In This Package You Will Find...

Introduction to:
The Traumatic Brain Injury Resource & Support Center

The Traumatic Brain Injury Resource and Support Center serves as a critical life-line for Floridians who survive traumatic brain injury and their families, providing:

- ✓ One-stop access to a vast network of information and services
- ✓ Toll-free Helpline: 1-800-992-3442 and website: www.byyourside.org
- ✓ Assistance by Resource Facilitation Coordinators (certified brain injury specialists)
- ✓ Help connecting with State and local agencies and professionals
- ✓ Assistance with paperwork
- ✓ Emotional support and advocacy

By Your Side.™ Our staff at the Traumatic Brain Injury Resource and Support Center helps family members and survivors of traumatic brain injury (TBI) answer common questions and provides further personalized assistance with challenging and confusing choices. Our staff's knowledge, as certified brain injury specialists, is enhanced by the experiences shared by survivors and families who live with TBI and the professionals who help them. Call our toll- free helpline at 1-800-992-3442 to reach a Resource Facilitation Coordinator in your area or visit our website at www.byyourside.org.

Tab 1

The Brain & Spinal Cord Injury Program (BSCIP)

Tab 2

Traumatic Brain Injury (TBI)
General Facts / Information

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TBI General Facts/Information

Glossary of Terms

Abstract Reasoning: process of generalizing from concrete examples and experiences to larger, broader principles.

Acalculia: dysfunction or inability to perform mathematical operations, recognize numbers, or count.

Acuity: keenness of sensation.

Agnosia: loss of ability to recognize familiar people, places and objects.

Agraphia: loss of ability to express thoughts in writing.

Alexia: inability to read or recognize words.

Anoxia: a lack of oxygen that can cause damage to the brain. This can result when blood flow is reduced (such as in electrocution, lightning strike and near drowning).

Anomia: dysfunction or inability to name objects or recall individual names.

Anterograde Amnesia: loss of memory for events and periods of time following an injury or traumatic event.

Apathy: decrease in motivation, initiation, interest in life and growth; indifference.

Aphasia: loss in ability to speak coherent ideas or understand spoken language.

Apraxia: loss of ability to carry out habitual movement or acts that were previously automatic.

Astereognosis: inability to recognize objects or shapes by feeling them.

Asymmetry: discrepancy in function or appearance between sides of organs.

Ataxia: dysfunction in motor coordination and balance.

Attention: ability for sustaining focus on task for a period of time to allow for coding and storing of information in memory.

Brain Stem: the lower portion of the brain that connects it to the spinal column. The brain stem coordinates the body's vital functions (breathing, blood pressure and pulse).

Cerebellum: the portion of the brain that is located below the cortex. The cerebellum is concerned with coordinating movements.

Cognition: process of thinking, understanding and reasoning.

Coma: unconsciousness lasting for longer than a brief period of time. A state of unconsciousness where the person cannot be aroused and/or does not respond.

Contra-Coup: when the brain sustains sufficient force, causing it to "bounce" against the opposite side of the skull; thereby causing injury to both the site of impact, and the part of the brain opposite the impact.

Cortex: the largest portion of the brain consisting of two cerebral hemispheres that are connected by a band of tissue (the corpus callosum). This is the area where most "thinking" and cognitive functioning takes place. It is sometimes referred to as the "cerebrum."

Diffuse: brain damage that covers many areas of the brain rather than one specific location. Diffuse damage is common in closed brain injuries due to the brain moving about and tissue being torn, stretched or bruised.

Diplopia: seeing two images of a single object ("double vision").

Disinhibition: the inability to control or inhibit impulses and emotions.

Disorientation: disturbance in recognition of person, place and/or time and day.

Dysarrhria: disruption or dysfunction in speech articulation. EDEMA: collection of fluid (water) in the brain tissue causing swelling.

Edema: collection of fluid (water) in the brain tissue causing swelling.

Emotional Liability: intense fluctuations of emotions in response to experiences.

Frontal Lobe: the area of the brain located at the front on both the left and right sides. This area plays a role in controlling emotions, motivation, social skills, expressive language and inhibition of impulses. The motor controlling movement and motor integration runs along the posterior (back) of the frontal lobe.

Frustration Tolerance: amount and degree of frustration; the point at which a person can no longer control his/her anger and responds by yelling, throwing things or displaying aggressive behavior.

Glasgow Coma Scale: a scale of severity of injury developed by B. Jennett, M.D., and G. Teasdale, M.D. This scale relates the level of consciousness with three factors: motor responses, eye opening and verbal responses.

Hematoma: when an area of tissue swells and fills with blood.

Hemiparesis: weakness of one side of the body (or part of it) due to injury to the motor areas of the brain.

Hemispheric Asymmetry: differences in the type of functions for which the two sides of the brain are responsible. (For example, the left side is usually associated with verbal functions, while the right side is associated with spatial abilities).

Hemorrhage: bleeding that occurs following trauma. Bleeding may occur within the brain when blood vessels in the skull or the brain are damaged.

Inflexibility: rigidity in thinking; over reliance on stereotypes; difficulty in recognizing alternative possibilities.

Judgment: ability for resolving dilemmas and approaching problems; includes values, morals, and interpretation with respect to interaction.

Limbic System: a set of structures (usually considered part of the temporal lobe) which play an important role in memory, attention, emotions and behavior.

Memory: stored recollections about experiences, events, feelings, dates, etc., from the recent and distant past.

Occipital Lobe: the posterior(back) part of each side of the brain, involved in perceiving and understanding visual information.

Parietal Lobe: the upper middle lobe of each side of the brain, involved in perceiving and understanding sensations, and closely linked to speech fluency and writing.

Perseveration: over-reliance on, or repetition of, a specific response or behavior to different tasks.

Premorbid: a term to describe the patient's condition before the injury or illness.

Post-Traumatic Amnesia: loss in memory of events related to a traumatic event and the period immediately following the trauma.

Problem Solving: skills for employing reasoning, judgment, and discernment in resolving problems.

Proximal Instability: impaired strength or muscle tone of the trunk, shoulder girdle or hip girdle. This can cause poor posture, abnormal movement of the limbs, inability to sit up and inability to hold one's head up.

Quadriparesis: a weakness that involves all four limbs.

Ranchos Los Amigos Scale: an assessment tool that provides a description of the various behavioral stages an individual with brain injury will experience as he/she progresses through rehabilitation.

Retrograde Amnesia: loss of memory of events and periods of time before an injury.

Spasticity: an abnormal increase in muscle tone, causing the muscles to resist being stretched. A patient with spasticity may look "curled up," with his arms held close to his chest, or he may appear very stiff.

Spontaneous Recovery: the recovery which takes places spontaneously as the brain heals; this type of recovery occurs with or without rehabilitation and it is often difficult to know how much improvement is spontaneous and how much is due to rehabilitative interventions.

Tactile Defensiveness: being overly sensitive to touch; withdrawing, crying, yelling or striking out when touched.

Temporal Lobe: the lower middle part of each side of the brain, involved in receiving information from the auditory system and involved in memory.

Unilateral: pertaining only to one side.

Unilateral Neglect: unawareness or inattention to one side of the body or the space or events occurring on one side of the body.

Ventricles: four cavities in the brain that are filled with cerebrospinal fluid, serving as a cushion when the brain is impacted.

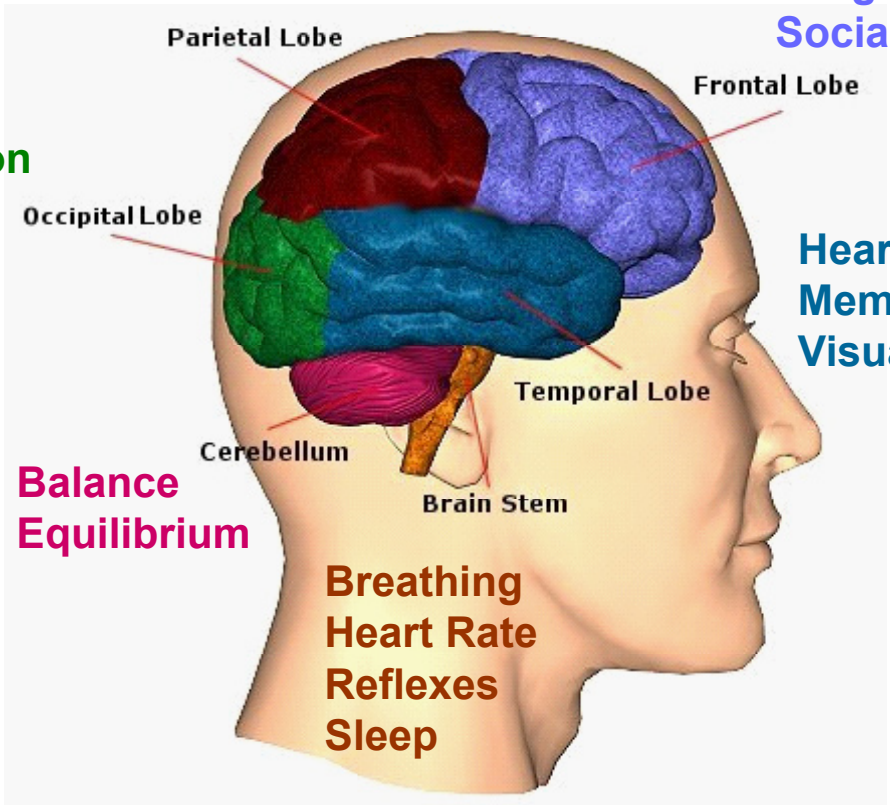
Vestibular: awareness of movement involving the head. Disorders of the vestibular system can lead to a lack of awareness of movement, a lack of awareness of direction of movement or hypersensitivity to movement.

Visual Field Deficit: not visually perceiving information in a specific area of the visual field.

