



A Pediatric Perspective on Brain Injury



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	ER	Hospital	Death	Total
age 0-4	251,546	15239	998	267,283
age 5-9	105,015	8799	450	114264
age 10-14	117,387	11098	726	129,211
age 15-19	157,198	24892	3995	186,089

Grand Total: 696,847 estimated per year

Estimated Average Annual Numbers, Rates, and Percentages of Traumatic Brain Injury-Related Emergency Department Visits, Hospitalizations, and Deaths, by Age

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Impact of Traumatic Brain Injury

- Affects the child, family, close friends, and the community
- