Supporting Individuals with Brain Injuries Living Within the Community:
An Information Guide for Community Rehabilitation Counsellors

by

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The procedures in this staff training/workshop are meant to be used by the agency staff, as part of the broader services they provide, or under supervision of agency staff.
Dedication

I would like to dedicate this thesis to Jarrett, for your continuous and unwavering support and encouragement. Thank you.
Abstract
For individuals with brain injuries, the transition from hospital to community setting is a complex process that requires the assistance and support of many different parties. Health care providers, such as community rehabilitation counsellors (CRCs), take on a significant amount of responsibility during this time and play an integral part in post-acute rehabilitation. There are several areas that CRCs need to consider when working with clients during this transitional phase. The aim of this thesis was to develop a resource guide that would assist CRCs when working with individuals with brain injuries within a community setting. The guide was developed to outline general steps for CRCs to consult during their contribution to a client’s rehabilitation, specifically describing assignment of new clients and the development of service plans. It was hypothesized that a CRC’s use of the information guide would maximize the psychological, social, and emotional benefits that clients can experience from engaging in the initial stages of community rehabilitation. It is recommended that the guide be used in tandem with other resources to ensure that a comprehensive rehabilitation plan for each client be developed. Furthermore, the guide also advocates for the inclusion of the client, their family and other important personnel in the rehabilitation care plan. A potential limitation of the thesis was the lack of specific community resources mentioned within the guide that CRCs could potentially use; however, the rationale for its generality was to allow for the individualization of care. Further recommendations, limitations, and implications with regard to the field of Behavioural Psychology are also discussed within the thesis.
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Chapter I: Introduction

The acquisition of a brain injury is a life-altering event that produces lasting and challenging consequences for individuals and their families to overcome. The rehabilitation process starts the moment a brain injury occurs and can potentially continue for a significant amount of time. Essentially, rehabilitation for individuals with brain injuries can be divided into three general categories: the acute phase, the post-acute phase, and the community integration phase (Turner et al., 2007). The acute and post-acute phases of rehabilitation encompass inpatient care within hospital settings; individuals receive treatment from a team of various professionals, including a physiatrist, occupational therapist, rehabilitation nurse, and physiotherapist (Agrawal & Joshi, 2014). These two phases provide individuals with access to resources related to physical and cognitive functioning, as well as the health care professionals qualified to implement such supports. The community integration phase of rehabilitation begins following discharge from hospital. While some individuals move home, others return to the community via supported living programs. Regardless of a person’s living arrangements, it is vital that the gains made during the acute and post-acute phases of recovery are maintained when re-entering the community.

The concept of community integration is difficult to describe due to the highly individualized nature of brain injury rehabilitation. McColl et al. (1998) describe community integration as a general concept that includes social support, occupation, and independent living. Parvaneh and Cocks (2012) suggest a more comprehensive definition of community integration. They view the term as a framework that includes seven key factors: relationships, acceptance, resuming life prior to injury, increased vulnerability and risks, occupation, returning home, and community access. Regardless of its definition, community integration is considered an important goal for many individuals recovering from brain injuries (Martelli, Zasler, Tiernan, 2012).

The transition to community setting can be difficult for both patients and their families; returning home presents new challenges to overcome and adds to the difficulties present during the acute phase of rehabilitation (Turner, Fleming, Onwsworth, & Cornwell, 2011). Commonly faced challenges during this time of transition include financial difficulties, unsuccessful identification of resources, and the achievement of independence (Nalder, Fleming, Cornwell, Shields, & Foster, 2013). The assistance of community rehabilitation counsellors (CRCs) and other health care professionals can help to alleviate these stressors and provide an easier transition for all individuals involved during this process. Resources that ease this transition are of significant benefit to both clients and CRCs. In regard to the field of behavioural psychology, the development of new resources is important to the growth of health care workers. The utilization of these new tools can help health care professionals implement best practices, thus allowing clients to receive optimal service.

Through consultation with staff members of the Community Brain Injury Services (CBIS), it was determined that an information guide for CRCs to use during the community integration process would greatly benefit all parties involved. During the development of this thesis, a guide of this nature did not exist within the agency. The guide was developed with the intention of providing users with a comprehensive and simple set of guidelines to refer to during the community integration process. Based upon this idea, the guide would be general and adaptable for all circumstances, but also inclusive of all relevant areas of a client’s life. The intention of the information guide was to enhance a staff member’s ability to ensure that all areas of the community re-integration process are addressed and remediated if necessary. In
summation, the use of this guide will enable CRCs and other agency staff members to provide effective support to individuals with brain injuries transitioning into the community following acute and post-acute rehabilitation.
Chapter II: Literature Review

Introduction
In reviewing current brain injury literature, several areas relevant to the community integration process were identified. These areas included the benefits of continuing rehabilitation within community settings, the roles of goals during community rehabilitation, and the impact of brain injury among children and adolescents. Information obtained from these areas help to validate the inclusion of certain content within the information guide. Articles that help to highlight the importance of resources, such as the guide, during the rehabilitation process are discussed in length.

Community Integration
Williams, Rapport, Millis, and Hanks (2014) describe community integration as a process of significant importance; the task of assisting individuals’ transitioning back to the community is emphasized as the most important role of community health care providers. For many people, the transition back to community living signifies an important achievement (Turner, Fleming, Ownsworth, & Cornwell, 2011).

Many studies have noted the benefits of returning home following acute care in hospital settings. Turner et al. (2011) conducted a study in which participants reported that returning home was beneficial in their recovery process. Many of the participants and their families explained that self-awareness of deficits was only fully understood upon the return to community living (Turner et al., 2011). Winkler, Farnworth, Sloan, and Brown (2011) examined the transition of people with acquired brain injury (ABI) moving from aged care facilities to the community. Participants stated that many beneficial outcomes resulted from the transition to community, which included improved well-being, independence and social inclusion (Winkler et al., 2011). Winkler et al. (2011) reported that participants attributed these positive outcomes to four specific factors: consistency in support, respect, staff ratio, and dignity. Participants and their families emphasized the importance of these factors during the community rehabilitative process, and believed that improved outcomes would not have occurred within the environment of an aged care facility (Winkler et al., 2011).

There are a significant amount of articles that examine the self-reports of people returning home following acute care. In many instances, positive outcomes and themes are identified by participants and their families. Nalder et al. (2013) conducted a study that examined the self-reported experiences of 16 individuals with traumatic brain injury (TBI) six months following discharge from hospital. Interviews of the participants highlighted two main themes that were experienced during this transitional phase: changed life perspectives and wanting normality (Nalder et al., 2013). Nalder et al. (2013) found that participant outcomes were significantly influenced by perceptions of their injuries; many achieved a new normality through adjustment of life perspectives, while others adapted in other ways in order to maintain their life perspectives. In a study conducted by Williams et al. (2014), participant experiences were analyzed, with common characteristics being grouped into two areas: objective and subjective factors. Social participation, social mobility, and occupational outcomes were identified as objective indices, while social role limitations and connectedness were described as subjective examples (Williams et al., 2014). Williams et al. (2014) noted the importance of both areas being acknowledged as important yet separate domains within the community integration process. Turner et al. (2011) identified four major themes experienced by individuals transitioning home from acute brain injury rehabilitation. The themes included: difficulties in emotional adjustment, adapting to life at home, self-discovery, and variations in recovery (Turner et al., 2011).
et al. (2011) explained that the themes represented both the benefits and challenges that were experienced during community integration. The study by Nalder et al. (2013) also examined some challenges experienced by participants. Eight specific events were noted: accommodation change, financial strain, regaining independence in home environment and transport use, challenges finding therapy services, relationship breakdown, returning to work, and returning to driving (Nalder et al., 2013).

