

## **UOFL HEALTH - FRAZIER REHABILITATION INSTITUTE SCOPE OF THE BRAIN INJURY PROGRAM**

### **Introduction to Frazier Rehab**

The UofL Health - Frazier Rehab Institute - Brain Injury Program provides comprehensive services to individuals who have experienced a brain injury and to the individuals' families and support systems. The program serves patients of all ages, with the goal of restoring individuals to optimal levels of physical, cognitive, and emotional recovery following brain injury. The program also values community partnerships and collaborations that serve to increase wellness and awareness of brain injury prevention and management.

Because Frazier Rehab provides services along the continuum of care, many patients and families are introduced to medical rehabilitation services while they are recovering in an acute care hospital. Each patient's needs are different, so the recommendations for each patient will differ. Many patients transfer to Frazier Rehab Institute for inpatient rehabilitation, and some patients will be referred directly to outpatient community-based rehabilitation. Other patients may require different types of services (e.g., home-based), based on the patients' needs and goals. As such, referrals for the brain injury program can come from any referral source (i.e., facility, provider, self-referrals). Frazier Rehab also has robust and comprehensive payer contracts as part of the UofL Health system that are updated routinely and promote widespread community access to the services provided in our continuum of care. A Frazier Rehab Institute admission liaison helps coordinate the patient's care plan and communicates this to patients and families, to begin establishing a "roadmap" of the recovery plan.

Regardless of the setting in which services are delivered (inpatient or outpatient), the goals of the Frazier Rehab Brain Injury Program include:

1. Provide a formally organized program for support and advocacy for the brain injured individual and family.
2. Educate families to understand the effects of the brain injury and the recovery process.
3. Educate patients and families on safety measures and precautions that promote optimal recovery and independence (e.g., decision-making, return to driving).
4. Address symptoms commonly associated with brain injury, such as behavioral challenges, safety/judgement, reduced self-awareness, and personality changes through psychological intervention and an interdisciplinary approach.
5. Improve thought processes, memory skills, planning, perception, and judgment through cognitive retraining activities, often referred to as Cognitive Rehabilitation Therapy.
6. Improve mobility and self-care skills through focused therapy and care promoting physical recovery.
7. Encourage active participation and education of the patient's family through attendance at the patient's therapy sessions when appropriate, and through routine scheduled family teaching sessions.
8. Develop a comprehensive discharge plan for the patient by working closely with the patient and family to identify needed resources and services and make appropriate referrals.
9. Empower patients and families to prevent or minimize further injury and chronic disability of persons with a primary diagnosis of acquired brain injury.
10. Restore each person served to his or her fullest potential of independence and productivity at home, in the workplace, at school and in the community.

### **Commitment to Quality Brain Injury Rehabilitation Care**

Frazier Rehab holds CARF Accreditation. The Commission on Accreditation of Rehabilitation Facilities (CARF) is an international, third party, independent, consultative accreditation process. This accreditation is voluntary and considered a gold-standard framework guiding best practices and care in brain injury rehabilitation. The Frazier Rehab Institute Brain Injury Program has been CARF accredited since 1993. Frazier Rehab is one of three CARF accredited inpatient rehabilitation brain injury specialty facilities in the state of Kentucky.

### **Certified Brain Injury Specialist (CBIS) Credentialed Staff**

The Frazier Rehab team has clinicians specializing in pediatric and adult brain injury treatment. Over 50 providers within our Brain Injury Program hold a CBIS certificate, which demonstrates our organizational commitment to staff development and access to the latest brain injury research, treatment, and practice information. Additionally, we have two individuals who hold CBIST status, and can serve as instructors.

### **Certified Rehabilitation Registered Nursing (CRRN) Staff**

Over 15 members of the Frazier Rehab nursing team have achieved the CRRN credential, which validates their professional standing and specialty knowledge as rehabilitation nurses.

### **Commitment to Customer Satisfaction**

The Frazier Rehab Institute Brain Injury team is both competent and compassionate. There is a strong commitment to providing the best environment, services, and education to assist the patient to achieve the highest level of independence possible.

Frazier Rehab actively solicits and welcomes feedback from our patients, families, and other stakeholders to help guide and shape clinical programming, staff competency, quality improvement initiatives, cultural diversity, and patient care efforts. Frazier Rehab formally solicits patient experience feedback post-discharge through independent third parties: Press Ganey (within days of discharge) and MedTel (three months after discharge). Frazier Rehab informally solicits patient experience feedback during treatment through patient (e.g., Huron) rounding and more recently through system discharge phone calls to ensure smooth transition of care. Additionally, the UofL Health system utilizes nurse navigators to call patients within a couple days of hospital discharge to ensure a smooth transition home and to escalate areas of concern.

