Patricia Neal Rehabilitation Center at
Ft. Sanders Regional Medical Center of
Covenant Health

1901 Clinch Avenue
Knoxville, TN 37916

Brain Injury Program
Scope of Services and Protocol

I. Mission, Vision, and Values

The Brain Injury Program of the Patricia Neal Rehabilitation Center is located within Fort Sanders Regional Medical Center and is a member of Covenant Health. The program adheres to the Mission Statement of Covenant Health which is to serve the community by improving the quality of life through better health. In the quest to fulfill this mission, Covenant Health is committed to its vision of being the region's premier healthcare network by providing patient-centered care that inspires clinical and service excellence, making us the first and best choice for our patients, employees, physicians, volunteers, employers and communities. This mission is based on three values:

1. The patient always comes first
2. Excellence in everything we do
3. We will do our part to be the first and best choice

The mission of the Brain Injury Program follows within the parameters of the mission of the Patricia Neal Rehabilitation Center, Ft. Sanders Regional Medical Center, and Covenant Health.

It is the mission of the Brain Injury Program of the Patricia Neal Rehabilitation Center to be patient focused in all that we do so as to provide excellent care and education necessary to transition a brain injured individual from trauma or point of decline to an optimal discharge setting by improving his/her capacity to function independently. The mission is achieved by a combination of therapeutic and medical interventions and education to provide the most conducive environment for recovery within the resources available. We will do our part to be the first and best choice for brain injury recovery in the East Tennessee region.

It is the Vision of the Brain Injury Program of the Patricia Neal Rehabilitation Center to be recognized as the premier Brain Injury Program through integrity, quality, serving the customer, caring for and developing our customers, and using the community's resources wisely.

The goal of the Brain Injury Program at PNRC is *to become a BI center of excellence that is internationally recognized for quality, comprehensive continuum of patient care, research, and education with an exceptionally qualified staff.*

II. Justification for Brain Injury Program at PNRC

The Center for Disease Control and Prevention, National Institutes of Health, National Institute of Neurological Disorders and Stroke, and the Brain Injury Association of America state the following information which demonstrate the impact of traumatic brain

injury as being a nationwide problem with more injuries occurring in the southern region of the United States than any other region in the country.

- There are over 2.7 million brain injuries including emergency hospitalization visits and deaths occurring annually according to the CDC 2014 data. This equates to a traumatic brain injury occurring every 21 seconds in the United States.
- There has been a 53% increase nationally from 2006- 2014 according to the CDC.
- Annually, approximately 56,700 individuals died from a traumatic brain related injury in 2014 with 2,529 being pediatrics age
- Traumatic brain injury (TBI) is the leading killer of Americans from the age of 0-34 years and accounts for 30% of all deaths annually in the US.
- TBI is the leading cause of disability of youths and young adults in the country with the primary group effected being 0-34 year old males.
- According to the Tennessee Department of Health TBI register, there had been an increase in reported cases of brain injured from hospitals with a consistent rise of incidence from 1996 - 2008. In 1996, 5000 cases were reported with an annual increase of about 8-10%. Currently from 2012-2018, there is an average of 8,000 reported cases of brain injury annually that are reported to the TBI Registry. The Knoxville MSA handles approximately 20% of these cases through its geographic coverage responsibility in Tennessee.
- Children ages 0 to 4 years, adolescents aged 15 to 19 years, and adults aged 65 years and older are most likely to sustain a TBI.
- In Tennessee, the three leading causes of TBI are falls, motor vehicle accidents and violent injuries in that order respectively.

The consequences from a brain injury impact physical, behavioral, psychosocial, and cognitive areas of functioning. Physically, a brain injured individual may have limited mobility of one or all extremities, impaired ability to communicate and/or swallow, impaired vision and/or hearing, seizure disorders, respiratory dysfunction, chronic pain, chronic fatigue syndrome, loss of continence, and be dependent on another due to loss of motor control. Cognitively, the brain injured survivor may demonstrate impairments in memory, attention/concentration, perception, communication, judgement, impulse control, and general executive functioning. Behaviorally, the traumatic brain injured demonstrate a change in mood swings, depression, anxiety, denial, affect, motivation, impulse control, sexual functioning, or psychosis. Psycho-socially the brain injured survivor may often demonstrate poor pragmatics for social interactions due to his/her cognitive and behavioral deficits. They may become socially isolated due to these factors.

What an average individual takes for granted in everyday life may become a struggle for brain injured survivor. All of these deficits impact the manner in which an individual functions in society. Often these problems will impact financial and social functioning which creates unemployment and burdens on the family unit and society. It is within the

scope of services and the purpose of the Patricia Neal Rehabilitation Center to service this population in our region.

