Hamilton Health Sciences

Acquired Brain Injury Program

Regional Rehabilitation Centre
at the Hamilton General Hospital

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Introduction

The Acquired Brain Injury (ABI) Program at the Hamilton Health Sciences' Regional Rehabilitation Centre serves the rehabilitation needs of adults with acquired brain injuries and their families. Our program provides specialized care to provincial, regional and local patients and spans the spectrum of service, including: inpatient rehabilitation units, outpatient clinics, community outreach and consultative services.

ABI Program Philosophy

We are committed to facilitating comprehensive services for individuals with acquired brain injuries that reflect:

- Innovative client-centered service
- Treatment plans based on individualized functional goals
- Treatment within a rehabilitative setting or within the individual's natural environment whenever possible
- Treatment that includes behavioural, cognitive, communication, medical, physical, psychological, psychosocial and psychiatric components as necessary

Vision

Our vision for the ABI Program is one of leadership and innovation in providing a continuum of opportunity for individuals with acquired brain injuries, and their families, and to advance the field of acquired brain injury rehabilitation by:

- Providing the highest level of quality services possible that will meet the expectations of the individual, family and community,
- Using our resources responsibly to balance quality, hope and cost in meeting functional goals,
- Facilitating access to life long living opportunities,
- Optimizing community re-integration,
- Optimizing the outcomes of the rehabilitation process through data-driven, evidence-based practice, and,
- Promoting research and continuous education and development for health professionals in the field of acquired brain injury.

Service Delivery Model

The model of service delivery revolves around the goals of the individual with the acquired brain injury and his/her family, in discussion with the treatment team. These goals are defined in very specific terms and measured with a comprehensive system of data collection and analysis. A team of health care professionals works together with the individual and his/her family towards the achievement of the rehabilitation program goals.

Depending on the individual's care needs, the team may consist of:

- Community Intervention Coordinators, Clinical Coordinators, Rehabilitation Therapists, Behaviour Therapists, Psychologists, Psychometrists, Neuropsychiatrists, Nurses, Physicians, Physiotherapists, Occupational Therapists, Speech-Language Pathologists, Social Workers, Dietitians, Therapeutic Recreationists and Pharmacists.

The treatment team is supported by specialists in education, evaluation and research to ensure:

- Comprehensive, consistent and ongoing education and Development of staff across the ABI Program,
- Outcome evaluation,
- Evidence-based practice , and,
- Advancement of ABI rehabilitation research.

Neurobehavioural Program Overview

The Neurobehavioural Program is one of three inpatient programs located at the Regional Rehabilitation Centre. The Neurobehavioural Program is a Provincial Program responding to the needs of individuals with ABI who display challenging behavioural and/or mental health issues. Such issues often result in socially unacceptable behaviours that prevent participation in conventional rehabilitation programs. Behavioural difficulties may manifest as behaviours of excess or as an absence of behaviour, such as, lack of motivation, lack of initiation or difficulties with compliance. The Neurobehavioural Program provides a transdisciplinary rehabilitation program that addresses cognitive and physical needs in conjunction with a concurrent behaviour management program. The transdisciplinary team consists of Physiatry, Neuropsychiatry, Behavioural Psychology, Neuropsychology, Behaviour Therapy, Occupational Therapy, Physiotherapy, Speech Language Pathology, Nursing, Dietitians, Social Work, Recreation Therapy and Rehabilitation Therapy. The patient to staff ratio is 1:1 during the majority of waking hours.

The focus of the Neurobehavioural Program is one of functional rehabilitation in a structured, engaging environment in order to achieve behavioural self-regulation that can be generalized to a community environment. The significant behavioural and psychiatric difficulties of these individuals may also prevent them from successfully living in the community without ongoing supports, and, as such, the program considers the necessary supports, advocates for them, and facilitates training of future care providers prior to discharge from the program.

Admission Parameters

The Neurobehavioural Program accepts patients with functional impairments related to the following diagnoses: traumatic brain injury, anoxic brain injury, intracranial aneurysms, as well as encephalitis due to infections. Consideration may be given to patients with functional and/or cognitive impairments related to a primary benign tumour, once the surgical treatment and adjuvant treatment has been completed.