It is evident that there are both positive and negative effects that people experience when integrating back to community settings. While the consequences described in the literature are significant, the benefits of returning home are of greater importance and indicate the potential of further positive rehabilitative gains.

**Benefits of Community Rehabilitation**

There is a significant quantity of literature that has advocated for immediate intervention during the initial transition from hospital setting to community for people recovering from acquired brain injuries (ABI) (Turner, Fleming, Ownsworth, & Cornwell, 2011). There are many positive outcomes that can result from engaging in community rehabilitation. Braunling-McMorro, Dollinger, Gould, Neumann, and Heiligenthal (2010) found that the community integration stage of rehabilitation has a significant impact on the improvement of various areas of functioning, including psychological, physical, and behavioural, among individuals who have sustained brain injuries. Wheeler, Lane, and McMahon (2007) found that participation in a life-skills community-based rehabilitation program resulted in better community integration outcomes among individuals with TBI. A study conducted by Perna, Loughan, and Talka (2012) determined that a person’s level of executive functioning impacted their ability to perform instrumental activities of daily living (IADLs). As a result of these deficits, community re-integration was to be difficult (Perna et al., 2012). The implications of this study suggest that attention be allocated to the on-going rehabilitation of cognitive functioning among people receiving community supports.

Many studies sought to identify techniques and methods for improving the community rehabilitation process for individuals with brain injuries. For individuals’ recovery from brain injuries, case management is a valuable resource during the post-acute phase of rehabilitation (Fitzsimmons, 2003; Umeasiegbu, Waletich, Whitten, & Bishop, 2013). The inclusion of rehabilitation counsellors during community integration for individuals with brain injuries can be beneficial (Degeneffe et al., 2008; Dillahunt-Aspillaga et al., 2014). A significant amount of responsibility is placed with the caregivers of people with brain injuries; common areas of support can include financial, social and personal support (Dillahunt-Aspillaga et al., 2014). Community rehabilitation counsellors work with both people with brain injuries and their caregivers to assist in alleviating challenges that may arise when returning to the community.

Another effective method for positive integration outcomes is environmental enrichment. Frasca, Tomaszczyk, McFadyen, and Green (2013) hypothesized that environmental enrichment for individuals with TBI currently in the post-acute phase of rehabilitation would help to alleviate future declines in functional abilities. The authors of this study describe environmental enrichment as the enhancement of a person’s environment that results in increased stimulation among physical, social, and cognitive domains. Research of this topic concluded that enriched environments were found to have positive effects on cognitive functioning of individuals with TBI (Frasca et al., 2013). They advocated for the use of environmental enrichment to deter cognitive decline during the post-acute phase of rehabilitation. The nature of community
rehabilitation lends itself to environmental enrichment, providing clients with access to cognitive, physical, and social engagement.

The use of individualized treatment plans for people with brain injury have also been found to be effective during community rehabilitation. Oddy and da Silva Ramos (2013) developed individualized treatment plans for participants by specifically identifying neurological impairments. Goal setting, behavioural psychological techniques, and coping strategies were also used (Oddy & da Silva Ramos, 2013). As a result of the rehabilitation programs, participants were found to have made gains in functional independence, social outcomes, and occupational status (Oddy & da Silva Ramos, 2013). Wheeler et al. (2007) also found that positive outcomes were achieved through personalized treatment plans. These plans included one-on-one skills training in areas such as money management, social behaviour, and self-care (Wheeler et al., 2007). Schönberger et al. (2014) highlight the importance of individualized treatment plans for positive rehabilitation outcomes. Specifically, the inclusion of goal setting and the current knowledge of emotional functioning were found to be particularly beneficial (Schönberger et al., 2014).

There is an extensive amount of evidence that suggests positive outcomes for individuals who continue to actively participate in rehabilitative supports within the community setting. Practices such as individualized treatment plans and environmental enrichment have demonstrated benefits in regard to psychological, behavioural, and social domains. The care provided by CBIS utilizes many of these techniques and validates the inclusion of such within the rehabilitative process.

**Goal Setting During Community Rehabilitation**

The implementation of goal setting is a recommended and commonly used component with many rehabilitative processes (Levack et al., 2006). In particular, goal setting for individuals participating in brain injury rehabilitation is a common practice (Webb & Glueckauf, 1994). There is significant evidence that supports the efficacy of this technique among individuals among this population. Bergquist et al. (2012) further supported research conducted by Malec (1999), which demonstrated a positive correlation between goal achievement and functional outcomes in both vocational and residential participation. In a collaborative effort including the participant, their family members, and rehabilitation worker, both short-term and long-term goals were identified and worked toward over the course of one year (Bergquist et al., 2012). These results, in comparison to participants who did not achieve all goals, were maintained at the one-year follow-up after discharge from comprehensive day treatment (CDT) program (Bergquist et al., 2012).

Brands, Stapert, Köhler, Wade, and van Heugten (2015) followed a group of people with brain injuries over the course of a year to analyze their attainment of life goals. The most significant factor associated with goal attainment was self-efficacy. Brands et al. (2015) suggested that it would be beneficial to concentrate supports to treatments that improve self-efficacy, as it may aide in improvements of goal attainment for individuals with brain injuries.

Juengst et al. (2015) determined that life satisfaction is directly correlated with the identification of life roles. Juengst et al. (2015) suggested that efforts be made toward establishing new life roles during the community rehabilitation process, and further suggest that these efforts will lead to greater life satisfaction among individuals receiving brain injury rehabilitation. It was also found that lack of participation in social activities such as employment, leisure, and religious activities was associated with decreased levels of life satisfaction (Juengst et al., 2015). Results from the study also found a correlation between depressive symptoms and
life satisfaction (Juengst et al., 2015). It can therefore be determined that participation in community rehabilitation, and in turn the identification of goals, is beneficial to individuals with brain injury experiencing decreased life satisfaction.

The studies discussed within this section advocate for the inclusion of goal setting during the community rehabilitation process. Benefits such as improved life satisfaction and increased functional abilities have been achieved via goal setting and attainment. Furthermore, the process of goal setting fosters collaboration and inclusion of clients within their own treatment plans.

**Brain Injury Among Children and Adolescents**

In addition to the significant amount of research that has investigated brain injury among adults, there is also a large quantity of literature that has specifically examined childhood and adolescent brain injury. In children aged 0 to 14 years, the majority of brain injuries result from either falls or motor vehicle accidents (Popernack, Gray, & Reuter-Rice, 2015). Other common risk factors include learning disabilities, risk-taking behaviour, and mental health disorders that were present prior to an injury (Popernack et al., 2015). Ryan et al. (2015) examined whether the age at which a child sustained a brain injury correlated in any way with outcomes at both six month and two year follow ups. Participants were grouped according to age; middle childhood (five to nine years), late childhood (ten to eleven years), and early adolescence (twelve to fifteen years) (Ryan et al., 2015). Results indicated that all participants, regardless of age, presented impairments at the six month follow up (Ryan et al., 2015). It was only at the two-year follow up that functional levels had increased to levels comparable to typically developing children (Ryan et al., 2015).

McKinlay (2014) specifically researched brain injury among pre-school aged children and found that a major barrier in providing appropriate support was due to a lack of reporting. A major factor that contributed to few injury reports was the limited communication skills of pre-school aged children (McKinlay, 2014). McKinlay (2014) believed that the inability to provide a self-report of an incident or express symptoms following an injury significantly decreases the probability that a brain injury will be reported and diagnosed. Furthermore, it was found that this lack of communication skills placed the responsibility of reporting an injury on the parents or caregivers of the child; inaccuracies can arise when incidents are reported through secondary sources, and some adults may not be educated regarding the symptoms of brain injury (McKinlay, 2014).

When compared to other studies, similarities were found between long-term goals for children and adults recovering from brain injury. Popernack et al. (2015) investigated the implications of moderate to severe brain injury among children. Suggested rehabilitation goals for children included maximizing independence and continuing to improve functional abilities (Popernack et al., 2015). As with adults, community re-integration is also a prominent goal for children with brain injury (Popernack et al., 2015). Returning to school settings is a common goal for children and their families (Popernack et al., 2015). Popernack et al. (2015) emphasized the role of health care professionals during brain injury rehabilitation for children, as well as their ability to promote prevention of brain injury among parents and families.

Semrud-Clikeman (2010) conducted a study in which the rehabilitative process for children with brain injury was discussed. While physical and cognitive impairments contributed to challenges during community integration and rehabilitation, emotional and behavioural difficulties in regard to adjustment were found to be more significant factors (Semrud-Clikeman, 2010). Research indicated that remediation of emotional difficulties during childhood is important as there is a tendency for these impairments to affect functioning in adulthood.
Turner et al. (2011) also highlighted the importance of emotional and psychological adjustment, noting that adjustment in these areas of functioning correlated with successful community integration in adulthood. Re-integration within a school setting was also cited as a significant goal for children with brain injury (Semrud-Clikeman, 2010). A collaborative approach is emphasized between school staff, health care professionals, and family of a child with a brain injury to ensure that appropriate accommodations are implemented upon a return to school (Semrud-Clikeman, 2010). It was recommended that a child’s needs and supports be re-evaluated with each new level of schooling (i.e. elementary, middle, high school), as accommodations will need to be adjusted with growth of skills (Semrud-Clikeman, 2010). The transition to college or university can be a difficult process for both adolescents and their families, as it is common for new challenges to arise. To aide in this process, Semrud-Clikeman (2010) stated that planning in advance should be completed. Results of the study strongly recommend that a home-school relationship should be established and maintained throughout a child’s academic participation as to aide in successful transitions (Semrud-Clikeman, 2010).

Tavano et al. (2014) conducted a study that compared children and adolescents to adults to determine if age correlated with cognitive protection following a severe traumatic brain injury. Participants were tested on a multitude of factors, including executive functions, attention, and visuospatial abilities (Tavano et al., 2014). Results indicated that young age is not a neuroprotective factor against the effects of severe traumatic brain injury; all participants were found to have similar outcomes, regardless of age (Tavano et al., 2014).

The findings presented from these studies indicate that brain injuries sustained during childhood or adolescence are serious and require extensive rehabilitation in order to prevent deficits from persisting into adulthood. As with injuries among adults, children and adolescents identify community integration as primary goal of rehabilitation and benefit from a collaborative treatment team of professionals and family members.

**Summary**

Community integration is a significant event during a person’s recovery of a brain injury. For many, this transitional phase signifies the beginning of normality and positive outcomes. While there are many benefits that can be experienced, returning home following acute and post-acute rehabilitation can also be difficult. Despite the challenges that may occur, community integration is a necessary process that must occur if functional gains are continued to be made. Positive outcomes in all areas of functioning can be achieved with the appropriate resources and techniques. Overcoming obstacles provides individuals with learning opportunities that will benefit them for the future. Experiencing life situations first-hand is the most effective method in adapting to life after a brain injury.

The Community Brain Injury Services (CBIS) acknowledge the significant amount of work and dedication that is required in order to achieve successful community re-integration. Evidence has shown that the implementation of methods such as goal identification and attainment, case management, and social engagement are beneficial to people recovering from brain injury. The involvement of community rehabilitation counsellors (CRCs) can help to ensure that resources such as these can be accessed if necessary, as well as provide support to individuals and their families adjusting to community living.
Chapter III: Method

Rationale

The position of community rehabilitation counsellor (CRC) entails a significant amount of responsibilities. For this reason, an information guide (Appendix A) was developed for CRCs and other CBIS staff members to reference when working with new clients. It was developed with the intention of being used in conjunction with other materials. The content of the information guide provide users with guidance during the critical first stages of community rehabilitation.

With advice from the agency supervisor, a decision was made to design an information guide for CBIS staff. It was believed that a project of this manner would be the most suitable for the work environment of CBIS. Staffing schedules, client routines, and time constraints made the possibility of an ABA or counselling program unfeasible. Currently, CBIS staff members are provided several different resources when they enter the agency. Some of these resources include mandatory corporate training, material pertaining to health and safety procedures, and scheduled opportunities to shadow other employees. However, there was not a resource in place that specifically addressed the factors that CRCs should expect to occur when new clients join CBIS.

Setting

It is common for many client-CRC interactions occur within the CBIS office. The office building is centrally located, close to public transit, and is accessible to individuals with physical limitations. Furthermore, there are several offices and boardrooms available that provide a neutral and professional setting for interactions to occur. An environment such as this can help to alleviate any nervous or apprehensive feelings experienced by clients during the initial meetings of the community rehabilitative process.

Subjects

The information guide was developed for new CRCs or staff members of CBIS. Informed consent was not collected as the participation of CBIS clients was not necessary for the completion of the guide. For data collection purposes, a convenience sample comprised of four CRCs was used; each CRC was provided with a form and was asked to complete and return the form by the specified date. Three of the four subjects were female and ranged in age from 25 to 37. All of the subjects had earned Bachelors degrees either in psychology or behavioural psychology and had worked at CBIS for at least one year.

Design

The purpose of the information guide is to provide CRCs and other CBIS staff members with a tool that can be utilized when assisting clients within the community rehabilitative process. Specifically, the guide was developed with the intention of helping CRCs during the pairing of a new client to a primary CRC, and development and implementation of a service plan. The resource guide is divided into three sections: initial assessment, allocation of resources, and additional resources.

The first section, initial assessment, explains the importance of getting to know a new client. Clients entering the CBIS program are assigned to CRCs, based on a variety of criteria. Of the two subcategories in this section, the first discusses areas of a client’s life that may be useful to collect information about. Suggested topics include personal background, cognitive functioning, and physical functioning. It is rationalized that gathering information will not only aide providing the client with assistance in the future, it will also help to establish rapport and trust. The second subcategory identifies and describes different ways in which information can be collected. It is recommended that both direct client interaction (i.e. conversation or
observation) and secondary sources (i.e. family members and medical documents) be used. This is to ensure that a comprehensive and accurate view of a client is established.

The second section of the resource guide, allocation of resources, describes the steps that should take place once all relevant information has been gathered. It is at this point that services and supports can be identified and implemented. Identifying important goals, having knowledge of the resources available, and developing a service plan are all important steps during this stage. Without knowing what goals a client would like to achieve, a proper service plan cannot be developed. It is suggested that the identification of goals be completed in a collaborative manner between the client and their primary CRC. Understanding the possible community resources available is also important in the development of a service plan. While CRCs are able to assist in many ways, there are some needs of clients’ that will require specialized treatment. Service plans outline a client’s goals, steps that will be taken to achieve these goals, as well as written updates concerning progress of goal achievement. In order for a proper plan to be made, knowledge of goals and specific resources to aid in the achievement of said goals are vital factors.

The third and final section of the guide, additional resources, includes three assessments: the Community Integration Questionnaire (CIQ), the Barthel Index (BI), and the Mayo-Portland Adaptability Inventory (MPAI-4). These assessments were specifically included as they are free to use, do not require any specialized training to either conduct or interpret, and can be completed in a short amount of time. It was emphasized within the guide that it was not necessary for the assessments to be completed, but instead were included for staff members to use if wanted.

**Measures**

**Community Integration Questionnaire (CIQ).** The CIQ was designed to determine the level of community integration among individuals recovering from traumatic brain injuries. It is a brief measure, containing 15 questions that can be answered either by the person or a proxy. The questionnaire examines three aspects of a person’s life: home integration, social integration, and productive activities. The combination of scores from these three areas provides an overall community integration score (Dijkers, 2000).

**Barthel Index (BI).** The BI examines a person’s ability to perform ten common ADLs, including dressing, toileting, and ambulation. The measure was specifically designed to be used with individuals who have sustained brain injuries or strokes. This brief assessment can be completed in one of two ways; through self-report or by a proxy that observes the performance of the items in question. A total score of 100 indicates that no assistance is required during the completion of ADLs; lower scores suggest that help is needed (Rehabilitation Measures Database).

**Mayo-Portland Adaptability Inventory – 4th Ed. (MPAI-4).** The MPAI-4 is a 35 item assessment that is used to assess individuals with brain injuries during different points during the rehabilitative process. The measure is comprised of three sections (ability, adjustment, and participation) and can be completed by the person being evaluated, a significant other, or a health care professional. While only a few questions are directly associated with cognitive functioning, results may provide insight into a person’s self-awareness (Malec, 2005). The MPAI-4 is a required component of the intake assessment for CBIS and should be completed and logged within the client’s file. The tool was designed to help measure differences in abilities across time and can be useful in tracking progress throughout the community rehabilitation process; the MPAI-4 is also conducted at the time of discharge by CBIS for this reason.
Procedures

A copy of the information guide was made and left at CBIS for staff members to review. Approval of the resource guide was received from both agency and college supervisors. Feedback and suggestions for improvement were also provided. A feedback questionnaire (Appendix B) was developed as to elicit CRC’s opinions about the guide. The resource guide was developed with the intention of being a practical and useful tool. As there was no opportunity available for the guide to be used in a real situation, the questionnaire was designed with hypothetical questions to elicit the potential efficacy of the guide. Each CRC was provided with a verbal description of the form, highlighting important points. An opportunity for questions regarding the form was also allotted. As only four questionnaires were distributed, maintaining anonymity was of high priority. To maintain confidentiality, an envelope was placed in the mail room of the CBIS office for CRCs to return their feedback forms. Each participant was given eight days to read and complete the form. Results from the forms were to be compared as to identify commonalities or discrepancies among the same questions.
Chapter IV: Results

The feedback questionnaires consisted of five questions with blank spaces provided beneath each question for participants to write their answers. The CRCs were given five days to complete and return the feedback questionnaires to the envelope located in the CBIS office mail room. However, only two of the four feedback questionnaires had been returned by the requested date. With approval from the agency supervisor, the participants were provided with a three-day extension. Upon retrieving the envelope following the extended return period, it was discovered that no additional feedback questionnaires had been returned. Analysis of the feedback questionnaires revealed that all of the questions had been answered on each of the two forms.

**Question 1: What types of resources were you provided when you started as a CRC? (ex: manuals and instructional material, advice from co-workers, etc.)**

Participant 1 noted that manuals and buddy shifts were provided when they had started working as a CRC. Participant 2 noted that in addition to manuals and buddy shifts, instructional videos and advice from co-workers were also provided.

**Question 2: Of the resources mentioned above, which did you find the most helpful?**

Participant 1 explained that buddy shifts were the most helpful resource because the information within the manuals was too much to remember. Participant 2 said that buddy shifts and advice from co-workers were the most helpful resources. It was the hands-on experience that participant 2 noted to be the most effective method of learning during the initial months of working as a CRC.

**Question 3: As a CRC, is there a specific challenge that you experienced when working with new clients?**

Both participants noted several different challenges. Participant 1 said that families can be difficult to work with if they are not willing to accept assistance. As well, participant 1 also said that not knowing information about a new client prior to an initial meeting can present challenges. It was noted that intakes only provide so much information. Participant 2 listed many examples of challenges that arise from learning the routines of new clients. These examples included: being unfamiliar with the location of important items, learning a client’s daily routine, remembering to bring important items when in the community with clients (i.e. taxi chits, Access Bus tickets, doctor forms, etc.), and learning how to problem-solve when these challenges occur.

**Question 4: Do you think that “Supporting Individuals with Brain Injuries Within the Community: An Information Guide for Community Rehabilitation Counsellors” would be beneficial for new CRCs to review? Please explain your answer.**

Participant 1 said that the guide would be beneficial, specifically noting that breaking down the process of working with a new client would be helpful. Participant 2 also said that the guide would be beneficial. When new CRCs know what to do in difficult situations, participant 2 said that the likelihood of mistakes being made is reduced significantly.

**Question 5: What is one piece of advice that you would give new CRCs?**

Participant 1 provided two pieces of advice for new CRCs; to learn the systems that are commonly used by clients (i.e. ODSP, OW, insurance), and to also learn the policies and procedures specific to your agency. Participant 2 advised new CRCs to prioritize the important aspects of their job. Specific aspects that participant 2 emphasized included safety, medication compliance, and communication with co-workers.
Section V: Conclusion/Discussion

Thesis Summary

Returning home following acute or post-acute rehabilitation can be a process that is both positive and negative for individuals with brain injuries; it is a hard, yet necessary step in a person’s rehabilitation. Evidence gathered from an extensive literature research has indicated that there are several techniques that are effective among individuals of this population: goal identification and attainment, case management, and social engagement. These and other techniques are highlighted within the information guide that was specifically developed for the CBIS agency. The information guide created for CBIS highlights the importance of many techniques, specifically getting to know a new client and goal identification and development. The intention of the guide is to provide new CRCs and other staff members with an additional resource that will aide in their ability to help clients entering the program.

Strengths

At the time of the thesis, there was not a guide of this nature at the agency. While there are other resources available to staff members, none of these specifically concentrate on the initial steps involved with meeting new clients and developing goals. These first two steps within the continuum of care are important for several reasons. Not only are rapport and trust built between a client and their primary CRC during these steps, but it also is the time that goals are made in a collaborative manner. Feedback collected from the questionnaires identified additional strengths. Both participants stated that resources such as manuals were helpful when they were starting work as CRCs. It was also said by both participants that the information guide created for CBIS would be a valuable resource for new CRCs to use.

Limitations

There were some apparent limitations in regard to the information guide. During its development, it would have been beneficial to have consulted CBIS staff members. Staff input could have highlighted information that was not included within the guide. Another limitation was the lack of specific information referenced in the guide. While the rationale for having limited resources was to allow for the individualization of each client case, more specific resources could have still been incorporated. As well, the guide could have had more information about the entire CBIS process for clients and CRCs. The main focus of the guide concentrated on the initial meeting of clients and the development of a service plan. The guide does elaborate on the other steps of the process, but more information could have been discussed in order to provide a fuller, more comprehensive view of the entire model.

In addition to the information guide, there were also some significant limitations with the feedback questionnaires. Only four forms were distributed to staff members, and two were returned by the extended due date. Ideally, more than four staff members should have been given questionnaires. As well, the forms should have been distributed at an earlier date in order to provide the staff members with more time to complete them. The staff members of CBIS have multiple on-going tasks and a longer time period to complete the forms could have resulted in more being returned. There were also some limitations within the feedback questionnaires. The format of the forms required staff members to write their answers, which allowed users to provide as much or as little information as they wished. However, in doing so, the ability to obtain measurable data was lost. Instead of written answers, the use of a Likert scale would have provided quantitative data that could have been analyzed.
Multilevel Challenges to Service Implementation

Client Level. It is common for individuals with brain injuries to experience impairments in various areas related to cognitive functioning, such as memory, self-awareness, and reasoning. Deficits in these areas can make the process of providing services difficult. In some cases, participation and motivation are affected by these impairments and can make the rehabilitation process lengthy. Other clients may not feel the need to receive services, based upon their personal opinions about their functional abilities. In relation to the continuum of care, establishing rapport and developing a goal plan may be challenging if a client is not willing to participate in such activities.