Brain Lobes / Functions

Motor Functions
Memory
Judgment
Language
Social Behavior

Visual Attention
Hand/Eye Coordination



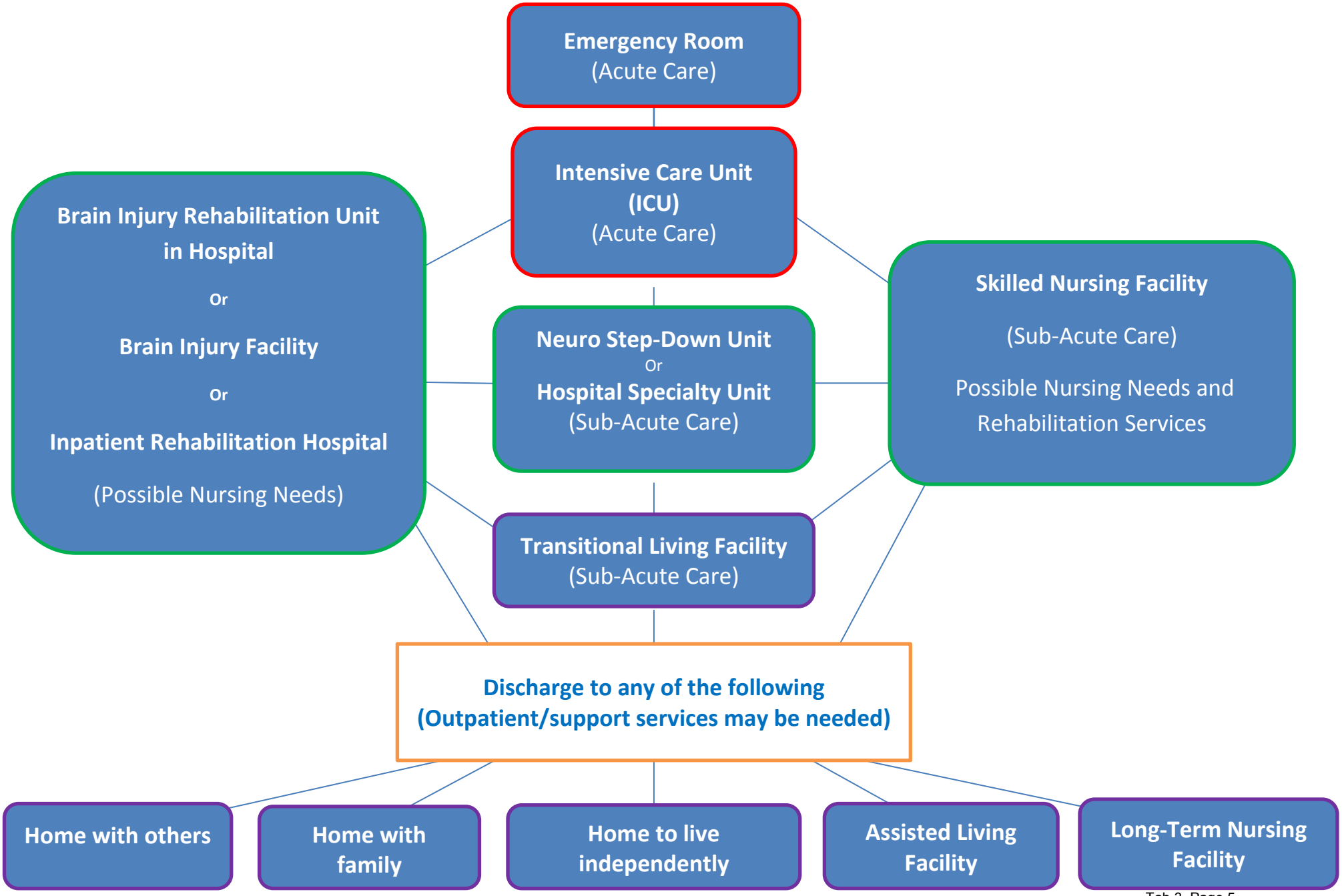
Vision

Hearing
Memory
Visual Perception

Balance
Equilibrium

Breathing
Heart Rate
Reflexes
Sleep

Common Traumatic Brain Injury (TBI) Recovery Chart



Initial Injury / Critical Phase

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Initial Injury / Critical Phase

WHAT IS TRAUMATIC BRAIN INJURY?

A **traumatic brain injury (TBI)** is an injury to the brain as a result of an **external** blow to the skull. A **"closed head injury"** results from a blow to the brain as in a motor vehicle crash or a fall. When the skull hits a stationary object, the brain twists on its axis (the brain stem), causing localized or widespread damage. The brain, a soft mass surrounded by fluid that allows it to "float," may rebound against the skull, resulting in further damage. There may be a period of unconsciousness immediately following the trauma, which may last minutes, weeks or months. Damage or bruising to many parts of the brain is called diffuse damage.

An **"open head injury"** is a penetrating assault to the brain, such as from a gunshot or knife wound. This type of injury is more likely to damage a specific area of the brain.