Admission Criteria

All of the following criteria are required:

- Be 16 years of age or older
- Be a resident of Ontario
- Have physical and cognitive abilities that will allow them to actively participate in a rehabilitation program
- Have attainable functional goals which require a specialized ABI inpatient admission
- Are reasonably likely to achieve articulated functional goals within estimated hospital length of stay
- Be medically stable with no significant fluctuation in medical status within 72 hours prior to admission including:
    - Diagnostic investigations completed prior to admission to rehabilitation program
    - Clearly articulated management plan for concurrent medical disorders including addictions and psychiatric conditions
- Have a viable community discharge plan or repatriation agreement

The Neurobehavioural Program does not accept patients:

- With a degenerative or progressive disease e.g. dementia, or,
- Who are undergoing concurrent radiation or chemotherapy.

For referrals from external hospitals, physicians and agencies, a completed ABI referral form signed by the referring physician is required.

Community Re-integration Program Overview

The ABI Community Re-integration Program is one of three inpatient programs located at the Regional Rehabilitation Centre. The Community Re-integration Program assists individuals with ABI to develop a level of independence sufficient for re-integration into the community. Functional life skills training are provided for individuals with moderate acquired brain injuries. The environment aims to build a home-like routine with a focus on community and group living. All therapeutic activities are developed with regard to the discharge environment, whether it be home or another facility based setting. Group and individual activities are designed to promote "living" and "doing".

Admission Parameters

The Community Re-integration Program accepts patients with functional impairments related to the following diagnoses: traumatic brain injury, anoxic brain injury, intracranial aneurysms, as well as encephalitis due to infections. Consideration may be given to patients with functional and/or cognitive impairments related to a primary benign tumour, once the surgical treatment and adjuvant treatment has been completed.

Admission Criteria

All of the following criteria are required:

- Be 16 years of age or older
- Be a resident of Ontario
- Have physical and cognitive abilities that will allow them to actively participate in a rehabilitation program
- Have a score of 4 or higher on the Rancho Los Amigo Scale
- Have attainable functional goals which require a specialized ABI inpatient admission
- Are reasonably likely to achieve articulated functional goals within estimated hospital length of stay
- Be medically stable with no significant fluctuation in medical status within 72 hours prior to admission including:
    - Diagnostic investigations completed prior to admission to rehabilitation program
    - Clearly articulated management plan for concurrent medical disorders including addictions and psychiatric conditions
- Have completed formal occupational therapy and physical therapy assessment
- Have a viable community discharge plan or repatriation agreement

The Community Re-integration Program does not accept patients:

- With a degenerative or progressive disease e.g. dementia
- Who are awaiting long-term care placement, or,
- Who are undergoing concurrent radiation or chemotherapy.

For referrals from external hospitals, physicians and agencies, a completed ABI referral form signed by the referring physician is required.

Slow To Recover Program Overview

The ABI Slow to Recover (STR) Program is one of three inpatient programs located at the Regional Rehabilitation Centre. The STR Program is a provincial program which accommodates 6 individuals who have experienced a severe acquired brain injury. The focus of the program is to care for patients who are unable to access services in their home communities. Rehabilitation is provided by specialists in physical medicine and rehabilitation, internal medicine, nursing, respiratory therapy, occupational therapy, physiotherapy, speech-language pathology, therapeutic recreation, social work, dietician, and rehabilitation therapy. Consultation is provided by behaviour therapy, neuropsychology, psychiatry, neurology and pharmacy on an as needed basis. Individual and family education is a strong component of the program. Patients treated in the STR Program may be discharged to the community or alternatively to another hospital, nursing home or complex continuing care facility. The STR team also provides consultation and assistance prior to and subsequent to admission to the program.

Admission Parameters

The STR Program accepts patients with functional impairments related to the following diagnoses: traumatic brain injury, anoxic brain injury, intracranial aneurysms, as well encephalitis due to infections. Consideration may be given to patients with functional and/or cognitive impairments related to a primary benign tumour, once the surgical treatment and adjuvant treatment has been completed. The STR Program is not able to accept patients with progressive neurological conditions.

Admission Criteria

All of the following criteria are required:

- Age 16 years of age or older
- Resident of Ontario
- Medically Stable which includes: stable vitals and laboratory indices, completion of diagnostic investigations and articulating medical and surgical treatment plan
- GCS score of less than 9/15
- Responses are specific to stimuli such as; pain, speech, visual tracking and purposeful movements
- Sitting tolerance of at least 2 hours per day
- Have completed a formal occupational and/or physical therapy assessment with clearly articulated goals
- Viable community discharge environment or repatriation agreement

Outreach Service

The Outreach Service is provided to individuals with acquired brain injuries after their discharge from inpatient units. This service is designed to facilitate a smooth transition to the community and is essential to the individual's ability to maintain the gains made while in the hospital. The Outreach Service also serves individuals who have been referred directly from the community who have not had a hospital admission. Frequency of direct contact with staff varies depending on the individual's needs and identified goals. The staff assist the patient to return to community living within the patient's social, vocational, recreational and academic goal areas.