III. Background of the Brain Injury Program at PNRC

A. Patricia Neal Rehabilitation Center Brief History

The Patricia Neal Rehabilitation Center at Ft. Sanders Regional Medical Center opened its doors in May of 1978 as the first comprehensive physical medicine and rehabilitation facility in East Tennessee. The Patricia Neal Rehabilitation Center was the vision of the Ft. Sanders Board of Directors to provide rehabilitation services to East Tennessee. Prior to this time, residents of East Tennessee traveled to Birmingham, AL or Fisherville, VA to receive physical rehabilitation services. The Patricia Neal Rehabilitation Center is named after the actress, Patricia Neal, who was a native of Knoxville and achieved her academy award after recovering from three cerebral vascular accidents.

The Patricia Neal Rehabilitation Center is certified by the Joint Commission and by the Commission on Accreditation of Rehabilitation Facilities (CARF). The Patricia Neal Rehabilitation Center holds CARF certifications in the areas as follows: Inpatient Comprehensive Services, Outpatient Comprehensive Services, Brain Injury Programs, and Stroke Programs. The Patricia Neal Rehabilitation Center was the first CARF accredited brain injury program in the state of Tennessee. The Patricia Neal Rehabilitation Center is housed as a unit within Ft. Sanders Regional Medical Center which has been a leader in healthcare in the Knoxville Metropolitan Regional Area for over 100 years. The Patricia Neal Rehabilitation Center is one of the largest inpatient physical rehabilitation facility housed within a medical facility in the United States based on admissions celebrating its 41st Anniversary in 2019. Ft. Sanders Regional Medical Center is an affiliate of the Covenant Health system which is the largest independent operating health organization within the state of Tennessee and fifth largest in the South.

B. PNRC Brain Injury Program Historical Overview

The Patricia Neal Rehabilitation Center's first traumatic brain injury patient was admitted in 1978 with the volume of BI patients growing ever since as medical technology improves. The staff of the Patricia Neal Rehabilitation Center is known national as a center of excellence in physical rehabilitation. Beginning with the medical staff, Dr. Mary Dillon who serves as the Medical Director of Patricia Neal Rehabilitation Center provides medical direction. All of the medical staff are physiatrists which are specialists in rehabilitation medicine. The Patricia Neal Rehabilitation Center works in a team approach consisting of the medical staff, rehabilitation nursing, behavioral medicine, physical therapy, occupational therapy, recreational therapy, speech language pathology, social services, and case management. Support services include dieticians, orthotic and prosthetic specialists, opthamologist, optometrists, audiologist, vocational services, ortho/neuro specialty physicians, psychiatry, and affiliated professionals. The brain injury staff of the Patricia Neal Rehabilitation has over 250 years of combined experience working with brain injured. The staff has helped over 1,800 severe to moderately

impaired brain injured survivors transition from traumatic event to an appropriate level of independent functioning. The majority of the brain injured patients of Patricia Neal

Rehabilitation Center make it back to home upon discharge. Staff of the Patricia Neal Rehabilitation Center assists to coordinate needs of the brain injured patients with appropriate resources in the community, region, and nation.

C. Brain Injury Support in Tennessee through PNRC

The Patricia Neal Rehabilitation Center helped to form the East Tennessee Interest Group on Traumatic Brain Injury, INC as a 501 c-3 organization in 1983 in Knoxville which eventually became the Brain Injury Association of Tennessee as it is known today. The Patricia Neal Rehabilitation Center was a leader in the recognition of the need for a support network for families and survivors of brain injury in Tennessee. As the state organization grew, the Patricia Neal Rehabilitation Center continued to assist and support a local support group which became the Knoxville Area Brain Injury Support Group (KABISG) in 1988 as an affiliate of the state organization. The Patricia Neal Rehabilitation Center helps the KABISG by providing a meeting space for its monthly meetings, speakers for educational and professional sessions, mentoring through BIAT program services, social networking and activities, and supportive efforts like the support of the 1993 TBI legislation which created the TBI Program under the Tennessee State Department of Health. The support group successfully transitioned from a healthcare professional operated program to that of TBI survivors and family members group. The KABISG is still operating today.

D. Community Think First Education Program

The Patricia Neal Rehabilitation Center is an active participant in THINK FIRST. The nationally recognized THINK FIRST Program is a safety and prevention program for school age youths through in-service educational intervention at schools or water safety programs. The PNRC BI Program obtained a grant from the state to support education and awareness in the Knoxville Metropolitan Area to assist with developing insight and education in brain injury for the purpose of awareness and safety prevention. The staff from PNRC volunteers to assist with the education at schools and various safety venues throughout the year.

E. Brain Injury Service Coordination Grant

In 1998, the state of Tennessee TBI Program through the Department of Health awarded the Patricia Neal Rehabilitation Center Brain Injury Program a three year grant for $120,000 to assist in providing case management services for brain injured survivors in the Knoxville Metropolitan Statistical Region. The Knoxville MSA includes the surrounding 14 county region which encompasses about 1200 brain injured survivors annually. It is be the responsibility of the Brain Injury Services Coordinator to assist survivors with accessing resources to allow them to be more independent and to enhance their lives. The current grant is for a five year contract period for 2016- 2021valued at

$308,000 to support the brain injury population of the Knoxville MSA and surrounding 14 county region. Within Tennessee, there is a network of 8 regional brain injury service coordinators who work together to provide support services and resources across the state with additional coordination through the Tennessee Department of Health TBI Program.

IV. Philosophy

The Patricia Neal Rehabilitation Center (PNRC) subscribes to the ADA, The Disabled Person's Bill of Rights and the Patient's Bill of Rights, Title VI, and HIPAA guidelines. Furthermore, the Brain Injury Program will conform to standards defined by Commission on Accreditation of Rehabilitation Facilities and The Joint Commission. PNRC endorses all local, state, and federal regulations and guidelines for health care. In addition, the human rights of all patients served shall be protected by PNRC staff and through careful design of the programs, activities, and facilities.

V. Purpose

The Brain Injury Program of PNRC is dedicated to providing services to persons with brain injury with associated impairments and disabilities to help them regain the greatest amount of independence and enjoy the highest quality of life. Services will include appropriate intervention along a continuum of care that best fits the needs of the patient from inpatient to outpatient with coordination of available community services. Patients and families are a vital part of the rehabilitation team and must participate equally with the interdisciplinary team in developing an individualized treatment plan. Progress towards defined goals is reviewed in a patient team conference weekly. All patients are under the constant care of trained staff with brain injury knowledge and a physiatrist who with the case manager will coordinate the highly skilled team of professionals. There are fifteen staff who are certified brain injury specialist (CBIS) through the Academy of Certified Brain Injury Specialists. The environment is designed to facilitate cognitive, physical, educational, psychosocial, and behavioral needs of the BI survivor. Patients in the BI Program are treated with the latest state-of-the-art methods and equipment. Professional staff members in the BI Program are continually updating treatment skills and techniques to incorporate into the most modern treatment for those with brain injury.

VI. Organization Size and Structure

The Patricia Neal Rehabilitation Center at Ft. Sanders Regional Medical Center of Covenant Health is a not-for-profit IRS 501 (c) 3 organization. Covenant Health is operated by a chief executive officer that reports to a Board of Trustees who oversees the operations of the health system. The Patricia Neal Rehabilitation Center is under the supervision of the Director of Rehabilitation Services whom reports to the Senior Vice President of Rehab Services who reports to the Chief Administrator over Ft. Sanders Regional Medical Center who in turn reports to the Senior VP of hospital facilities who reports to the executive leadership team CEO and Board of Trustees. The Brain Injury Program has a designated Program Coordinator who reports to the PNRC Director of

Therapy Services. The Patricia Neal Rehabilitation Center has approximately 170 employees as a part of Ft. Sanders Regional Medical Center which has over 2,200 employees as a part of the Covenant Health System which is over 10,000 employees strong. The majority of the patients that the Patricia Neal Rehabilitation Center receives are from the following regions: Middle and East Tennessee, Southeast Kentucky, Western North Carolina, and Southwest Virginia. The main referral area for PNRC is the Knoxville MSA and surrounding 32 counties. The Patricia Neal Rehabilitation Center has received patients from across the country and around the world.

A. Key Leaders for the BI Program

The Vice President responsible for the Patricia Neal Rehabilitation Center of which the Brain Injury Program exists is Leslie Irwin, PT, MBA, FACHE. Mrs. Irwin has over 40 years of experience in healthcare.

The Director of Rehabilitation Services for the Patricia Neal Rehabilitation Center is Jennifer Steely, OTR, MHA. She has over 23 years of service in physical medicine and rehabilitation. The Therapy Services Manager, Christy Williams, DPT, PT is over the outpatient program and assist with clinical therapy staff operations. The nursing staff are coordinated by Kasey Freier BSN, RN, Manager of Nursing Services for PNRC. Jennifer Steely is responsible for approximately 80 staff members in the therapy section as well as oversees Nursing Manager for supervision. Her strengths are in clinical staffing and organization. Kasey Freier is responsible for approximately 90 nursing staff members who coordinate efforts to operate the Patricia Neal Rehabilitation Center Inpatient Care. Her strengths are in personnel management and organization.

The BI Co-Clinical Coordinator is Al Kaye, M.S., CTRS, FDRT, CBIS. Mr. Kaye has over 40 years experience in healthcare as a recreational therapist with 38 years of experience in physical medicine and rehabilitation with a concentration in brain injury for the past 30 years. He is responsible for brain injury program strategic planning and outcomes. Mr. Kaye is published, performed presentations on local, regional, and national conferences, a guest lecturer, and professionally active in his profession with NCTRC, ATRA, and SRTS. Mr. Kaye's strengths are in program development, fundraising, and organization. The BI Clinical Coordinator's responsible for facilitating outcomes and process improvement amongst staff to develop the most progressive BI program available.

The BI Co-Clinical Coordinator is Heather Moore, PT, DPT, CBIS. Mrs. Moore has 10 years of healthcare experience in physical medicine and rehabilitation with 6 years working specifically in brain injury. Mrs. Moore specialty area is balance and vestibular rehabilitation with PNRC outside of her brain injury practice. She assists the clinical coordinator with the brain injury program strategic planning and process improvement outcomes as well as helps to coordinate the brain injury workshop. Strengthens are in planning and organization.

The Medical Director for the Patricia Neal Rehab Center is Dr. Mary Dillon. Dr. Dillon is currently Chief of Staff for Ft. Sanders Regional Medical Center. Dr. Mary Dillon oversees programmatical and medical direction for all of PNRC. Dr. Dillon is directly involved with the admission process, strategic planning, and medical oversight for PNRC. All of the physicians are physiatrists and provide direction for the program to enhance outcomes for the BI survivor. The Physiatry team include: Dr. Dillon, Dr. Fisher, and Dr. Hartman.

B. Key Staff Positions

The staff of the Patricia Neal Rehabilitation Center Brain Injury Program is its most valued resource. The team of professionals who choose to work in the Brain Injury Program are dedicated and experienced in their respective disciplines. The backbone to care of the Brain Injured patient is our nursing staff that provides 24 hour care 7 days a week. The BI Program involves case management services and the patient representative as advocates for the patient with players from the following disciplines: physical therapy, behavioral medicine, occupational therapy, speech language pathology, rehab nursing, and recreational therapy as a part of the core treatment team. The most common brain injury program treatment core team will have membership representation from all of the above mentioned services. All teams are advised and directed by the admitting physiatrist. A list of all current brain injury staff is located in the Brain Injury Program Manual.

VII. Physical Plant

The BI inpatient program at the Patricia Neal Rehabilitation Center resides in a designated electronically secured area on 4 West. The patients are treated on 4 West and in the 3 East gym primarily with occasional services in the 5-East gym area and 4-East. The architectural layout of the Center is designed to be entirely accessible for convenient use by physically disabled persons with severe mobility limitations. Accessibility features conform to the American National Standards Institute (ANSI) regulations in addition to recommendations and suggestions from physically disabled persons, family members, and associated consumers. There are occasions when a patient may require treatment to simulate other environments such as community reintegration which requires off campus setting changes or use of the Rooftop Therapy Park or ADL Apartment. The current physical plant dedicated to PNRC is approximately 58,000 square feet.

VIII. Safety

The Patricia Neal Rehabilitation Center will assure that all patients with BI are safe within their hospital environment and that the environment will remain healthy. Routine health and safety inspections will be conducted including a comprehensive inspection regularly. Emergency plans and procedures are tested regularly as required by the Medical Center Safety Department. A Rehabilitation Center representative shall actively participate on the Medical Center's Safety Committee and share communications and

concerns with the Rehabilitation Center's Director and other appropriate operation managers.

At least (1) one staff person is available in each discipline area during times of patient care that is qualified to administer CPR or assist with emergency care. All injuries at work to staff and patients are reported immediately using the Medical Center's incident reporting mechanism. Emergency power and warning mechanisms operate according to Medical Center emergency operating and testing procedures. A parking garage located within our facility offers temporary parking and valet services.

The Rehabilitation Center vehicles are inspected and maintained routinely by FSRMC Recreation Therapy Services and contracted maintenance services coordinated through Plant Engineering Facility Services. Driver's Education vehicles are maintained and inspected by the Driver's Educator. First aid supplies and fire safety equipment are available within the vehicles and checked monthly. Only Medical Center employees may use the vehicles for patient use and such employees must hold a valid State of Tennessee license with F endorsement. Each driver receives appropriate instruction from Recreation Therapy Services on vehicle and lift operation, patient safety, transport, communication systems, driving safety, and emergency procedures annually.

Patient transport within the hospital is provided by trained transporters and clinical staff. All wheelchairs are equipped with seat belts to safely secure patients during transport. Transporters are trained in safe transport operations. Patients may be cleared to either be transported by family members or free to roll once passing staff medical review for safety.

IX. PROGRAM COMPONENTS

A. Admissions, Denials, Continuation of stay, and Discharge criteria are found in Patricia Neal Administrative Policy 1.001.

B. Payment Reimbursement

A comprehensive review of the patient's financial status is made as part of the pre-admission screening process to address the most appropriate placement in the rehabilitation continuum so that the patient has the optimum opportunity to achieve his / her rehabilitation goals.

Patricia Neal Rehabilitation Center's Case Management Services will review all reimbursement options such as: private pay, government agencies, third party insurance, as well as charitable support that may be available. The Inpatient Admissions Coordinator and Outpatient Admissions Coordinators inquire about the types of services and percentages that these services are covered by the patient's source of funding. Those services reviewed primarily include occupational therapy, physical therapy, speech therapy, with additional services to include behavioral

medicine, recreation therapy, audiology, prosthetics/orthotics, optometry, and alike as prescribed by the admitting physician. Case Managers within the facility perform ongoing updates and follow-ups with all parties involved with the case.