Minor brain injury may occur with no loss of consciousness and only a dazed or confused state lasting a short time. Though the medical care needed may be minimal, persons with minor brain injury may experience symptoms and impairments similar to those resulting from moderate to severe brain injury, but of lesser intensity.

OTHER TYPES OF BRAIN INJURY

The brain can also be damaged as a result of **near drowning, heart attack, stroke and infections.** These types of injury interrupt the flow of oxygen or blood supply to the brain, and are categorized as **"anoxic or hypoxic brain injury."**

BRAIN SWELLING / BRAIN EDEMA:

In response to trauma, changes occur in the brain that require monitoring to prevent further damage. The brain's size may increase after a severe brain injury. This is called **brain swelling** and **occurs when there is an increase in the amount of blood to the brain.** Later in the illness **water may collect in the brain, which is called brain edema.** Brain swelling and edema cause excessive pressure in the brain called **intracranial pressure (ICP).** Around the clock monitoring during this time is essential so that ICP can be immediately treated. Treatment can be difficult. Strong medications are administered and, in some cases, removal of small amounts of fluid from the brain may be beneficial.

COMA: A prolonged period of unconsciousness where an individual has no meaningful response to stimuli. In this sleep-like state, there is no speech, the eyes are usually closed, and there is no response to commands. However, a person in coma may have a simple reflex response to touch or pain. The individual may react to pain by groaning or moving but will have no memory of the pain. It is suggested that people talk about or to the individual as if he/she can hear and understand what is being said. Professionals measure coma levels by the progression of responsiveness. In the acute phase of brain injury, the **Glasgow Coma Scale** is used. As the patient improves or stabilizes, the **Ranchos Los Amigos Scale** is used, which measures levels of cognitive (understanding and reasoning) thinking.

RANCHOS LOS AMIGOS SCALE
Levels of Cognitive Functioning

Level I - No Response: Total Assistance

Complete absence of observable change in behavior when presented visual, auditory, tactile, proprioceptive, vestibular or painful stimuli

Level II - Generalized Response: Total Assistance

- Demonstrates generalized reflex response to painful stimuli
- Responds to repeated auditory stimuli with increased or decreased activity
- Responds to external stimuli with physiological changes generalized, gross body movement and/or not purposeful vocalization
- Responses noted above may be same regardless of type and location of stimulation
- Responses may be significantly delayed

Level III - Localized Response: Total Assistance

- Demonstrates withdrawal or vocalization to painful stimuli
- Turns toward or away from auditory stimuli
- Blinks when strong light crosses visual field
- Follows moving object passed within visual field
- Responds to discomfort by pulling tubes or restraints
- Responds inconsistently to simple commands
- Responses directly related to type of stimulus
- May respond to some persons (especially family and friends) but not to others.

Level IV - Confused/Agitated: Maximal Assistance

- Alert and in heightened state of activity
- Purposeful attempts to remove restraints or tubes or crawl out of bed
- May perform motor activities such as sitting, reaching and walking but without any apparent purpose or upon another's request
- Very brief and usually non-purposeful moments of sustained alternatives and divided attention
- Absent short-term memory
- May cry out or scream out of proportion to stimulus even after its removal
- May exhibit aggressive or flight behavior
- Mood may swing from euphoric to hostile with no apparent relationship to environmental events
- Unable to cooperate with treatment efforts
- Verbalizations are frequently incoherent and/or inappropriate to activity or environment

Level V - Confused, Inappropriate Non-Agitated: Maximal Assistance

- Alert, not agitated but may wander randomly or with a vague intention of going home.
- May become agitated in reponse to external stimulation, and/or lack of environmental structure.
- Not oriented to person, place or time.
- Frequent brief periods, non-purposeful sustained attention
- Severely impaired recent memory; confusion of past & present in reaction to ongoing activity
- Absent goal directed, problem solving, self-monitoring behavior
- Often demonstrates inappropriate use of objects without external direction
- May be able to perform previously learned tasks when structured and cues provided
- Unable to learn new information
- Can respond appropriately to simple commands fairly consistently with external structures & cues
- Responses to simple commands without external structure random; non-purposeful

RANCHOS LOS AMIGOS SCALE continued

Level V - Confused, Inappropriate Non-Agitated: Maximal Assistance (Cont'd)

- Converses on social, automatic level for brief periods of time when provided structure & cues
- Verbalizations about present events become inappropriate and confabulatory when external structure and cues are not provided

Level VI - Confused, Appropriate: Moderate Assistance

- Inconsistently oriented to person, time and place
- Can attend to very familiar tasks in non-distracting environment 30 min. with moderate redirection
- Remote memory has more depth and detail than recent memory
- Vague recognition of some staff
- Able to use assistive memory aide with maximum assistance
- Emerging awareness of appropriate response to self, family and basic needs
- Moderate assist to problem solve barriers to task completion
- Supervised for old learning (e.g. self care)
- Shows carry over for relearned familiar tasks (e.g. self care)
- Maximum assistance for new learning with little or nor carry over
- Unaware of impairments, disabilities and safety risks
- Consistently follows simple directions
- Verbal expressions are appropriate in highly familiar and structured situations