Program Level. As a community program, accessing and maintaining funding can be a challenge. The types and quantity of services that can be provided is directly correlated with the amount of funding that is allocated to the program each year. Strict guidelines for program eligibility are therefore required to ensure that services and resources are not “stretched too thin”. But because of this, some people within the community are unable to qualify for services that could benefit them in some way.

Organizational Level. There are currently many changes occurring within the organizational level. These changes are not currently affecting the program, but issues could potentially arise in the future. These issues could include a change of agency location or cutbacks in funding. It can be assumed that changes in regards to these and other variables would consequently impact the program’s ability to provide resources and services to people with brain injuries.

Societal Level. Lack of awareness or education concerning brain injury can lead to challenges at a societal level. It is common for individuals with brain injuries to have cognitive impairments that are invisible to other people in the community. As a result, other community members may not provide adequate supports to these individuals. Some community services may not be willing or able to provide accommodations based upon lack of knowledge concerning this population.

Implications for the Field of Behavioural Psychology

Much of the information discussed within the guide adheres to the use of effective behavioural psychology techniques among individuals recovering from brain injuries. Techniques that are discussed in length, such as goal development and attainment, provide clients with both short- and long-term benefits. Furthermore, the creation of this guide advocates and brings awareness to the brain injury population. The services provided by CBIS are based in validity and effectiveness; the creation of the information guide is simply an extension of the work that is accomplished with clients re-integrating back into the community.

Recommendations for Future Research

It is recommended that the information guide be used and tested within the agency to determine its efficacy. One reason that contributed to the inability to administer a post-test was the lack of available time. Another reason was due to the fact that there were no new CRCs working at CBIS. The ability to gain staff feedback regarding the effectiveness of the information guide would allow for corrections to be made or different information or resources to be added. It also recommended that the information within the guide be updated and revised as changes within the agency occur. It is important to maintain current information for staff members, as policies or procedures may change within a short time period.
References


journey of discovery. *Neuropsychological Rehabilitation*, 21(1), 64-91. doi:10.1080/09602011.2010.527747


APPENDIX A: Information Guide

SUPPORTING INDIVIDUALS with BRAIN INJURIES living within the community

an information guide for community rehabilitation counsellors

Community Brain Injury Services (CBIS)
Kingston, Ontario
December 2015

Brooke MacNeil
B.A.A. Behavioural Psychology
SUPPORTING INDIVIDUALS
with
BRAIN INJURIES
in the community
For many people who have sustained a brain injury, returning to “normal life” and becoming a member of their community once again can be a difficult process. In many cases, assistance is required in order to regain these aspects of a person’s life. The community rehabilitation counsellors (CRCs) and other staff members of the Community Brain Injury Services (CBIS) help people adjust to community living and provide the necessary support to ensure that personal goals are achieved.

For many of the clients who receive support from CBIS, a standard set of procedures are followed by staff. Referred to as the continuum of care within this resource guide, there are several steps that are involved in this process:

- Referral to CBIS and acceptance to services
- Intake assessment
- Assignment of primary counsellor
- Development and implementation of service plan
- On-going evaluation and revision of service plan
- Completion of service plan
- Discharge

CRCs assume a significant amount of responsibility throughout the continuum of care. There are many additional obligations aside from these steps that are also managed, such as building rapport with clients and their families, providing emotional support, and advocating for necessary resources. Because of these significant contributions to the rehabilitation of individuals, efforts should be made to support CRCs in any way possible. Assisting CRCs during the rehabilitative process will ultimately benefit the clients; the achievement of client goals rely in part on a CRC’s ability to provide appropriate supports and services.
2 PURPOSE

The purpose of the resource guide is to provide CBIS agency staff members with a tool that can be utilized when assisting clients within the community rehabilitative process. Specifically, the guide was developed with the intention of helping CRCs during the initial stages of the continuum of care (i.e., assignment of client, development and implementation of service plan).

3 INITIAL ASSESSMENT

Careful consideration is taken to ensure that each new client is paired with an appropriate CRC. Factors such as a client’s personality, needs, and circumstances are compared with a CRC’s skill set or area of expertise to ensure that a proper match is made. Following this, the first step that a CRC should take is to gather information about their client’s personal history and functional statuses. While this may seem quite obvious, it is a fact that should not be overlooked or underestimated. Without identifying all relevant information, CRCs and other CBIS staff members are unable to provide appropriate resources to individuals integrating into the community. The mission of Providence Care is to treat each person with dignity, compassion, and respect. Getting to know someone and establishing a healthy professional relationship is a great way of accomplishing this.

3.1 Areas of Interest

Becoming familiar with a new client can take time and is not always an easy process; it can be difficult for some people to open up about their lives. A CRC’s ability to elicit information in a manner that is cautious yet effective comes with time and practice. It is the intention of the guide to aide in this process. The following sections outline three different areas of information that should be obtained. While these categories do not cover all areas of a person, it does provide some direction for CRCs working with new clients.
Personal Background – It is suggested that the first area of information to gather should be a person’s history and background. Specific areas that may be of interest include:

- Medical history (related to brain injury)
- Family supports and circumstances
- Interests and hobbies
- Preferences and dislikes
- Education and work history
- Personality traits and characteristics
- Life satisfaction

While not all of the factors listed above are pertinent to a CRC’s ability to provide assistance, it does aid in the development of a comprehensive view of an individual. In addition, this process will also help to establish rapport and trust. A solid therapeutic alliance goes a long way within the rehabilitative process and can significantly impact a client’s ability to acquire community independence once again.

Cognitive Functioning – In a general term, cognitive functioning can be described as a person’s ability to process and retain information. Areas of cognitive functioning that are commonly affected by brain injuries include:

- Memory
- Attention
- Insight and awareness
- Information processing speed
- Perception
- Problem solving
- Self-monitoring

Deficits in these areas can contribute to challenges in everyday life, potentially interfering with a person’s ability to have independence within the community. In order to provide appropriate accommodations, knowledge of a client’s cognitive performance must first be obtained. It is suggested that both the strengths and limitations of a client be determined; while areas of difficulty will be assisted, areas of strength can be emphasized and used to aide in the rehabilitative process.
Physical Functioning – It is common for individuals with brain injuries to also have physical impairments. In some instances, these impairments can be visible (i.e. paresis or paralysis). In other cases, physical limitations may not be as apparent (i.e. deficits in hand-eye coordination). It is typical for clients to already have physical supports in place when they are referred to CBIS. However, it is still important for CRCs to have knowledge of all physical impairments in the event that new or different supports are needed in the future.

3.2 Ways of Obtaining Information
Once the relevant information has been identified, the task of collecting the information can now begin. Listed below are some different ways in which this can be achieved. It is strongly recommended to use as many of these techniques as possible; referring to multiple sources will help determine what is the most accurate and reflective information of a client.

Direct Client Interaction – This choice of contact should always be the first option to consider when collecting information. The term interaction encompasses several different things within this context; interacting with a client could include having a conversation, completing an interview or questionnaire, or simply observing a client in a comfortable environment. Not only are these options great ways of eliciting information, but also lend themselves to the development of rapport. Face-to-face contact will never lose its value in this process.

Secondary Sources – In some instances, clients may not be able to provide accurate information pertaining to their lives. Under- or over-estimation of abilities and lack of insight or awareness are common symptoms experienced by people with brain injuries; these can have a significant impact on the reliability of information being given. It is therefore recommended that information also be obtained from other sources.

