain Injured
SBIA	Saskatchewan Brain Injury Association
SIGN	Society for the Involvement of Good Neighbours
SMILE	Society for Maintaining and Improving Life in Estevan
SPI	Saskatchewan Prevention Institute