Level VII - Automatic, Appropriate: Minimal Assistance for Daily Living Skills

- Consistently oriented to person and place, within highly familiar environments. Moderate assistance for orientation to time
- Able to attend to highly familiar tasks in a non-distraction environment for at least 30 minutes with minimal assist to complete tasks
- Minimal supervision for new learning
- Demonstrates carry over of new learning
- Initiates and carries out steps to complete familiar personal and household routine but has shallow recall of what he/she has been doing
- Able to monitor accuracy and completeness of each step in routine personal and household ADLs and modify plan with minimal assistance
- Superficial awareness of his/her condition but unaware of specific impairments and disabilities and the limits they place on his/her ability to safely, accurately and completely carry out his/her household, community, work and leisure ADLs
- Minimal supervision for safety in routine home and community activities
- Unrealistic planning for the future
- Unable to think about consequences of a decision or action
- Overestimates abilities
- Unaware of others' needs and feelings.
- Oppositional/uncooperative.
- Unable to recognize inappropriate social interaction behavior

Level VIII - Purposeful, Appropriate: Stand-By Assistance

- Consistently oriented to person, place and time
- Independently attends to and completes familiar tasks for 1 hour in distracting environments
- Able to recall and integrate past and recent events
- Uses assistive memory devices to recall daily schedule, "to do" lists and record critical information for later use with stand-by assistance
- Initiates & carries out steps to complete familiar personal, household, community, work & leisure routines with stand-by assistance; can modify the plan when needed with minimal assistance

RANCHOS LOS AMIGOS SCALE continued

Level VIII - Purposeful, Appropriate: Stand-By Assistance (cont'd)

- Requires no assistance once new tasks/activities are learned
- Aware of and acknowledges impairments and disabilities when they interfere with task completion but requires stand-by assistance to take appropriate corrective action
- Thinks about consequences of a decision or action with minimal assistance Overestimates or underestimates abilities
- Acknowledges others' needs and feelings and responds appropriately with minimal assistance
- Depressed and/or irritable
- Low frustration tolerance/Easily angered/Argumentative
- Self-centered
- Uncharacteristically dependent/independent
- Able to recognize and acknowledge inappropriate social interaction behavior while it is occurring and takes corrective action with minimal assistance

Level IX - Purposeful, Appropriate: Stand-By Assistance on Request

- Independently shifts back and forth between tasks and completes them accurately for at least two consecutive hours
- Uses assistive memory devices to recall daily schedule, "to do" lists and record critical information for later use with assistance when requested
- Initiates & carries out steps to complete familiar personal, household, work and leisure tasks independently and unfamiliar personal, household, work and leisure tasks with assistance
- Aware of and acknowledges impairments and disabilities when they interfere with task completion and takes appropriate corrective action but requires stand-by assist to anticipate a problem before it occurs and take action to avoid it
- Able to think about consequences of decisions or actions with assistance when requested
- Accurately estimates abilities but requires stand-by assistance to adjust to task demands
- Acknowledges others' needs and feelings and responds appropriately with stand-by assistance
- Depression may continue
- May be easily irritable
- May have low frustration tolerance
- Able to self monitor appropriateness of social interaction with stand-by assistance

Level X - Purposeful, Appropriate: Modified Independent

- Able to handle multiple tasks simultaneously in all environments but may require periodic breaks
- Able to independently procure, create and maintain own assistive memory devices
- Independently initiates and carries out steps to complete familiar and unfamiliar personal, household, community, work and leisure tasks but may require more than usual amount of time and/or compensatory strategies to complete them
- Anticipates impact of impairments and disabilities on ability to complete daily living tasks and takes action to avoid problems before they occur but may require more than usual amount of time and/or compensatory strategies
- Able to independently think about consequences of decisions or actions but may require more time and/or comepensatory strategies to select appropriate decision or action
- Accurately estimates abilities and independently adjusts to task demands
- Able to recognize needs and feelings of others and automatically respond in appropriate manner
- Periodic periods of depression may occur
- Irritability and low frustration tolerance when sick, fatigued and/or under emotional stress
- Social interaction behavior is consistently appropriate

WHO ARE THE MANY DIFFERENT PEOPLE CARING FOR THE PATIENT?

Most hospitals use a team approach in the care of patients with brain injuries. Family members may become disturbed because the lead doctor is not always present. However, each member of this specialized team has a specific and important job. It may be difficult for family members to understand which team member does what, and to whom specific questions should be directed. The following is a list of professionals who may be part of the team during various stages of the recovery process:

Depending on the extent of injuries the patient has sustained, it is not uncommon for the admitting physician to consult with physicians with special skills, such as infectious disease control; ear, nose and throat; orthopedic; ophthalmology; oral surgery; etc.