### **Commitment to Patient Safety**

Frazier Rehab demonstrates a commitment to patient safety by incorporating evidence-based safety practices into our clinical programs and staff competency. We are well equipped to safely deliver therapy services across the continuum, but also emphasize this as a component of successful community re-entry within patient and family training sessions. Some examples of our safety initiatives include Safe Patient Handling, Casa Colina Falls Risk Assessment, Braden Scale Assessment (i.e., for skin integrity), Bedside Shift report, Patient Safety Rounding, Behavioral Response Team, and an outpatient Safety Coach program.

## UOFL HEALTH - FRAZIER REHABILITATION INSTITUTE BRAIN INJURY PROGRAM CONTINUUM OF CARE

### **INPATIENT REHABILITATION**

#### **Overview**

The 15-story, state-of-the-art Frazier Rehab and Neuroscience Center located in the downtown Louisville medical campus is the home to UofL Health - Frazier Rehab Institute - Inpatient Brain Injury Rehab program. Frazier Rehab is positioned centrally in a thriving medical community, surrounded by acute care hospitals including UofL Health - Jewish Hospital (physically attached), Norton Children's Hospital and Norton's Hospital (attached by pedway), UofL Health - UofL Hospital Level 1 Trauma Center, and UofL Health - Brown Cancer Center down the street. The University of Louisville Department of Physical Medicine and Rehab and Restorative Neuroscience are physically located adjacent to Frazier Rehab Institute and provide support to our Brain Injury Program.

#### **Persons Served**

The Inpatient Brain Injury Program is available to patients of all ages at any level of recovery after injury – from coma to mild brain injury. The Brain Injury program offers inpatient services (24/7/365) to people who have had a traumatic brain injury or a non-traumatic brain injury (e.g., anoxic or hypoxic events, exposure to toxic substances, brain tumors, and infections). Frazier also hosts a unique EMERGE program for patients with disorders of consciousness, or low-level brain injury.

Patients may be eligible for inpatient admission to Frazier if they meet the following criteria:

- 1) Sustained a brain injury that requires the availability of a physician and nursing care 24/7
- 2) Are medically stable at time of admission/transfer according to the following general parameters:
  - All vital signs stable
  - Free of fever greater than 100.4 degrees F (per NHSN) for at least 24 hours prior to admission without fever-reducing medication.
  - Adequate nutrition/hydration (orally or by feeding tube)
  - All medications adjusted/finalized and plans for use delineated
  - Must not require one-on-one care by a nurse
  - Must not require constant psychiatric intervention (e.g., chemical detoxification) or have been on active suicide precautions within 24 hours prior to transfer
  - All work up procedures and surgical interventions completed (or definite plans for either finalized)
  - Stable respiratory status with or without respiratory support device (i.e., tracheostomy, ventilator, BiPAP/CPAP). Ventilator patients must have been on ventilator for at least 48 hours prior to admission.

- Does not demonstrate progressive, irreversible cognitive deficits which would preclude patient's ability to participate in intense rehabilitation program
- 3) Patient has functional deficits requiring an intensive, interdisciplinary, and highly coordinated acute rehab program not available as an outpatient, in a skilled nursing facility, or lesser level of care.
  - 4) Patient must demonstrate rehabilitation potential and agree (to the extent possible) to inpatient rehabilitation plans, and:
    - a. Be capable of participation in a minimum of three (3) hours of multidisciplinary therapy a minimum of 5 out of 7 days and
    - b. Require a coordinated intensive program of multiple services to include at least two or more therapy disciplines.
  - 5) Patient should have the potential for home or community-based environment upon discharge and/or have an adequate support system:
    - a. Reasonable discharge plan identified prior to admission
    - b. Support person(s) must be identified and defined (name, relationship, and phone number) and as required, be willing to participate in the teaching program to the extent needed to accomplish the discharge goals.
  - 6) Must not require constant psychiatric intervention (e.g., chemical detoxification) or have been on active suicide precautions within 24 hours prior to transfer
  - 7) Congestive heart failure must be compensated and treated or stable recent myocardial infarction.
  - 8) Have insurance coverage/authorization and/or other financial arrangements/agreements established prior to transfer/admission.

### **The Frazier Rehab Inpatient Interdisciplinary Team**

The rehabilitation needs for patients recovering from an acquired brain injury are multifaceted. These patients require the knowledge and skills from several different professionals collaborating as a team to maximize each person's potential for recovery and achieve the highest possible level of functional independence. The interdisciplinary team works together to advocate for services, given the constraints imposed by reimbursement/funding agencies.