Patients will not be eliminated from consideration solely due to lack of funding although it is recognized that the center can only support a limited number of charity cases, yet to assure its own economic viability.

C. Patient / Family Orientation

1. Family orientation is designed to introduce family members to the rehabilitation process and to the roles of the patient, family, staff and general policies of the center.
2. Included in the program is a tour of the center, overview of the services provided, educational/training requirements, admission and discharge requirements and visitation policy. The program is coordinated by the PNRC Admissions, the clinical staff, and patient care representative. It is the responsibility of all staff to orient patients and significant others to PNRC.
3. For those families not able to attend, this information is provided via phone, mail, or email. A DVD is available as an introduction to PNRC as well as the website at www.patneal.org . A virtual tour of PNRC is available on the web and also within the PNRC Regal Cinema.
4. The Admitting Nurse is responsible for general PNRC orientation. Each discipline is responsible for orientation to their service with goals and expectations discussed. The treatment team educates the patient and/or significant other on issues regarding brain injury, functional expectations, and processes.
5. After each team staffing, the case manager with the physician will review discussions and update the patient and/or significant others. The case manager will assist with developing a family and/or significant others training time with patient and the clinical staff to prepare for discharge.
6. Updates to the plan of care are performed with the case manager and attending physician at least on a weekly basis in a team conference format.
7. Education is ongoing with each day resulting in new opportunities for the patient and significant other to comprehend the brain injury and associated medical complications as well as general information on the rehab process. There is a Nursing Educator who helps with education efforts.

D. Interdisciplinary Program Scheduling:

1. Evaluation: After the physician orders are received, the Team members discuss an appropriate schedule for the patient to prevent overlap of the patient's therapies
2. Treatment: Upon completion of the evaluations by team members, the patient's therapy schedule is modified to facilitate the optimum schedule based upon patient's needs and abilities.

3. Scheduling is accomplished through coordinated efforts of clinical staff for both inpatient and outpatient services.
4. Inpatient therapies and activities will be provided 7 days a week with traditional services Monday through Friday and appropriate therapies Saturday and Sunday as deemed required. Outpatient services are Monday through Friday from 8 AM until 5:30 PM.
5. Traditional inpatient therapies are scheduled between the hours of 7:30 AM to 4:30PM Monday through Sunday. There are structured leisure activities available Monday through Friday with open ended non-structured options on the weekends for access to the recreational area, Regal Movie Theater, and a Worship Service on Wednesday and Sunday afternoons. Saturday and Sunday therapy schedule is coordinated by clinical staff. All activities are designed to balance and adjust the patient to the rehab process. Medical staffs are on call 24 hours a day 7 days a week. Nursing service will provide medical assistance as necessary 24 hours 7 days a week. A chaplain is available 7 days a week for spiritual guidance and support.
6. An example of a routine Brain Injury patient inpatient day may include ADL training, Dining group for swallowing, brain injury group for education and therapeutic value, traditional speech pathology, occupational therapy, physical therapy, behavioral medicine, recreation therapy, chaplain services for spiritual support, and ancillary services like respiratory therapy or a nutritional review by a dietician or clinical pharmacist. General Sessions are between 30 to 60 minutes in duration except for home evaluations and community re-integration assessments which require additional time due to transportation. Patient's scheduled are adjusted with considerations to patient's ability to best participate in their recovery process.

E. Clinical Program Protocols

1. Program Personnel
   a. Patient ratio: The ratio is no more than 6 patients to each individualized inpatient therapy team for the "pure" brain injury team and 6 to 1 for a mixed diagnosis team. Currently Teams 3 and 4 are the primary inpatient brain injury treatment teams with staff designated to work specifically with brain injury diagnosis. Outpatient is based on 1:1 individualized sessions.
   b. Core Interdisciplinary Team are all licensed and/or certified: It consists of a physiatrist which is a M.D. with specialty training in Physical Medicine and rehabilitation, Registered Nurse, Occupational Therapist, Physical Therapist, Speech Language Pathologist, Psychologist, Recreational Therapist, and a Case Manager with either a background in Nursing or Social Services. The physician directs the core team to handle specific issues as assessed requiring attention. These issues may include but are not limited to:
      - Community Access for driving, mobility, and transportation
      - Life Roles for basic life skills, life-long learning, parenting skills, marital relationships, and work re-entry

- Adjustment to disability due to aging, insight, and supervision.
- Medical (Co-morbid conditions, falls, medications, nutrition, seizures, and secondary complications)
- Community Participation in wellness, fitness & health, leisure, sports, recreation, social integration, advocacy, volunteer opportunities, and spiritual opportunities.