Neurosurgeon – Physician specialist trained to evaluate, treat and perform surgery for injuries and disease affecting the brain, brain stem and/or spinal cord. The neurosurgeon is a primary care physician and may sign off the case once the crisis is past or upon completion of surgical follow-up.

Neurologist – Physician specialist concerned with treating disorders of the brain, nerves, and muscles.

Rehabilitation Nurses – Nurses with basic nursing skills and specialized training in rehabilitation techniques.

Respiratory Therapist – Concerned with helping the patient breathe adequately. If the patient is on a respirator, the respiratory therapist is responsible for maintaining the equipment. If the patient is unable to cough up secretions, the respiratory therapist may assist by lowering the head, tapping the back, and suctioning the patient.

Physiatrist – Physician primarily concerned with evaluating the impact of the traumatic brain injury on the functioning of the patient's body (not just the brain) and helping the patient to overcome any disability that has occurred.

Physical Therapist – Concerned with helping the patient regain maximum functioning of body movement or preventing further deterioration of physical function in the unconscious patient. This is done initially by moving the arms and legs (called Range of Motion) and thereby exercising unused muscles.

Occupational Therapist – Concerned with helping patients with activities of daily living (ADL) and with recovering functions that help them return to work and independence.

Speech Therapist – Concerned with helping the patient return to normal or alternative patterns of communication.

Clinical Psychologist/ Neuropsychologist – Concerned with evaluating mental functions and planning training programs to help the patient brain return to normal functioning as quickly as possible. Assists with emotional and behavioral problems.

WHAT IS THE BEST WAY TO OBTAIN INFORMATION FROM DOCTORS?

Questions to doctors should be written down. This is a very stressful time for everyone and questions can be easily forgotten. Be persistent with questions until they are answered. The family member asking the questions may want to take notes on the answers. The family should be prepared for some unpleasant information and be aware that there may be no specific answers to some questions. Remember that the recovery process involves a number of specialists who work as a team and information should be sought from all team members in order to understand the patient's situation.

WHAT IS ALL THAT EQUIPMENT ATTACHED TO THE PATIENT?

The brain coordinates of the rest of the body's functions. Brain injury may result in the brain not performing these functions as well as necessary. It must be given as much help as possible to maintain all bodily functions.

Below is a list of the equipment commonly found surrounding a patient with brain injury and how it is used. Each patient may not have all of this equipment. A diagram follows showing the location of some of the listed equipment on the patient.

Arterial line – A very thin tube (catheter) inserted into the patient's arteriy (usually in the arm) to allow direct measurement of blood pressure and to measure the concentration of oxygen and carbon dioxide in the blood. The arterial line is attached to a monitor.

Brain stem evoked response (Evoked potentials) – Auditory brain stem responses are evoked by stimulating the brain stem with painless sound waves using headphones. These sound waves are received by the brain, and a machine is used to test whether the brain stem has received the signals. The quality of brain stem functioning in a comatose patient is thought to be an important indicator of the degree and site of brain injury. Since this test requires very specialized and expensive equipment, it is not available in all hospitals. A more common test is the **EEG (Electroencephalogram).**

Catheter (kath-a-ter) – A flexible plastic tube of varying sizes with multiple uses.

Central venous pressure (CVP) line – A very thin tube (catheter) inserted into veins to measure venous blood pressure (the pressure of the blood as it returns to the heart). CVP lines are inserted into veins in the patient's arm or chest just below the shoulder, or occasionally on the side of the neck. The CVP catheter is connected to a monitor.

Chest tubes – Tubes inserted into the patient's chest between lung and ribs to allow fluid and air to drain from the area surrounding the lungs. Removing this fluid and air from around the lungs allows them to more fully expand. An accumulation of fluid and air in the lung cavity can cause the lung to collapse. Chest tubes drain into a large plastic container near the foot of the patient's bed. The patient may have one or more of these tubes in place.

Electrocardiogram (EKG) – A set of electrodes placed in selected locations on the patient's chest to monitor heart rate and rhythm.

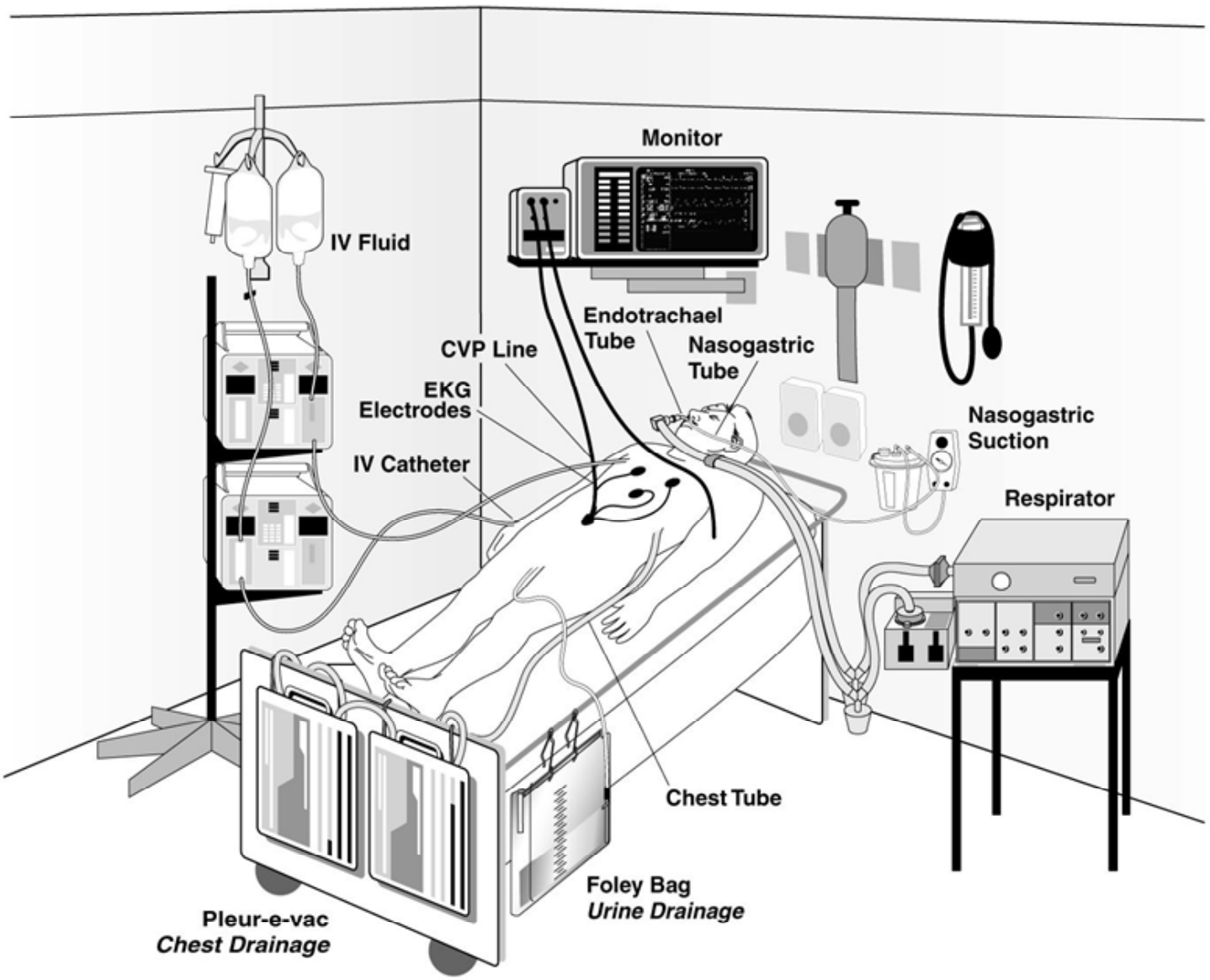
Endotracheal tube (E.T. Tube) – Serves as an artificial airway inserted through the patient's mouth or nose. It passes through the throat and into the air passages to help breathing. It must also pass through the patient's vocal cords. The patient will be unable to speak as long as the tube is in place.

Eye tape - Tape used to close the patient's eyes. The eyes must be kept moist. We do this naturally when we blink our eyes. This reflex is lost in the patient who is unresponsive but has open eyes.

Foley catheter – This is a tube inserted into the urinary bladder for drainage. Urine drains through the tube into a plastic bag hanging low by the foot of the bed or attached to the patient's leg.

Intracranial pressure (ICP) monitor – A monitoring device to determine pressure within the brain. It consists of a small tube attached to the patient's skull by either a ventriculostomy, subarachnoid bolt or screw, and connected to a transducer.

Intravenous (IV) board – A simple board usually attached with tape to the patient's forearm to prevent bending and dislocation of intravenous arterial or CVP lines.



HOW LONG WILL IT TAKE TO RECOVER?

Due to the uncertainty accompanying brain injury, it is difficult to predict a level of recovery. However, to speak in general terms, the recovery from brain injury happens in stages. The first stage includes intensive, lifesaving medical and technical procedures, which occur in an acute care facility immediately following the trauma. After the acute care stage, the challenge of recovery then shifts to focus on the remaining stages of physical, occupational and neuropsychological restoration.

The rate of recovery is most rapid during the initial weeks of the brain injury or after the person awakens from the coma. It is important that the period of rapid recovery does not mislead both the family and treatment staff to predict continued rapid, perhaps complete, recovery. Unfortunately if there is a slowdown of recovery after this stage, it can be very difficult for families; however, each individual progresses at his/her own rate of recovery. It is important to note that a slowdown in progress does not mean an end to recovery. Continued gains in function have been reported for years after the injury.

There are many factors that will affect the level of recovery after brain injury, such as: age at injury, area of the brain affected by the injury, length of time in coma, pre-existing personality characteristics, quality of pre-hospital (paramedic/EMS) and hospital care, speed of entry into brain injury rehabilitation program, nature of the support network, and involvement of family.