Talking with individuals that are close with a client can provide valuable insight concerning the areas of interests previously discussed. Family members and close friends are great sources of information, specifically in regards to pre-injury functioning. With the appropriate consents, speaking with doctors, specialists, and other health care providers within a client’s support network would also be beneficial. By consulting different people, commonalities and discrepancies within the information can be identified.

Documents pertaining to a client are also valuable sources of information that should be reviewed. For all new clients of CBIS, profiles are compiled and contain various documents and reports that have either been con-
ducted by CBIS or were collected from other agencies. It is recommended that these client profiles be reviewed first. Interviews, assessments, and progress notes are commonly found within most profiles and can contain important information relating to a client. With appropriate consents, it may be helpful to obtain other documents that are not included in a client’s profile, such as medical or criminal records. Reports of this nature may also indicate potential recommendations or strategies that could be used when developing a client’s service plan.

### 3.3 Summary

**Purpose of collecting information:**
- To build rapport with new clients
- To inform CRCs where services and supports for clients are needed
- To determine baseline levels of functioning that can then be tracked over time

**Key steps in this process:**
- Collecting information from various areas of a client’s life (personal background, cognitive and physical functioning)
- Using multiple techniques to collect information (direct client interaction, secondary sources)
4 Allocation of Resources

Once all relevant information has been collected, the task of allocating appropriate resources can begin. Within the context of this guide, the allocation of resources refers to a CRC’s ability to identify and implement any services or resources that would aid a client during the rehabilitative process. There are many ways that CRCs can provide assistance and resources to clients; the majority of which can be outlined within a client’s service plan. Resources are also provided to clients in other ways, aside from the goal-attainment strategies outlined in their service plan. These areas tend to involve short-term assistance and do not require lengthy planning or ongoing evaluation. Regardless of their implementation, resources, supports, and services are all provided with the intention of assisting clients achieve goals and promoting techniques for the independent attainment of future goals. The following sections highlight key aspects of this process.

4.1 Identification of Goals

The identification of goals should be the first step in this process. Goals can be viewed as the backbone of the continuum of care; they provide direction to the service plan. Without knowing what a client would like to achieve, CRCs and other CBIS staff members would have a difficult time trying to find out how to help. Goals allow clients to personalize their own rehabilitation plan and choosing the areas that are important to them; this highlights a client-centered approach which may be helpful to clients who are reluctant about community rehabilitation.

Establishing strategies to achieve the goals are just as important as the goals themselves. Creating a plan of action is beneficial to both clients and CBIS staff members, as it will ensure that all parties are in agreement on how things will be done. It is therefore strongly recommended that the development of goal-attainment strategies be done in a collaborative manner.
4.2 Types of Resources

There are many services and resources available to individuals recovering from brain injuries. Some of the types of supports and services available include:

- Vocational Services
- Medical Services
- Housing
- Food
- Community Programs
- Accessible Transportation
- Physiotherapy
- Social and Recreational Activities
- Education
- Counselling
- Mental Health Services
- Addiction Services
- Occupational Therapy
- Financial Planning
- Supportive Living Programs
- Disability Benefits

It is the responsibility of CRCs to inform clients about services that are relevant to their situation or needs, and to ensure that accessibility to them is possible. Fortunately for clients of CBIS, many of these services are available through the agency itself. Counselling, education, and community programs are some of the areas that can be supported through the staff members of CBIS. However, for individuals requiring more intensive or specialized services, referrals can be made to external agencies. There are several other community resources available in Kingston and the surrounding areas that can provide individuals with the specialized care that they need.

4.3 Development of Service Plan

After identifying goals and learning of services available in the community, the creation of a service plan can take place. Service plans are created for each CBIS client, regardless of their status within the agency [i.e. residential, outreach, group-only]. These plans outline a client’s goals, the steps that will be taken to achieve the goals, and on-going updates concerning the progress of the goals. The service plan acts as a formal method of documenting the specific services and supports that will be used by a client as well as the areas of a client’s life they will be targeting.
4.4 Summary

Purpose of allocating resources:
- To identify goals that a client would like to achieve
- To ensure that areas of difficulty that are experienced by clients are assisted

Key steps in this process:
- Helping clients identify goals they would like to achieve
- Informing clients of relevant community services and supports
- Choosing specific services and resources that will aid in the achievement of goals
- Developing a service plan that will outline how these services will be implemented
5 ADDITIONAL RESOURCES

The following assessments have been provided for CRCs and other CBIS staff members to either use or reference when working with clients. All of the assessments are free to use and do not require specialized training to implement and score. The use of these assessments may be helpful in getting to know a new client, and possibly determining where resources should be allocated.

5.1 Community Integration Questionnaire (CIQ)

The CIQ was designed to determine the level of community integration among individuals recovering from traumatic brain injuries. It is a brief measure, containing 15 questions that can be answered either by the person or a proxy. The questionnaire examines three aspects of a person’s life: home integration, social integration, and productive activities. The combination of scores from these three areas provides an overall community integration score (Dijkers, 2000).

5.2 Barthel Index (BI)

The BI examines a person’s ability to perform ten common ADLs, including dressing, toileting, and ambulation. The measure was specifically designed to be used with individuals who have sustained brain injuries or strokes. This brief assessment can be completed in one of two ways; through self-report or by a proxy that observes the performance of the items in question. A total score of 100 indicates that no assistance is required during the completion of ADLs; lower scores suggest that help is needed (Rehabilitation Measures Database).

5.3 Mayo-Portland Adaptability Inventory – 4th Edition (MPAI-4)

The MPAI-4 is a 35 item assessment that is used to assess individuals with brain injuries during different points during the rehabilitative process. The measure is comprised of three sections (ability, adjustment, and participation) and can be completed by the person being evaluated, a significant other, or a health care professional. While only a few questions are directly associated with cognitive functioning, results may provide insight into a person’s self-awareness (Malec, 2005).

This assessment is a required component of the intake assessment for CBIS and should be completed and logged within the client’s file. The tool was designed to help measure differences in abilities across time and can be useful in tracking progress throughout the community rehabilitation process; the MPAI-4 is also conducted at the time of discharge by CBIS for this very reason.


### Community Integration Questionnaire

Name: ___________________________ Date: ________________

<table>
<thead>
<tr>
<th>Home Integration</th>
<th>Answer (circle one)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Who usually does shopping for groceries</td>
<td>Yourself alone (2) Someone else (0)</td>
<td></td>
</tr>
<tr>
<td>or other necessities in your household?</td>
<td>Yourself and someone else (1)</td>
<td></td>
</tr>
<tr>
<td>2. Who usually prepares meals in your</td>
<td>Yourself alone (2) Someone else (0)</td>
<td></td>
</tr>
<tr>
<td>household?</td>
<td>Yourself and someone else (1)</td>
<td></td>
</tr>
<tr>
<td>3. In your home who usually does normal</td>
<td>Yourself alone (2) Someone else (0)</td>
<td></td>
</tr>
<tr>
<td>everyday housework?</td>
<td>Yourself and someone else (1)</td>
<td></td>
</tr>
<tr>
<td>4. Who usually cares for the children in</td>
<td>Yourself alone (2) Someone else (0)</td>
<td></td>
</tr>
<tr>
<td>your home?</td>
<td>Yourself and someone else (1)</td>
<td></td>
</tr>
<tr>
<td>5. Who usually plans social arrangements</td>
<td>Yourself alone (2) Someone else (0)</td>
<td></td>
</tr>
<tr>
<td>such as get-togethers with family and</td>
<td>Not applicable (score is the average of 1, 2, 3 and 5)</td>
<td></td>
</tr>
<tr>
<td>friends?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Home Integration Total Score**

Add the above scores together

<table>
<thead>
<tr>
<th>Social Integration</th>
<th>Answer (circle one)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Who usually looks after your</td>
<td>Yourself alone (2) Someone else (0)</td>
<td></td>
</tr>
<tr>
<td>personal finances such as banking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or paying bills?</td>
<td>Yourself and someone else (1)</td>
<td></td>
</tr>
</tbody>
</table>

Can you tell me approximately how many times a month you now usually participate in the following activities outside your home?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Answer (circle one)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Shopping</td>
<td>5 or more (2) 1 – 4 times (1) Never (0)</td>
<td></td>
</tr>
<tr>
<td>8. Leisure activities such as movies,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sports, restaurants</td>
<td>5 or more (2) 1 – 4 times (1) Never (0)</td>
<td></td>
</tr>
<tr>
<td>9. Visiting friends or relatives</td>
<td>5 or more (2) 1 – 4 times (1) Never (0)</td>
<td></td>
</tr>
</tbody>
</table>
10. When you participate in leisure activities do you usually do this alone or with other?  mostly alone (0)  mostly with friends who have head injuries (1)  mostly with family members (1)  mostly with friends who do not have head injuries (2)  with a combination of family and friends (2)

11. Do you have a best friend with whom you confide?  Yes (2)  No (0)

Social Integration Total Score  Add the above scores together

<table>
<thead>
<tr>
<th>Integration into Productive Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. How often do you travel outside the home?  almost every day (2)  almost every week (1)  seldom/never (less than once per week) (0)</td>
</tr>
<tr>
<td>13. Please choose the answer below that best corresponds to your current (during the past month) work situation.  Full-time employment (&gt;20 hours/week)  Part-Time Employment (≤ 20 hours/week)  Not working, but actively looking for work  Not working, not looking for work  Not applicable, retired due to age  Volunteer job in the community</td>
</tr>
<tr>
<td>14. Please choose the answer below that best corresponds to your current (during the past month) school or training program situation.  Full-time  Part-time  Not attending school or training program</td>
</tr>
<tr>
<td>15. In the past month, how often did you engage in volunteer activities?  5 or more  1 – 4 times  Never</td>
</tr>
</tbody>
</table>

Total Score
References:

Scoring for items 13 to 15 - Jobschool
The patient receives a 0, if answers for the following questions are:
item 13: not working, not looking for work
item 14: not going to school
item 15: no volunteer activities

The patient receives a 1, if answers for the following questions are:
item 13: not working, not looking for work
item 14: not going to school
item 15: volunteers 1 to 4 times

The patient receives a 2, if answers for the following questions are:
item 13: actively looking for work
item 15: volunteers 5 or more times per month

The patient receives a 3, if answers for the following questions are:
item 13: working part-time
item 14: attends school part-time

The patient receives a 4, if answers for the following questions are:
item 13: working full-time
item 14: attends school full-time

The patient receives a 5, if answers for the following questions are:
item 13: works part-time AND item 14: attends school full-time

If the patient is retired due to age, use item 15 to score the JOBSITE variable

5 or more receives 4 points
1 – 4 times receives 2 points
Never receives 0 points

Summing Scores:
The productivity score = item 12 score + Jobschool variable
The total CIQ score = Home integration score + social integration score + productivity score

References:
# Appendix B

## The Barthel Index

<table>
<thead>
<tr>
<th>Activity</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>feeding</strong></td>
<td></td>
</tr>
<tr>
<td>0 = unable</td>
<td></td>
</tr>
<tr>
<td>5 = need help cutting, spreading butter, etc., or requires modified diet</td>
<td></td>
</tr>
<tr>
<td>10 = independent</td>
<td></td>
</tr>
<tr>
<td><strong>bathing</strong></td>
<td></td>
</tr>
<tr>
<td>0 = dependent</td>
<td></td>
</tr>
<tr>
<td>5 = independent (or in shower)</td>
<td></td>
</tr>
<tr>
<td><strong>grooming</strong></td>
<td></td>
</tr>
<tr>
<td>0 = needs help with personal care</td>
<td></td>
</tr>
<tr>
<td>5 = independent (brushing, toilet sitting)</td>
<td></td>
</tr>
<tr>
<td>10 = independent (shaving, brushing, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>dressing</strong></td>
<td></td>
</tr>
<tr>
<td>0 = dependent</td>
<td></td>
</tr>
<tr>
<td>3 = needs help, but can do half timed</td>
<td></td>
</tr>
<tr>
<td>10 = independent (including buttons, zips, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>bowels</strong></td>
<td></td>
</tr>
<tr>
<td>0 = continence (or needs to be given enema)</td>
<td></td>
</tr>
<tr>
<td>5 = occasional accidents</td>
<td></td>
</tr>
<tr>
<td>10 = continence</td>
<td></td>
</tr>
<tr>
<td><strong>bladder</strong></td>
<td></td>
</tr>
<tr>
<td>0 = incontinent, or catheterized and unable to manage alone</td>
<td></td>
</tr>
<tr>
<td>5 = occasional accidents</td>
<td></td>
</tr>
<tr>
<td>10 = continence</td>
<td></td>
</tr>
<tr>
<td><strong>toilet use</strong></td>
<td></td>
</tr>
<tr>
<td>0 = dependent</td>
<td></td>
</tr>
<tr>
<td>5 = needs some help, but can do something</td>
<td></td>
</tr>
<tr>
<td>10 = independent (on and off, dressing, sitting)</td>
<td></td>
</tr>
<tr>
<td><strong>transfers (bed to chair and back)</strong></td>
<td></td>
</tr>
<tr>
<td>0 = unable, no sitting balance</td>
<td></td>
</tr>
<tr>
<td>5 = major help (one or two people, physical), can sit</td>
<td></td>
</tr>
<tr>
<td>10 = minor help (verbal or physical)</td>
<td></td>
</tr>
<tr>
<td>15 = independent</td>
<td></td>
</tr>
<tr>
<td><strong>mobility (on level surfaces)</strong></td>
<td></td>
</tr>
<tr>
<td>0 = immobile or &gt; 50 yards</td>
<td></td>
</tr>
<tr>
<td>5 = wheelchair, dependent, including rooms, &gt; 50 yards</td>
<td></td>
</tr>
<tr>
<td>10 = walks with help of one person (verbal or physical) &gt; 50 yards</td>
<td></td>
</tr>
<tr>
<td>15 = independent (but may use aid for example, crutch &gt; 50 yards)</td>
<td></td>
</tr>
<tr>
<td><strong>stairs</strong></td>
<td></td>
</tr>
<tr>
<td>0 = unable</td>
<td></td>
</tr>
<tr>
<td>5 = need help (verbal, physical, carrying aid)</td>
<td></td>
</tr>
<tr>
<td>10 = independent</td>
<td></td>
</tr>
</tbody>
</table>

**Total (0-100):**
The Barthel ADL Index: Guidelines

1. The index should be used as a record of what a patient does, not as a record of what a patient could do.
2. The main aim is to establish degree of independence from any help, physical or verbal, however minor and for whatever reason.
3. The need for supervision under the patient is independent.
4. A patient’s performance should be established using the best available evidence. Asking the patient, friends/relatives and nurses are the usual sources, but direct observation and common sense are also important. Review of direct testing is not needed.
5. Usually the patient’s performance over the preceding 2-4-6 hours is important, but occasionally longer periods will be relevant.
6. Middle categories imply that the patient supplies over 50 per cent of the effort.
7. Use of aids to be independent is allowed.

References

Wiltse LF, Barthel D. “Functional evaluation: the Barthel Index.”

Maryland State Medical Journal 1965;14:56-61. Used with permission.