Each discipline specializes in the following services and addresses these issues and provides resources to address concerns as they develop:

Issue	**Service Provider**
Ages 6-12	Pediatric dedicated brain injury clinicians
Ages 13 - Geriatric	Core Team
Impairment	Core Team for treatment planning
Impairment Codes	Physician, FSRMC Coders and Case Management
Dual Diagnosis Codes	Physician, FSRMC Coders and Case Management
Decision-making capacity	Court of Law, Physicians with input from Core Team regarding safety
Functional Needs	Core Team
Behavioral Needs	Core Team
Physical Needs	Core Team
Cognitive Needs	Core Team
Psychosocial Needs	Core Team
Vocational Needs	Case Mgt and VR referrals sources
Educational Needs	Core Team and BI Service Coordination
Leisure and recreational needs	Core Team
Visual Functioning	OT, Physician, & Optometry
Vestibular & Balance	PT and Physician
Cultural Issues	Core Team
Spiritual Issues	Core Team with Chaplain Services
Predicted Outcomes	Core Team
Medical Acuity	Core Team
Nutrition	Core Team with Dietary and Physician
Medical Stability	Physician and Nursing
Community Reintegration	Core Team
Mental Health Issues	B. Med. & Physician
Sexuality	B. Med, PT, OT, & Physician
Chemical use/ A&D	B. Med & Physician
Life Events	Core Team with Significant Others
Usability of Living Environment	Core Team, BI Service Coordination with Significant Others
Community Access (Driving, Mobility, &	Core Team, BI Services Coordination with Significant Others

Transportation)	
Life Skills and Roles	Core Team, BI Services Coordination with significant others

c. Student affiliations: The management of students on the brain injury team is left to the discretion of the individual disciplines. The students, however, are supervised by a qualified team member and oriented to understand all aspects of brain injury by their proctor.

d. Medical Consultative Services: Patients are referred when determined appropriate by the attending physiatrist. These include specialists or services, but are not limited to, the following services:
   1. Neurosurgery
   2. Orthopedic Surgery
   3. Neurology
   4. Internal Medicine
   5. Ophthalmology
   6. Optometry
   7. Otorhinolarynogology
   8. General Surgery
   9. Plastic Surgery
   10. Urology
   11. Psychiatry
   12. Pediatric Medicine
   13. Podiatry
   14. Dentistry
   15. Oncology
   16. Cardiology
   17. Pulmonology
   18. GI
   19. Diagnostic Services:
      a. Electrodiagnositc services including EEG, EMG, and evoked potentials
      b. Radiological services including CT scan and MRI
      c. Laboratory Services
      d. Doppler Studies

E. Supportive Services:

Patients are referred when appropriate as determined by the person served and stated goals to provide support and to meet targeted goals for issues that may arise such as:
1. Modification for integration into their environment for life functions
2. Hearing Impairment
3. Spiritual needs
4. Dialysis

5. Driver's Rehabilitation
6. Durable Medical Equipment
7. Dysphasia management
8. Nutrition concerns
9. Cognitive and behavioral management
10. Prosthetics and/or orthotics to facility mobility, positioning, or function
11. Ostomy/wound care
12. Peer Support
13. Psychiatric concerns
14. Psychological concerns
15. Recreation/Leisure concerns
16. Respiratory concerns
17. Sex Education
18. Parenteral Nutrition
19. Spasticity management
20. Substance abuse and counseling
21. Vestibular deficits
22. Visual concerns for function
23. Vestibular and balance concerns
24. Vocational abilities
25. Fiscal Management concerns
26. Safety due to limited capacity of comprehension and function

These specialists and service providers may include, but are not limited to the following Services to address the above stated needs to achieve goals:

1. Assistive Technology Services
2. Respiratory Therapy
3. Vocational Services
4. Audiology
5. Orthotics / Prosthetics
6. Dietetics / Nutrition
7. Educational Specialist
8. Disabled Drivers Evaluation / Training
9. Rehabilitation Engineering
10. Adaptive Aquatics
11. Brain Injury Community Case Management Services
12. Mental Health Services with psychiatry and psychology services
13. Visually Impaired Services
14. Assistive Technology Services
15. Vestibular and Balance Specialist
16. Wheelchair Seating Specialists
17. Spasticity Management
18. Patricia Neal Innovative Recreation Cooperative program
19. Community Recreational or Leisure Programs
20. Knoxville Area BI Support Services

21. Veterans Administrative Services
22. Durable Medical Equipment Suppliers
23. Spiritual Counseling with chaplains
24. Service Animal Training
25. ADA specialists
26. Legal Aid and Advocacy
27. Brain Links Resource Network
28. Disability Services for higher education
29. Disability Resource Center
30. Balance specialists
31. Neuropsychologist
32. Swallowing Therapy
33. Health and Fitness Centers with trainers familiar with brain injury
34. Primary Care Physicians to manage general health concerns
35. Alcohol and Drug Abuse Programs
36. Department of Health and Human Services
37. Department of Child Services
38. Disability Rights Tennessee
39. Disabled Sports USA
40. Home Modification Specialists

F. Continuum of Care:

Patients are referred when appropriate and available along the continuum of care. These include, but are not limited to the following:

1. Home Health Agencies
2. Public Health Agencies
3. Public / Private Schools
4. Sheltered Workshops
5. Independent Living Centers
6. Health Care Centers
7. Vocational Rehabilitation Services
8. Community Mental Health Services
9. Skilled Nursing Home
10. Outpatient Therapy Services
11. Local BI Support Groups
12. BI Service Coordination
13. Senior Citizens Centers
14. Church Supported Organizations like Joni and Friends Knoxville
15. Post-Acute services (i.e. Crumley House, Limestone, TN; CCS, Carbondale, IL; Center for Neuro Skills, Dallas, TX; NeuroRestorative Gallatin, TN; Peachtree Brain Injury Program, Hosanna House, Chattanooga, TN; and the Mentor Network)
16. TBI Program, Tennessee Department of Health
17. Brain Injury Association of Tennessee

G. Staff Development:

Requirements for the team members are as follows:

1. Viewing web sessions on BI related topics when available
2. Attending in-house presentations on BI topics
3. Reading current literature related to BI issues through the journal club
4. Participating and / or presenting at professional organizations, public service organizations, other hospitals, and other related facilities
5. Participating in education specializing in BI treatment
6. New staff will receive specialized training on BI treatment from experienced staff prior to and during the initial phase of employment on the BI team
7. Participation in the Department of Health TBI program meetings.
8. Encouraged to participate with local events that support the brain injury community like brain injury awareness month activities and prevention.
9. Encouraged to participate in the Academy for Credentials for Brain Injury Specialists (CBIS).
10. Annual Brain Injury Workshop supported by CarolineCan Endowment.

H. Inpatient Treatment Process:

1. Patient assessments: Evaluations are initiated by team members within one (1) working day from the time the physician's order is received. Initial evaluations are completed within 3 days of admission by primary disciplines.
2. Treatment Plan: The development of long and short term goals are accomplished through a cooperative effort of the patient, family, and / or significant others, physicians, and team members.
   a) Long Term Goals are realistic long term expectations for the patient.
   b) Short Term Goals are functional objectives which are required in order to achieve long term goals.
   c) The Rehab teams along with the physician meet with family / significant others as needed to update long term goals and discuss patient progress. Case managers review information from treatment teams to patient and his/her family members.
3. Treatment Implementation: Patient treatment is implemented after team members have completed initial assessments. The patient is scheduled for individual and / or group treatment sessions based upon his / her needs. Specific treatments and techniques are discussed with patient/family/significant others during scheduled training sessions.
4. Education and Psychosocial Supportive Services:
   a) Education and psychosocial supportive services for <u>patient</u> include but are not limited to educational session, sex education, drug and alcohol counseling, and orientation sessions. This is achieved in education classes, therapies, support group, and peer support network. Patients are provided a Brain Injury Resource Manual for educational information and reference for questions about recovery and adjustment from a brain injury by case management. The resource manual is written by brain injury program staff.

b) For the family, the educational and psychosocial supportive services include but are not limited to educational sessions on brain injury, family management, financial resources, and education of school-age children, program orientation, life plans, resource information, and behavioral management. This is achieved by the nurse educator, case manager, support group, and treatment team.
c) All patients/significant others are given an educational manual specifically for brain injury education as a resource as well as access to the Brain Injury Community Service Coordinator for area resources and materials. There are over 100 resources available pertaining to Brain Injury information.

I. Outpatient Treatment Services
1. Outpatient services within PNRC are compatible with the scope and purpose of the Brain Injury Program and will provide similar services except for rehab nursing.
2. Patients will under go a thorough assessment with the prescribed therapies as recommended by the referring physician with plan of care, goals and outcomes directing needs of the patient.

Resources fall into one of the following categories: medical, sheltered, educational / vocational training, mental health, financial, transportation, government, and miscellaneous goods and services. The following is a list of some resources which may assist the patient / family but is not all inclusive:

*GENERAL RESOURCES FOR PATIENT AND CAREGIVERS

Brain Injury Community Service Coordinator
Brain Injury Association of America
Tennessee Department of Health TBI Program
Brain Injury Association of Tennessee
Disabled Sports USA
Local Mental Health Facilities
Veterans Administration
Nursing Homes
Home Health Agencies
Goodwill Industries
ARC of Knoxville - Sunshine Industries
Other rehab facilities
Housing assistance and alternatives (KCDC, HUD, Bridgeview Assisted Living, Hosea House, Crumley House, etc…)
Transportation Alternatives (K-trans, CAC, Quality Transport, ETHRA, P2P)
Sertoma Learning Center
Tennessee Department of Vocational Rehabilitation
Tennessee Department of Human Services
Medicare
TennCare