HOW CAN THE FAMILY HELP?

After the initial crisis, a family should try to return to a routine that is as normal as possible. Family members should stay in contact with friends and stay involved in activities they enjoy. It is important to stay in touch with the outside world.

Family members should ask the medical staff for ways they can be involved in the daily care of the patient. Loving care from family members is important in the recovery process. It is also a productive way to spend time with the patient as well as a learning process for family members.

Families are encouraged to learn about brain injuries so they will be better able to help the individual recover to the fullest extent possible. Families should inquire as to the availability of reading material about brain injury from the hospital, doctor or social worker. Families may also receive helpful information from Brain Injury Association of Florida, or the State of Florida, Brain and Spinal Cord Injury Program

WHAT PROCEDURES ARE BEING USED WITH THE PATIENT?

During the rehabilitation process, rehabilitation specialists may be involved with the care and treatment of the patient. Some rehab programs may use a multi-disciplinary team. The team may include the Physicians, Occupational Therapist (OT), Physical Therapist (PT), Speech/ Language Pathologist, Recreation Therapist, Neuropsychologist, and others. Short and long term goals are established by the team based on the patient's abilities.

WILL THE BRAIN HEAL ITSELF?

Brain tissue that is injured can recover over a short period, but once brain cells are dead or destroyed, new brain cells cannot grow. The recovery process of the patient continues to take place, however, even though new brain cells are not growing. The recovery is thought to happen when other parts of the brain take over the function of the destroyed brain tissue. In extensive damage to the brain, it is less likely that the remaining brain can assume the function of the destroyed areas. In this case, the patient must learn how to compensate for this loss through other methods involving adaptations in the environment or in his/her own behavior.

HOW WILL WE KNOW WHEN THE CRITICAL PHASE IS ENDING?

For most patients, as the critical phase is ending, there will be signs the coma is lessening. Evidence of wakefulness and increasing consciousness will occur during this period. The recovery of consciousness is a gradual process and is not just a matter of "waking up" as people often imagine.

The patient begins to open his/her eyes and obey simple commands on an inconsistent basis. Often there will be confusion, disturbed behavior and memory loss even after the patient is fully alert. After a brain injury the patient will generally have no memory of the event and may also have no memory of events for an undetermined period of time before and after the injury.

Rehabilitation Phase

What Happens Next?

- ✓ What is rehabilitation? When and where should it begin?
- ✓ What happens in a rehabilitation program?
- ✓ How are the problems evaluated?
- ✓ What types of rehabilitation facilities are available?
- ✓ What are some guidelines for selecting a facility?
- ✓ Where can families find resource information and medical assistance?

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Tab 5

Preparing for Home

Are We Ready?

- ✓ What reactions might be expected from family members?
- ✓ How can family members help to minimize stress?
- ✓ What is family's role in recovery?
- ✓ How will the family be affected?
- ✓ What can the family do to prepare at home?

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A service of Brain Injury Association of Florida, Inc. with support from the Florida Department of Health

At Home / Community

By Your Side.™ Our staff at the Traumatic Brain Injury Resource and Support Center helps family members and survivors of traumatic brain injury (TBI) answer common questions and provides further personalized assistance with challenging and confusing choices. Our staff's knowledge, as certified brain injury specialists, is enhanced by the experiences shared by survivors and families who live with TBI and the professionals who help them.

Call our toll- free helpline at 1-800-992-3442 to reach a Resource Facilitation Coordinator in your area or visit our website at www.byyourside.org.

Living with TBI

The Traumatic Brain Injury Resource and Support Center can help link persons with brain injury and their loved ones to self-directed, voluntary support groups. Support groups can provide a number of benefits, including:

- ✓ Emotional healing comes when people interact with other people.
- ✓ Sharing of similar experiences helps individuals feel less alone and more ready to deal with day-to-day issues.
- ✓ Encouragement from learning about how others have conquered situations similar to theirs.
- ✓ Education from the exposure to information and personal experiences in a group.
- ✓ Safety, in the environment of a confidential, supportive, non-judgmental group, allows for honest disclosure and sharing of common difficulties.

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Caregiver Resources

10 tips for Family Caregivers:

1. Caregiving is a job and respite is your earned right. **Reward yourself** with respite breaks often.
2. **Watch out** for signs of depression, and don't delay in getting professional help when you need it.
3. When people offer to help, **accept the offer** and suggest specific things they can do.
4. **Educate yourself** about your loved one's condition and how to communicate effectively with doctors.
5. There's a difference between caring and doing. **Be open** to technologies and ideas that promote our loved one's independence.
6. **Trust your instincts.** Most of the time they'll lead you in the right direction.
7. Caregivers often do a lot of lifting, pushing and uplling. **Be good to your back.**
8. Grieve for your losses, and then allow yourself to **dream new dreams.**
9. **Seek support** from other caregivers. There is great strength in knowing you are not alone.
10. **Stand up for your rights** as a caregiver and a citizen.

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Community Resources

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