BRAIN FUNCTIONING AND THE IMPACT OF ABI

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WHAT IS AN ACQUIRED BRAIN INJURY?
TYPES OF BRAIN INJURY

Brain Injury

- Congenital and Perinatal (no period of normal development)
  - Perinatal (e.g., birth stroke)
  - Congenital (e.g., PKU, CP)

- Acquired (following a period of normal development)
  - Non-traumatic (internal occurrence e.g., tumor)
  - Traumatic (external physical force)
    - Open (e.g., gunshot)
    - Closed (e.g., fall)
ACQUIRED BRAIN INJURY

Location of Different Types of Brain Tumors

- Supratentorial Ependymoma
- Pinealoma
- Medulloblastoma
- Cerebellar Astrocytoma
- Infratentorial Ependymoma
- Brainstem Glioma
- Astrocytoma
- Optic Glioma
- Craniopharyngioma

Hemorrhagic Stroke
- Hemorrhage/blood leaks into brain tissue

Ischemic Stroke
- Clot stops blood supply to an area of the brain
ACQUIRED BRAIN INJURY

UNIQUE AND CHALLENGING DISABILITY TO UNDERSTAND
INCIDENCE

Data from Brain Injury Association of America
INCIDENCE

(Beth Slomine, KKI)
INCIDENCE

(CDC, 2004)
Low incidence disability?
Lobes of the Brain

Parietal Lobe

Frontal Lobe

Occipital Lobe

Temporal Lobe

Cerebellum

Brain Stem
FRONTAL LOBE
TEMPORAL LOBE
PARIETAL LOBE
OCCIPITAL LOBE
CEREBELLUM
BRAIN STEM
NEURONS

Neuron

CELL BODY

Dendrites
Nucleus
Synaptic terminals
Myelin sheath
AXON
Schwann cell
Node of Ranvier
Synapses
MECHANISM OF INJURY

CLOSED HEAD INJURY
(COUP AND CONTRECoup INJURY)
CONSEQUENCES

- Physical
- Cognitive
- Social/Behavioral
PHYSICAL
COGNITIVE
Left brain


Right brain


Mercedes-Benz
The best or nothing.
BRAIN INJURY IN CHILDREN AND ADOLESCENTS
“GROWING INTO” THE BRAIN INJURY
“GROWING INTO” THE BRAIN INJURY
Having one brain injury puts you at greater risk than the general public for having another brain injury. The risk for a 2\textsuperscript{nd} injury is 3 x greater than the general public; the risk for a 3\textsuperscript{rd} injury is 8 x greater!
OUTCOMES
BRAIN INJURY CAN RESEMBLE OTHER DISABILITIES

- ADHD/ADD
- LEARNING DISABILITIES
- EMOTIONAL DISTURBANCE
ADHD is a risk factor for brain injury.
LEARNING DISABILITIES
EMOTIONAL DISTURBANCE
APPRAOCHES AND STRATEGIES

• Generic Management Strategies

• Behavior Management Strategies

• Memory Strategies
BEHAVIOR MANAGEMENT STRATEGIES
MEMORY DEFICIT STRATEGIES

I don't see how you remember your locker combination, Charlie Brown.

It's easy... 3-24-7... see?

But how in the world do you remember it?

Babe Ruth was number 3. Willie Mays is number 24 and Mickey Mantle is number 7!
A brain injury survivor typically has a pre-injury self-concept of being “normal” which can often lead to adjustment issues.
Thank you

Betsy Zeigler, ACSW, CCM, CBIS
QUESTIONS
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