Clients being discharged from an inpatient rehabilitation program will be assessed to determine if they require Outreach involvement. This will be based on the Outreach criteria and the support systems available to the client upon discharge. If a need for Outreach has been determined, Outreach will be involved for approximately 4 to 6 weeks. This will ensure the transition to their new living environment is successful and all recommended services are in place. Following the 4 to 6 weeks, the Advanced Rehabilitation Therapist will determine if there is a further need for Outreach and place them back on the list.

The team consists of Clinical Coordinator, Community Intervention Coordinators, Advanced Rehabilitation Therapists, Social Work, and Psychology.

Admission criteria

All of the following criteria are required:

- Documented evidence of an acquired brain injury
- 16 years of age or older
- Resident of Ontario
- Client's home, work environment or academic environment must be no more then 1 hour from the Regional Rehabilitation Centre
- Have physical, cognitive and emotional abilities that will allow them to actively participate in rehabilitation therapy sessions
- Have attainable functional goals that the client is willing to pursue
- Are reasonably likely to achieve articulated functional goals within an estimated three to four months

The ABI Outreach Program does not accept patients:

- Active substance abuse or Acute mental health issues not being managed

ABI Out Patient Clinic

The ABI Outpatient Clinic sees individuals with severe, moderate and mild brain injury. These individuals usually live at home or in community facilities. The focus of the clinic is on assessment and problem solving for individuals with known or suspected brain injuries.

Some typical individual and family needs that are addressed in the clinic include:

- Assistance in accessing existing community resources (such as occupational therapy, physiotherapy, counseling, life skills programs, recreational programs, substance treatment services, vocational re-entry services, driving assessment services)
- Education about brain injury and the impact on functional abilities (such as mobility, self care, communication)
- Pain management
- Rehabilitation medical management
- Medication management
- Social work services (such as individual and family counseling, anger management, group therapy - relaxation)
- Neuropsychological assessment to evaluate the impact of the brain injury
- Neuropsychiatric treatment

Crisis Management Services

Referrals for crisis management are accepted from across the province for individuals who are in immediate need of resources or who require extensive behavioural intervention and advocacy.

Immediate referral to the Crisis Management Service should occur when:

- An individual is in need of emergency stabilization
- An existing patient exhibits behavioural difficulties where staff are seeking support & education
- An existing patient has been declined access to, or has refused to participate in appropriate support services and there is significant potential for crisis (i.e., harm to self, harm to others)
- An existing patient encounters the criminal justice system, is experiencing concurrent issues with addictions or mental health, housing, competency, decision making, power of attorney, etc., and consultation is required

Crisis Management Services and Descriptions

Service	Description
Emergency Stabilization (Same day response) *(Urgent Service)*	Immediate response to crisis. Pre-intake services including directing client and family to emergency psychiatric treatment, local police, COAST (Hamilton), Canadian Mental Health Association, ACTT and emergency housing. Crisis team response can also include developing crisis protocols for clients, care providers, families, etc.
Systems Advocacy *(Non-Urgent Service)*	Assistance provided to the client and family in order to access and understand the mental health system, the criminal justice system, relevant legislation (Statutes & Acts). Education is also provided to individuals providing service to the client, e.g., caregivers, physicians, social workers, discharge planners, lawyers, crown attorneys, etc.
Behavioural Education & Training (BEATS) *(Non-Urgent Service)*	Behavioural management programs for agencies, residential programs, nursing homes & community providers including education and follow-up.
Coordination of Support *(Non-Urgent Service)*	Identification & facilitation of access to services including community programs, mental health services, ABI inpatient and outreach programs, addictions treatment programs & aftercare support, hospitalization and physician referrals.
Direct Support *(Non Urgent Service)*	For clients unable to access available support or when no support is available. The Crisis Management Service can provide regular & direct follow-up visits or phone contact on an interim basis. This involves utilization of a least intrusive approach and emphasis is placed upon therapeutic rapport.
Environmental Change *(Non-Urgent Service)*	Access to alternative housing for clients experiencing problems secondary to environment. Clients may suffer difficulties ranging in cause from isolation and lack of supervision to too much structure and demand. Environmental change can also include alteration of a same environment, change in caregiver approach, expectations and responsibilities.
Resource and Funding Advocacy *(Non-Urgent Service)*	Advocacy for resources and the funding necessary to support those resources.