With an interdisciplinary team model, multiple behavioral, cognitive, communication, and physical issues may be addressed without unnecessary duplication or fragmentation of services. The Frazier Rehab Brain Injury Program team members may include:

- Psychiatrist (rehab doctor)
- Consulting physicians
- Case managers
- Rehab nurses
- Nursing assistants

- Psychologists
- Neuropsychologists
- Occupational therapists
- Occupational therapy assistants
- “Bedside” Certified Occupational Therapy Assistants
- Physical therapists
- Physical therapist’s assistants
- Speech-language pathologists
- Dietitians
- Pulmonary rehab clinicians
- Recreation/Activity therapists
- Rehab technicians
- Chaplaincy services
- Language Services, Translators
- Family & Caregivers

Together, the members from these varied disciplines complete a comprehensive assessment process, treatment plan, and discharge plan designed to achieve the best functional outcomes possible. Consequently, many patients are able to return home and resume therapies in an outpatient setting.

### **Inpatient Facility and Treatment Areas**

Frazier Rehab offers inpatient rehabilitation to individuals who are recovering from brain injury on either an adult neurologic floor or the pediatric floor. Each of these inpatient floors has been specially designed for patients’ and families’ comfort, safety, privacy, and care needs. Patients are provided rooms that are well equipped to manage medical and nursing care and to allow family and friends to visit comfortably. A family member is permitted to stay overnight. Families are welcome to reserve a dining room for a special family occasion.

Patient treatment areas offer:

- Patient Valet Parking at facility entrance
- Spacious and comfortable private and semi-private patient rooms equipped with bathroom, plasma screen television
- Wireless Internet access throughout the campus and in patient rooms
- Private family conference and education space
- Safe Patient Handling equipment such as overhead lifts for standing, walking, and transfers.
- Orthosis Room
- Centrally located therapy gyms with spectacular views of the city skyline, where most PT and OT sessions are held
- Private Speech-Language Pathology offices
- Private treatment room for use when distractions need to be minimized
- Practice kitchen area for daily living skills
- Practice bathroom area for daily living skills
- Assistive technology resource carts
- Aquatic Therapy Pool

Additionally, our pediatric unit hosts:

- Colorful therapy gym with an array of pediatric-specific equipment and toys
- Ronald McDonald House Charities of Kentuckiana Family Resource Room
- LaRosa Lounge recreation area of group activities and/or dining
- Outdoor playground

The equipment available in the neurologic therapy areas can be used for general rehab purposes but was primarily selected to meet the needs of the neurologically involved patient. Our therapeutic approach and equipment address difficulty with balance, sitting, mobility, self-care, vision, cognition, behavior, emotions, communication, and swallowing. A few examples of the technology and techniques we have available to the brain injury patient are:

- Zero G™ for gait and balance rehabilitation
- Armeo™ for upper extremity therapy
- Litegait™ for gait and balance rehabilitation
- Biometrics™ for upper extremity rehab
- Robots for improving shoulder/elbow, wrist and hand movement
- Motomed™ and Omnitainer™ for exercise and retraining
- Nusteps™ for exercise and retraining for functional electrical stimulation
- Deep physical agent modalities including ultrasound, electric stimulation, and anodyne
- Bioness™ for functional electrical stimulation
- Dynamic splinting for upper extremity functional return
- Serial casting (and functional rigid casting) and medications for spasticity management
- Modified constraint induced movement therapy
- Fluoroscopy for the swallow evaluation
- Endoscopy for the swallow evaluation
- Swallow therapy including neuromuscular electrical stimulation
- Frazier Water Protocol
- Aphasia therapy and cognitive rehabilitation
- Ramps, curbs, stairs, and parallel bars for ambulation therapy,
- Assistive technology and wheelchair seating resource center
- Car for practice getting in and out of a vehicle.

### **Inpatient Individualized Plan of Care**

Each member of the interdisciplinary acquired brain injury team is responsible for components of the integrated plan of care designed to achieve the best functional outcome possible. Members of the team meet frequently to discuss and revise this plan of care to meet the changing rehabilitation needs of the patient.

The Frazier Rehab inpatient rehab program operates seven days per week. Adult and pediatric patients should expect to receive at least 3 hours of therapy five of every seven days. Inpatient therapy begins as early as 7:30 am and can continue until approximately 4:30 pm. Each patient's schedule is adjusted as needed to best suit his/her progress and needs. Some therapy may take place in the patient's room, for example basic self-care activities involving grooming, dressing, and hygiene. Other activities are better suited to spaces where the specialized therapy equipment is located.

