

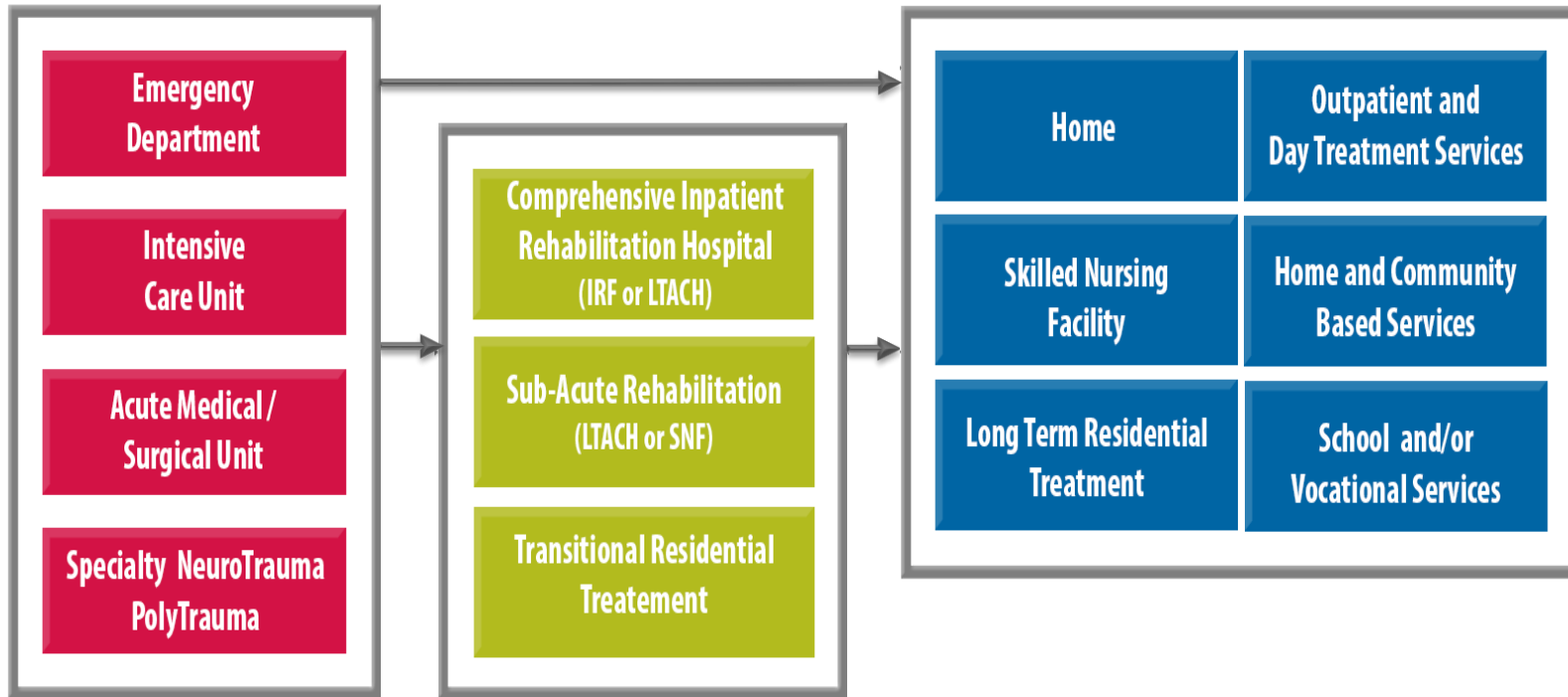


SPAULDING™
REHABILITATION NETWORK

IRF Level of Care for BI



Continuum of Care



Acute Care Rehabilitation

Post-Acute Rehabilitative Treatment

Long Term Home and Community

What is an IRF?

- IRF = Intense Rehabilitation Facility
- Criteria
 - Sufficient medical stability to be able to participate in a minimum of 3 hours of therapy daily
 - Medical complexity/acuity requiring daily monitoring by MD
 - Potential to achieve realistic functional goals allowing return to the community

Spaulding LTAC/IRF Continuum

- More medical acuity but allowing for access to rehab (80% medical:20% rehab vs 80% rehab:20% medical at IRF)
- Patients may start at LTAC (Long Term Acute Care) then progress to IRF
- Allows for earlier introduction of rehab program for more medically involved patients with up-titration as tolerated
- Allows for optimal exposure to rehab when there are greater LTC benefits than rehab benefits
- Pathway for Disorders of Consciousness patients who are emerging from Minimally Conscious state

Interdisciplinary Team

- Physiatrist
- Rehabilitation Nurse
- Occupational Therapist
- Speech Language Therapist
- Recreational Therapist
- Psychologist
- Neuropsychologist
- Music Therapist
- Case Management
- Social Worker
- Child Life Specialist
- Internal Medicine
- Neurologist
- Endocrinologist
- Respiratory Therapist
- Pulmonologist
- Nutritionist
- Chaplaincy

Adult Brain Injury Program 2018

- 410 patients served
- Average LOS: 20.8 days
- Each patient receives a minimum of 15 hours of therapy per week – 3hrs/day 5 days/week
- 24 hr MD and Rehab nursing care
- 64.6% male
- 35.4% female
- Average age: 54.1
 - 29% 0-44
 - 34.4% 45-64
 - 22.9% 65-74
 - 13.7% 75+