Provincial Needs Case Management Service

The Acquired Brain Injury Program has a provincial mandate to support patients from across Ontario who's needs exceed their region's capacity to provide service. Referrals are accepted from across the province for individuals whose complex needs cannot be met within a general rehabilitation program, or in an ABI program that does not have specialized expertise in managing the severe behavioural issues of this population. Many of these referrals require specialized inpatient treatment and extensive case management prior to and following discharge.

These individuals include those who display severe behavioural difficulties, inadequately managed mental health and/or addictions issues and those who have sustained catastrophic injuries and require slow to recover rehabilitation. In many cases, community placement is in jeopardy or has collapsed and interim service arrangements or crisis intervention may be required.

Access to suitable community placement may involve liaising with Ministry of Health and Long Term Care (MOH-LTC), LHIN offices, and locally based community service providers. Individuals may be waitlisted for provincially funded residential programs and may require ongoing support for access to appropriate resources.

Clients receiving individualized MOH-LTC funding may require crisis intervention and ongoing monitoring when issues arise. Transitional funding proposal requests are reviewed for clinical input at the request of the MOH-LTC.

Acquired Brain Injury Community Services

ABI Community Services provides community-based rehabilitation and consultative services for individuals with ABI who are 16 years of age and older. All clients referred to ABI Community Services require third party funding which may include the Workplace Safety and Insurance Board, insurance companies or other collaborative agencies. Clients may also self pay. Rehabilitation professionals teach clients practical functional skills in their own environment. Clients are assisted with returning to meaningful roles within their family, community, work and academic settings. This functional approach, based on a neurobehavioural model, maximizes opportunities that a client can practice and learn in a safe and non-threatening community setting, thus reducing the handicapping effects of brain injury.

Functional treatment programs are provided by a team of Rehabilitation Professionals that may include the following, depending on client need:

- Advanced Rehabilitation Therapist
- Rehabilitation Therapist
- Neuropsychologist
- Occupational Therapist
- Speech-Language Pathologist
- Community Intervention Coordinator
- Clinical Coordinator

The team works in collaboration with other care providers and can, when appropriate, implement recommendations from other health care disciplines. This creates a coordinated, comprehensive and cost-efficient rehabilitation program that considers all the needs of the individuals. Rehabilitation Therapists and Advanced Rehabilitation Therapists are knowledgeable regarding current legislation and procedures in collaborating with third party sources.

Assessment

A Community Intervention Coordinator conducts an initial intake interview (no charge). This offers the client and their family opportunity to discuss their concerns, learn about available resources and participate in the development of preliminary assessment and treatment goals and options. These assessment and treatment options are based on reasonable and necessary services given the client's unique and individualized needs.

Treatment

Individualized treatment programs focus on re-learning practical skills needed for effective daily living.

This includes:

- developing, evaluating and modifying data collection systems to monitor progress towards goal achievement,
- mentoring the client and their support network to ensure identified goals are completed according to the treatment plan,
- implementing specialized treatments including: behavioural management and discipline specific interventions,
- completing Progress Reports,
- collaborating with the community teams to ensure continuity of care, and,
- liaising with other professionals and implementing their recommendations, as appropriate.

Evaluation Process

The ABI Community Services program defines goals in specific terms and measures their progress with a rigorous system of data collection and analysis when appropriate. The team utilizes Goal Attainment Scaling to monitor progress within each goal area. The team collaborates with all treating professionals involved, assisting with designing and modifying programs as needed. Written reports outlining program goals and progress are forwarded to the client, funding source and other identified professionals at regular intervals. An important evaluation component includes discharge planning and gradually reducing services, as progress is demonstrated and clients gain increased independence and confidence in their recovering skills.

Acquired Brain Injury Program Intake Process

A comprehensive referral process determines admission to the ABI Program. The intake process begins when the completed referral package is received. All referrals are reviewed within one week of receipt. Following a review of this preliminary information, a Community Intervention Coordinator will conduct further assessment. This assessment is designed to determine the specific functional rehabilitation needs of the individual and to develop an intervention strategy based on the collection and analysis of the clinical data.