Some therapy activities might occur in other parts of the building and campus, including the outdoor therapy area. On occasion, the therapists may accompany the patient on a community outing.

Most therapy sessions are provided one-on-one with patients. Co-treatments (two therapy disciplines teaming up to treat the patient together) or group therapies may be indicated for some patients. Group therapies typically are provided in addition to the three hours of individual therapy patients receive five of every seven days.

Great communication leads to the best care and optimal rehab outcomes. A case manager's role is to link the family, patient, and rehab team and coordinate the care plan for each patient. This role requires frequent communication between team members, communication with insurance companies to report progress and advocate for patients continued therapy needs, communication with family members to ensure education and patient and family preparedness for discharge. This communication may be accomplished through individual meetings with the case manager, weekly team meetings with the rehab physician and team members, and/or additional team and family meetings. The case manager also serves as the leader of communication with community partners to identify services, support, and equipment that will be needed after inpatient rehab. The case manager is an expert on community resources including post-acute rehab services, transportation agencies, brain injury support groups, and financial programs (i.e. assist them in conserving their financial resources to meet their long-term care needs). Case managers provide the patient and family with recommendations relative to their existing financial resources and relative to alternative financial programs such as the Traumatic Brain Injury Trust Fund, Acquired Brain Injury Waiver program, and Vocational Rehab services. The case manager will also work with community partners such as Child Protective Services (CPS) and Jefferson County Public Schools (JCPS) as an academic liaison for pediatric patients.

Caregiver teaching is essential to a patient's safe and successful discharge to home. Caregivers attend therapy sessions to learn how to best care for the patient and to support what the patient learns in therapy for carryover at home. A Brain Injury Caregiver Education and Support group is offered twice weekly, specifically to educate and support our program patients.

## **OUTPATIENT REHABILITATION**

### **Overview**

Recovery from a brain injury is a long-term process. While most patients are discharged home after only a few weeks of inpatient rehab, ongoing services are often needed to continue the recovery process. - Therefore, the rehabilitation team invests special care to make patient/family-specific recommendations to support a patient's recovery.

Patients may be eligible for outpatient admission to a Frazier Rehab program if there is:

- 1) A diagnosis of acquired brain injury or other neurological injury
- 2) A reasonable expectation that the rehab program will improve functional ability, slow the deterioration of a progressive illness, or provide family/caregiver with necessary education to manage the patient in a home-like setting.
- 3) A treatment plan supported by a physician.

Patients are referred for outpatient therapy services from a variety of sources and providers, including acute care hospitals, emergency departments, inpatient rehabilitation, home health agencies, skilled nursing facilities, outpatient rehabilitation facilities, community advocacy groups (e.g., Brain Injury Alliance of Kentucky), primary care physicians, nurse practitioners, and specialists (e.g. neurology, neurosurgery, physiatry).

Upon referral for outpatient therapy, insurance verification is performed to ensure benefit coverage for referred services. Typical payer sources for outpatient programs include commercial insurance plans, Medicaid, Medicare, Worker's Compensation, or Kentucky Vocational Rehabilitation.

The outpatient brain injury rehabilitation services offered by Frazier Rehab fall under two types of programs:

- Individual outpatient services designed to address specific therapeutic interventions
  - Not every brain injury requires the full spectrum of care. Frazier Rehab has an extensive outpatient rehab network that can provide expert therapy services based upon individual needs for physical therapy, occupational therapy, speech language therapy, assistive technology consultation, and driver assessment and training.
  - Frazier Rehab proudly offers specialized therapies and evaluations at over 20 locations in the region.
  - Our outpatient locations generally operate Monday-Friday 8 a.m.-5 p.m.
- Frazier Rehab Institute's NeuroRehab Program
  - A comprehensive outpatient neuro-rehabilitation program for adolescents through adults who have sustained an acquired brain injury or other neurological injury, including:
    - Traumatic Brain Injury
    - Stroke
    - Concussion (mTBI)
    - Aneurysms
    - Brain Tumor
    - Anoxic Brain Injury
  - Comprised of an interdisciplinary team of experts, including speech-language pathologists, occupational therapists, physical therapists, and psychologists who address all aspects of rehabilitation - physical, cognitive, vocational, social/interpersonal, and emotional in an integrated framework.
  - Provides individualized treatment plans based on collaboration with other specialists (e.g., physiatrists, neuropsychologists, neuro-optometrists) patients, support systems, and insurance plans. The frequency of services within this plan of treatment will vary based on individual patient needs. However, most patients requiring comprehensive program care are scheduled three days/week.