Loewen SC, Anderson BA. “Predictions of stroke outcome using objective measurement scales.”


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Provided by the Internet Stroke Center — www.strokecenter.org
# Appendix C

## Mayo-Portland Adaptability Inventory-4

**Manual D. Leake, BSc, ABV & James P. Male, BSc, ABV**

Fill in the following table to rate your client on key adaptability dimensions. Use a scale from 1 (least) to 4 (most) for each item.

<table>
<thead>
<tr>
<th>Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mobility</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>2. Upper extremity function</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>3. Fine motor function</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>4. Lower extremity function</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>5. Upper extremity function at work</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>6. Fine motor function at work</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>7. Lower extremity function at work</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>8. Personal social function at home</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>9. Personal social function at work</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>10. Personal social function in community</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>11. Personal social function in leisure</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>12. Personal social function in family</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

## Test A: Characteristics

**1. Anxiety:** Feeling nervous, scared, worried, or phobic. Use a scale from 0 to 3.

<table>
<thead>
<tr>
<th>Scale</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>2.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>3.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>4.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>5.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>6.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>7.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>8.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>9.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

## Test B: Significant Relationships

**1. Family:** Significant others who are important and to whom you are close.

<table>
<thead>
<tr>
<th>Scale</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>2.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>3.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>4.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>5.</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
</tr>
<tr>
<td>6.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>7.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>8.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

## Test C: Significant Relationships

**1. Sexual: Financial:** Sexual and financial factors that may affect your life.

<table>
<thead>
<tr>
<th>Scale</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>2.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>3.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>4.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>5.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>6.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>7.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>8.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

Use the scale at the bottom of this page to rate item 921.

---

**Note:** The table above is a representation of the Mayo-Portland Adaptability Inventory-4, which is a tool used to assess the adaptability of individuals with disabilities. The scale ranges from 1 (least) to 4 (most) for each item, and the test results can help in understanding the client's abilities and challenges. **[Image 72x161 to 503x719]**
<table>
<thead>
<tr>
<th>Part C: Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Initiation: Preliminary goal-setting in activity selection and planning</td>
</tr>
<tr>
<td>23. Social contact with family, work associates, and other people who are significant others, or professionals</td>
</tr>
<tr>
<td>24. Leisure and recreational activities</td>
</tr>
<tr>
<td>25. All-weather setting, de-irritating, grooming, hygiene</td>
</tr>
<tr>
<td>26. Emotions: Inappropriate living and self-maintaining (such as, meal preparation, housekeeping, and maintenance, personal health maintenance beyond basic hygiene, excluding ambulation or management of)</td>
</tr>
</tbody>
</table>
### Part VIII: Pre-existing and Associated Conditions

| Condition | Pre-existing Condition
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Seizures</td>
<td>Yes</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Yes</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Part IX: Medication Information

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dosage</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atenolol</td>
<td>50mg</td>
<td>Dizziness</td>
</tr>
<tr>
<td>Metformin</td>
<td>500mg</td>
<td>Nausea</td>
</tr>
</tbody>
</table>

### Part X: Medical History

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT Scan</td>
<td>2023</td>
</tr>
<tr>
<td>MRI</td>
<td>2022</td>
</tr>
</tbody>
</table>

### Part XI: Student's Comments

<table>
<thead>
<tr>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

---

**Note:** The information on this page is for educational purposes only. Always consult a healthcare professional for medical advice.
### Packaging Workload

Items with an asterisk (*) and both (10, 20, 40) require receiving as specified below. Please review and refer to Reference Table 2 for further information. Reference Table 10 provides detailed instructions for the Adjustment Schedule. For General Scores, please review the reference guide for the appropriate table.

#### Adjustment Schedule

- **Score Item:** 1, *Original score:* $x$
  - $x < 4$: Use score $x$
  - $x = 4$: Use score $x$
  - $x = 5$: Use score $x$
  - $x > 5$: Use score $x$

- **Sum of scores for items 1-5:** $S$
  - $S < 15$: Weight score
  - $S = 15$: Use score $x$

- **Sum of scores for items 6-10:** $T$
  - $T < 30$: Use score $x$
  - $T = 30$: Use score $x$

- **Sum of scores for all items:** $R$
  - $R < 75$: Use score $x$
  - $R = 75$: Use score $x$

#### Participation Schedule

- **Score Item:** 27, *Original score:* $x$
  - $x < 3$: Use score $x$
  - $x = 3$: Use score $x$
  - $x = 4$: Use score $x$

- **Sum of scores for items 28-34:** $S$
  - $S < 20$: Use score $x$
  - $S = 20$: Use score $x$

- **Sum of all scores:** $R$
  - $R < 45$: Use score $x$
  - $R = 45$: Use score $x$

#### Use Reference Tables to Convert Raw Scores to Standard Scores

| Raw Score | Standard Score
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>From worksheet above</td>
<td>Obtained from appropriate reference table</td>
</tr>
</tbody>
</table>

- **A1:** Ability Schedule (Item 1-12)
- **A2:** Adjustment Schedule (Items 13-24)
- **A3:** Participation Schedule (Items 25-34)
- **S:** Sum of scores
- **T:** Total Score
APPENDIX B: Feedback Questionnaire

FEEDBACK QUESTIONNAIRE

Supporting Individuals with Brain Injuries Within the Community: An Information Guide for Community Rehabilitation Counsellors

PLEASE NOTE – The completion of this feedback questionnaire is voluntary and anonymous. Please do not provide your name or other identifying information. It is encouraged that all questions be answered, however this is not mandatory.

Overview

As part of my placement at Community Brain Injury Services (CBIS), I have created an information guide aimed at assisting new CRCs when working with clients entering the brain injury rehabilitation program. Please take the time to review the summary of my resource guide and answer the following questions.

Summary of Resource Guide

- The purpose of the guide is to provide strategies and resources that CRCs can use when working with new clients.
- The guide specifically concentrates on a CRC’s involvement when getting to know a client and the subsequent development of their service plan.
- Areas of information to obtain are suggested, as well as recommendations for collecting these types of information.
- The steps involved with ensuring that clients receive the appropriate community services are also discussed, looking at areas such as goal identification and the development of a service plan.
- Finally three different assessments are provided as additional resources that can be used by CRC during these initial stages of the rehabilitation process.

**What types of resources were you provided when you started as a CRC? (ex: manuals and instructional material, advice from co-workers, etc.)**

______________________________________________________________________________  
______________________________________________________________________________  
______________________________________________________________________________  
______________________________________________________________________________  
______________________________________________________________________________

**Of the resources mentioned above, which did you find the most helpful?**

______________________________________________________________________________  
______________________________________________________________________________  
______________________________________________________________________________  
______________________________________________________________________________  
______________________________________________________________________________

**As a CRC, is there a specific challenge that you experienced when working with new clients?**

______________________________________________________________________________  
______________________________________________________________________________  
______________________________________________________________________________  
______________________________________________________________________________  
______________________________________________________________________________
Do you think that “Supporting Individuals with Brain Injuries Within the Community: An Information Guide for Community Rehabilitation Counsellors” would be beneficial for new CRCs to review? Please explain your answer.

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

What is one piece of advice that you would give to new CRCs?

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

If you have any questions or concerns regarding this questionnaire, please feel free to contact:
Brooke MacNeil – BMacneil25@student.sl.on.ca
Paula Lesarge-Mayo – lesargp1@providencecare.ca
Dr. Hal Cain – halcain.phd@sympatico.ca

Please complete this form by **Friday December 18th, 2015** and return to the envelope located in the mail room.

If you would like to learn more information about the information guide, a copy can be found in the mail room adjacent to the envelope.

*Thank you for your cooperation!*