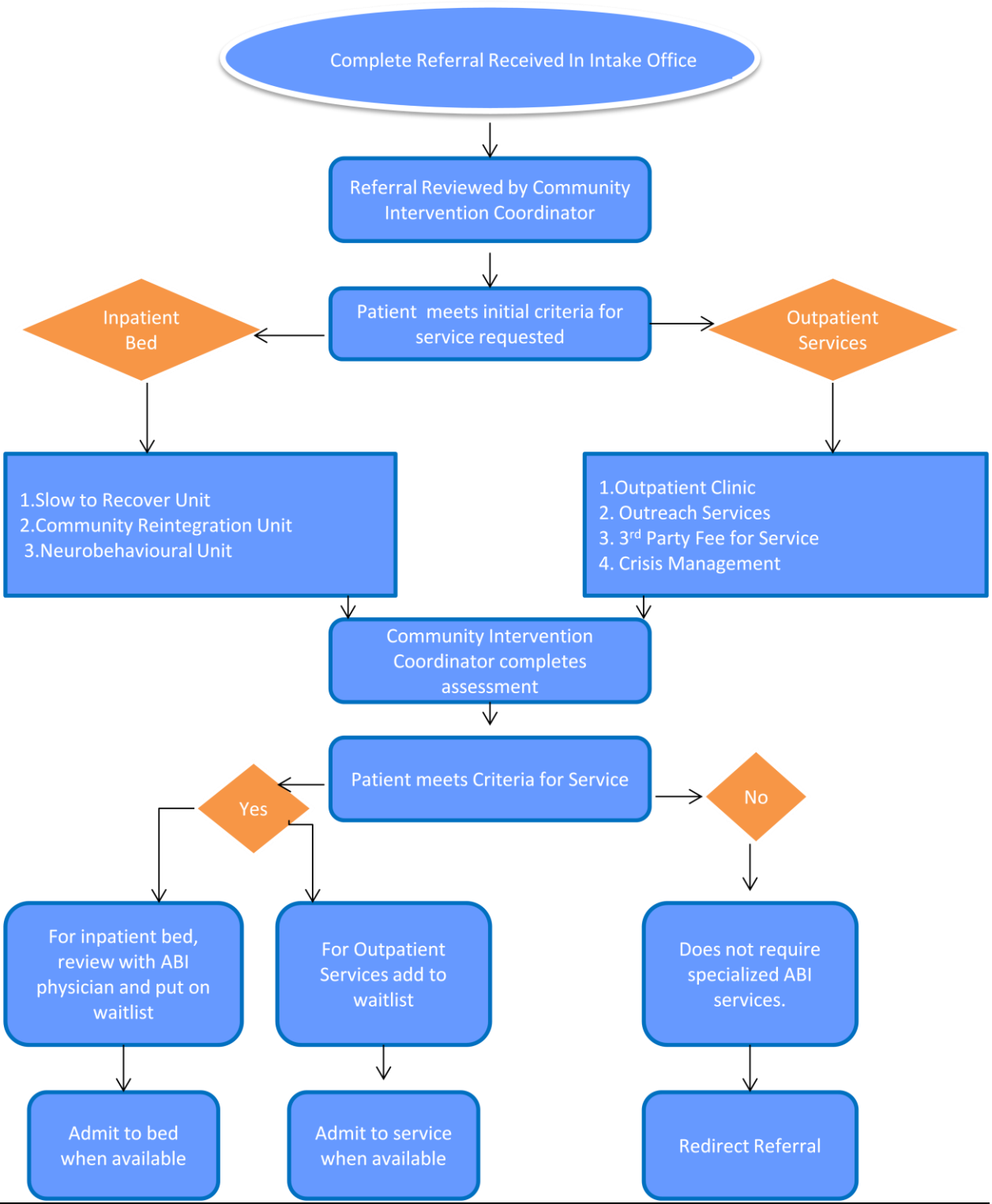
The Community Intervention Coordinator, in conjunction with team members, review the referral based on admission criteria. Urgency of admission in terms of suffering, potential danger and the probable prognosis with or without proper intervention is routinely factored into the triage process.

The needs of the individual may also be met in his/her home community through community intervention, through referral to the ABI Program outpatient clinic or outreach services. An inpatient admission is not always required.

Referral forms can be found on the Hamilton Health Sciences website:

www.hamiltonhealthsciences.ca/abi

HHS Acquired Brain Injury Referral Algorithm



For More Information

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