- Offers a combination of individual therapy, therapeutic groups, vocational rehab services to facilitate return to work, academic re-integration, pre-driving skills assessment, community-based support groups, and more.
- The NeuroRehab Program operates Monday through Friday 8am to 5pm.

The goals of the Outpatient Brain Injury Rehabilitation Programs are similar to those of the Inpatient Program, with a focus on maximizing the patient's recovery and restoring to a meaningful, fulfilling, and maximally independent lifestyle.

### **Specialty Outpatient Services**

#### *Concussion Management*

UofL Health also offers concussion management services that encompass a multi-disciplinary approach to concussion management that provide quick access to evaluation and management services, based on patients' needs. Our UofL Health Emergency Care Centers, Urgent Treatment Centers, and UofL Physicians Group practices are equipped to offer medical management and monitoring, and referrals for follow up care within the Frazier Rehab programs (e.g., physical or occupational therapy, neuropsychological evaluation, etc.). We have a coordinated approach within our Sports Medicine program to rely on Certified Athletic Trainers to assist in the patient education and referrals as needed.

#### *Driving Evaluation*

Frazier Rehab hosts a comprehensive outpatient-based driving program that specializes in pre-driving evaluation, behind the wheel evaluation, individualized driving training, and vehicle and equipment evaluation. This program is led by a Certified Driver Rehab Specialist.

## **HOME-BASED REHABILITATION SERVICES**

### **Home Health Care**

Patients may require therapies be provided in the home for a period of time, due to travel/accessibility, patient needs, and caregiver support. Frazier Rehab can make referrals to home care agencies if preferred by the patient and family.

### **Residential Placements**

Some patients may continue to require 24-hour nursing care and a less intense level of therapy and may be discharged to a skilled nursing facility after inpatient rehabilitation, while other patients may need a more intensive, longer term residential treatment program to achieve more progress before being able to return to the home setting. Frazier Rehab case managers facilitate appropriate referrals for skilled nursing facility placements and specialized residential brain injury programs if necessary.

## **UOFL HEALTH - FRAZIER REHABILITATION INSTITUTE COMMITMENT TO BRAIN INJURY ADVOCACY, SUPPORT & WELLNESS**

### **Brain Injury Support and Advocacy**

The Brain Injury Alliance of Kentucky (BIAK) is a strong alliance in our effort to educate and support awareness of brain injury in our community. The BIAK's mission is to serve Kentucky citizens whose lives have been affected by brain injury through advocacy, education, prevention, research, service, and support. Frazier Rehab supports this organization's mission through philanthropic activities and fundraisers, board membership, and other activities. A representative from the Brain Injury Alliance of Kentucky (BIAK) visits Frazier Rehab routinely (i.e., aside from pandemic-related visitor restrictions) and is available to meet patients and families or elicit a peer support person from the community upon request.

### **Self-Advocacy**

Shared care plans are portable health profile cards that are by an individual to communicate their health needs, status, and history to future providers. At Frazier Rehab, patients and families are encouraged to complete these profile cards-including health conditions, medications, and other health information- as a part of the therapy process. This encourages active participation and communication of health needs as patient's resume community-based care with various providers and specialists.

Frazier Rehab actively partners with the Retaining Employment and Talent After Injury/ Illness Network (RETAIN) program. This is an initiative through the US Department of Labor promoting coordination and intervention strategies to prevent disability and improve individuals' abilities to stay at work or return to work following illness or injury.

### **Ongoing Support Systems**

Frazier Rehab Institute hosts a monthly Brain Injury Survivor Support Group at the NeuroRehab Program, 4912 US 42. This community-based support group offers education and social networking and is available to Frazier Rehab patients and anyone in the community who has sustained a brain injury. Peer support has proven invaluable to many people who have survived a brain injury. The NeuroRehab Program also offers a support group for caregivers of acquired brain injury survivors. During the pandemic, these groups introduced a virtual attendance format.

### **Maintaining Wellness and Fitness after Brain Injury**

Frazier Rehab has developed the Community Fitness and Wellness gym within the downtown Institute. Individuals with disabilities can join this program to improve cardiovascular/aerobic fitness, muscular strengthening, and flexibility. The Community Fitness and Wellness gym is staffed by exercise science professionals and equipped with state-of-the-art equipment. Scholarships are available to support the membership fees for patients with reduced ability to pay. This program also hosts a general caregiver support group intermittently that focuses on various practical and emotional components of the caregiver experience.

Frazier Rehab Institute has collaborated with Gathering Strength, Inc to provide access to community health and wellness resources to those with disabling conditions who are unable to access the Community Fitness and Wellness Center. Gathering Strength, Inc offers online education, resources, and health and wellness classes.