Handling Challenges & Changes after TBI
Quick Facts about Traumatic Brain Injury (TBI)

• The CDC reports that roughly 2.5 million Americans have a TBI each year
• The most common causes are: falls, motor vehicle accidents, and impact from an object
• Two peaks of incidence:
  – Childhood to early adulthood (assaults, falls, accidents)
  – Elderly (falls)
Severity of TBI

- Severity is based on the Glasgow Coma Scale (GCS) score (Motor, Verbal, and Eye Response)
  - Mild GCS 13-15
  - Moderate GCS 9-12
  - Severe GCS 3-8
- Severity ranges from Mild to Severe:
  - Mild (concussion) to Complicated Mild: brief change in mental status or consciousness.
  - Moderate to Severe: significant period of unconsciousness (coma) or amnesia after the injury, positive neuroimaging findings, hospitalization.
Post-Traumatic Amnesia (PTA)

- The person is disoriented and confused.
- The person generally does not remember their injury/accident.
- There is often a period of time prior to injury that the person does not remember.
- The person’s memory is not recording new information well.
- Limitations in attention/processing.
- On the brain injury unit, Dr. Rubinsky (‘Hilly’) assesses PTA
Agitation after Brain Injury

• “an excess of one or more behaviors that occurs during an altered state of consciousness” (Bogner & Corrigan, 1995).

• Can include:
  – Restlessness
  – Aggression
  – Disinhibition (i.e. “impulsivity”)

• Hard to predict
Effect of TBI on the Brain

• The brain is the “control center” for:
  – Cognition: problem solving, memory and planning
  – Language: speaking, understanding speech
  – Movement: walking, reaching, dressing
  – Sensations: hearing, smelling, seeing, tasting, feeling,
  – Emotions: anger, sadness

• A TBI can cause an impairment to one or more of these areas
Common Cognitive Impairments

• Orientation:
  – Where you are, what day it is, etc.

• Attention
  – Ability to stay focused on a task or idea

• Memory
  – Ability to recall old and new information
Common Cognitive Impairments

• Problem solving
  – Ability to understand an issue or task and choose an appropriate response or course of action

• Executive Functioning
  – Ability to organize, plan and execute functional tasks effectively
Language Impairments

• Aphasia: A neurological disorder where there is damage to portions of the brain that are responsible for language
  – Patients with TBI often have a combination of expressive and receptive aphasia, where they may have some difficulty understanding or speaking with others
Physical Impairments: Motor

• Weakness
  – Hemiplegia: Weakness on one side of the body
  – Focal: Weakness in one concentrated area
  – Generalized: Weakness occurring throughout most regions of the body

• Abnormal tone
  – Spasticity: Abnormal tightness of a muscle as it is being moved
  – Flaccidity: Abnormal looseness of a muscle
Physical Impairments: Sensory

• Visual Disturbances
  – Field cut: loss of vision in part of the visual field
  – Visual neglect: focused attention/awareness to one area, ignoring others
  – Visuospatial impairments: impairments in the visual perception of spatial relationship of objects
Physical Impairments: Sensory

- Hearing impairments
- Tactile impairments
  - Numbness/tingling sensation in part of the body
- Taste/smell function impairments
- Joint position impairments
Emotional Impairments

• It is possible that certain aspects of personality may be enhanced after a brain injury

• Some common emotional issues may include:
  – Agitation
  – Aggression
  – Excessive crying
  – Excessive laughing
  – Flat affect
  – Depression
Goal of Brain Injury Rehabilitation

• The goal of the rehabilitation team is to assess areas of ability as well as impairment in order to improve daily functioning
  – Healing, strengthening, compensation
Helpful Hints for Rehab

• Issues of restlessness, irritability, agitation:
  – Reduce distractions, noise and number of visitors at once
  – Break down difficult tasks into smaller steps and give simple, one step directions
  – Redirect in the face of frustration
  – Allow (schedule) rest breaks
  – Remain calm in interactions
Helpful Hints for Rehab

• Issues of Attention/impulsivity
  – Be sure you have the patient’s attention before you speak to them
  – Speak slowly, clearly, and softly using the patient’s name frequently to keep their attention
  – Use demonstration in addition to verbal instructions when possible
  – Plan ahead and give steps one at a time
Helpful Hints for Home

• Individuals often have residual changes in physical, cognitive and emotional functioning when they leave the hospital.

• Greatest recovery in the first year following injury, however slower improvement may continue.

• Follow-up: Therapies, medical status, assessments for return to driving, work, school as appropriate.
Helpful Hints for Home

• Many individuals are eventually able to return to work, school, driving or other life roles.
• The ability to do so depends on the severity of injury and resulting levels of physical, cognitive and emotional disability, as well as the degree of family and community support.