School Systems / Head Start
Crippled Children's Services
Child Life
Private Industry Council
Recreational resources (NWAA, YMCA, Local Parks & Recreation Services, etc…)
Adaptive Driving Program
STEMS – Short term meal service
Plan for achieving self sufficiency (PASS)
Mobile Meals
Interfaith Health Clinic
Social Security Administration
Superior Van and Mobility /Wheelchair Get-aways
Phoenix Conversions
World of Independence
SPARK formerly known as East Tennessee Technology Access Center
Internet
Catalyst Sports
Joni and Friends Ministry- Knoxville, TN
Wounded Warriors, Warfighters Sports, and PVA
Patricia Neal Innovative Recreation Cooperative
STAR for therapeutic riding
National Wildlife Turkey Federation
Tennessee Wildlife Resource Agency
Local Health Departments per county of residence

*Note this list includes but is not limited the resources mentioned above. Each patient and/or caregiver requires a variety of resources for support and each patient will be given information pertinent to their needs. The Brain Injury Community Service Coordinator has over 100 community resources that may be of assistance to the brain injured survivor and/or significant other.

5. Documentation Standards

All team members complete initial assessments and discharge summaries as already outlined in policies. A documentation system known as Medilinks is used for inpatient and outpatient rehabilitation medical records and is coordinated with Cerner documentation records within the general FSRMC. Inpatient team members from each discipline document daily progress notes in real time using computerized documentation. Included within the notes are short and long term goals and any changes noted. Also documented is any contact made with the patient and their significant other/family members. Significant changes that occur regarding the patient's status are noted in the electronic medical record of the patient as it occurs. Documentation on appropriate forms is done as needed such as DME orders, letters of medical necessity, and alike. The content of the documentation reflects progress towards identified problems as a part of the plan of treatment. Outpatient services are

noted on a similar system for transition of information from inpatient to outpatients needs.

6. Case Review

   a. Inpatient team conferences are conducted for each patient weekly. The purpose is to present information regarding the patient's medical status, problems, goals, progress, plan of treatment, and estimated length of stay. All members are present. The conference is conducted by the team's physician.
   b. Outpatient team conferences are conducted at least monthly for review of medical status, problems, goals, progress, plan of treatment, and estimated length of stay
   c. The case manager and / or physician will share information from the team conference. The team, family members, and patient may request a conference at any time to review goals and progress. External case managers are welcome to attend team conferences. All clinicians are responsible for ongoing education and training to prepare the patient and their support network for the next level of functioning.

7. Discharge planning

   a. The discharge planning process begins during the initial admission interview with the patient, family, and/or significant other. It is reassessed throughout the patient's stay with plans and goals being changed as necessary. The case manager works with the team to make a plan in consideration of the patient's goals. The case manger completes a psychosocial with the patient and the family to determine strengths, weaknesses, and coping skills. The case manager makes an effective plan that utilizes the patient's resources most effectively. Referrals are made to community agencies when deemed necessary by the team members with physician approval.
   b. At inpatient discharge, the Case Manager, along with the treatment team will:
      1. Finalize discharge plans with the patient and significant other(s).
      2. Refer patients to services along with continuum of care such as PNRC Outpatient services including Home Health, Post-Acute services, or integration into appropriate community services.
      3. Coordination of needed equipment and services such as medication, transportation, and DME.
      4. Assess life needs. i.e. vocational-educational, academic status. Patients are referred to out-patient services and treatment when appropriate.
      5. Patients will receive a resource manual to hold important information for preparation which will include: Medications and prescriptions list, follow-up appointments, safety letters, community resource contacts, and educational information.

8. Program Evaluation

The purpose is to determine the effectiveness of the BI Program. Evaluation of treatment outcomes from the time of admission to the time of discharge is tracked through the Functional Independence Measurement System of UDS for inpatient Services until 3rd quarter 2019. As of October 2019, inpatient will use the QRP for general functional assessment for the Brain Injury Program as well as standardized tests and measurements. UDS will continue to work with PNRC to help with program evaluation information to establish benchmarks for areas of improvement and notes success. Due to the low number of pediatrics, we will use standard assessment tools to review outcomes in pediatrics. Patients and / or their family members have the opportunity to complete satisfaction surveys at the time of discharge. Case Management does a phone call follow-up within the first month of discharge. A follow-up phone survey is performed approximately 3-6 months after discharge to provide input on the progress and carry-over of skills learned while at PNRC. This is performed by MedTel. A random sampling of all patients who are post discharge is performed by Press Ganey consulting firm. PNRC has won six national Chrystal PRC patient customer satisfaction awards through PRC in the past recent years leading up to the change to Press Ganey. All the information is reviewed to qualify and quantify the delivery of services through the PNRC Quality Committee. Measurements of service delivery will be added to a cumulative data base to assist in individual case studies, determination of goals, patient satisfaction, and overall program management. The information is shared with BI Program staff to review effective treatment and program needs and objectives at BI Program Meetings. The information is shared with Administration for purposes of making program adjustments. The policy and procedure guiding the methodology involved for the execution of program evaluation will be the same as that criteria established for program evaluation for the entire Patricia Neal Rehabilitation Center as so stated in the General Policy and Procedure Manual for PNRC program evaluation.

Revised 11/18/2019 agk