Discharge Destination

From Spaulding

- 61.1% Community
- 19.8% LTC
- 19.1% Acute

At 90 Days

- 91.6% Community
- 6% LTC
- 2.4% Acute

Stroke Program

2018

- 605 patients served
- Average LOS 20 days
- Each patient receives a minimum of 15 hours of therapy per week – 3hrs/day 5 days/week
- 24 hr MD and Rehab nursing care
- 56.9% male
- 43.1% female
- Average age 67.3
- 6.9% 0-44
- 31.7% 45-64
- 27.9% 65-74
- 33.4% 75+

Discharge Destination

From Spaulding

- 49.9% Community
- 34.7% LTC
- 15.4% Acute

At 90 Days

- 91.6% Community
- 9% LTC
- 0% Acute

Admission Sources

- Primarily from acute trauma centers
- Home
- Long term care
- Primarily from Boston-area hospitals
- Massachusetts
- New England
- National
- International

Funding

Brain Injury

- Private (BC/BS, Aetna, HCHP, WC, etc.)
- Medicaid
- Medicare

Stroke

- Medicare/Managed Medicare
- Private (BC/BS, Aetna, HCHP, etc.)
- Medicaid

ACQUIRED BRAIN INJURY	TRAUMATIC IMPACT Contact Injury Head struck by or against an object		TRAUMATIC INERTIAL Non-Contact Injury Brain moves within skull	NON-TRAUMATIC Internal Insult
PRIMARY INJURY MECHANISM	CLOSED (Non-Penetrating)	OPEN (Penetrating) Skull Fracture Meninges Breach	Rotational/Angular Forces Non-Contact Injury Brain moves within skull	Severe Reductions in Blood Flow Hemorrhage Due to Clotting
INJURY CLASSIFICATION	FOCAL - OR - DIFFUSE	PRIMARILY FOCAL	PRIMARILY DIFFUSE (MULTIFOCAI)	FOCAL - OR - DIFFUSE
INJURY PATHO-PHYSIOLOGY	Brain Contusions Brain Lacerations Intracerebral Hemorrhage Diffuse Axonal Injury	Epidural Hematomas Subdural Hematomas Intracerebral Hemorrhage Infections	Diffuse Axonal Injury White Matter Lesions Hemorrhage	White Matter Lesions Hemorrhage
INJURY CAUSES	Blast Related Assaults Falls Vehicular Accidents Sports Accidents	Gunshot Stabbing Falls Vehicular Accidents Sports Accidents	Falls Vehicular Accidents Sports Accidents	Stroke Neurotoxic Poisoning Hypoxia/Anoxia Ischemia Infection Tumors

Major Sources of Acquired Brain Injury

Head Trauma

Vascular Disorders

Degenerative Disorders

Toxic Exposure

Infectious Processes

Neoplasms

Anoxia

Metabolic and Endocrine Disorders

Nutritional Deficiencies

Severity of Injury

- Mild < 30 min in LOC, GCS 13-15
- Moderate 30min-24 hr LOC GCS 9-12
- Severe > 24 hr LOC GCS 3-8

Severity of Injury

Rancho Los Amigos Scale

L
T
A
C

I
R
F

- Level 1 - No response
- Level 2 – Generalized response
- Level 3 – Localized response

I
R
F

- Level 4 – Confused and agitated
- Level 5 – Confused and inappropriate

H
o
m
e

- Level 6 – Confused and appropriate
- Level 7 – Automatic and appropriate
- Level 8 – Purposeful and appropriate

Sources of TBI

- Falls 20%
- Motor vehicle accident 20%
- Struck by another object 19%
- Other causes 13%
- Assault 11%
- Unknown 9%
- 65+ Falls #1
- 0-14 Falls #1
- ETOH involved in 37-51% of cases
- Domestic Violence leading cause for women 15-44

Medical Issues

- Fractures
- Seizures
- Hydrocephalus
- Hyper/hypotension
- Cardiopulmonary Disorders
- Hypothalamic and Endocrine Disorders
- Headaches
- Arousal
- Fatigue
- Pain
- Sleep Disturbance
- Cranial Nerve Damage
- Sensory Deficits
- Heterotopic Ossification
- Increased Muscle Tone and Contractures
- Motor Disturbances
- Vestibular disorders
- Dizziness
- Nutrition and Feeding
- Bowel and Bladder Dysfunction

Cognitive Issues

- Orientation/confusion
- Attention, Concentration Deficits
- Expressive and Receptive Language Deficits
- Memory Deficits
- Executive Functioning Deficits

Functional Issues

- Mobility
- Self-care
 - Bathing
 - Dressing
- Swallowing/Eating
- Continence
- Self-management

Psychological Issues

- Loss of control over one's life
- Loss of sense of one's sense of self
- Loss of mind/body integration
- Loss of confidence in oneself
- Increased sense of vulnerability and fragility
- Decreased sense of vitality
- Grief reaction to loss

Psychological Issues

- Dysregulated Behavior
- Agitation
- Aggressive behavior
- Personality change
- Depression
- Suicide
- Anxiety
- Generalized anxiety disorder
- Panic attacks
- Obsessive-compulsive disorder
- Psychosis
- Simple phobias
- Acute stress disorder
- PTSD
- Adjustment disorder
- Substance abuse

Family Impact

- Change in roles
- Limited/Diminished resources
- Change in supports
- Change in structure/dynamics
- Change in routines
- Trauma, grief and adjustment
- Large learning curve

Caregiver Needs

- Case management with service coordination
- Resource planning
- Legal and financial counseling
- Informational support (Knowledge)
- Emotional support (Feelings)
- Instrumental support (Operational)
- Training (Skills)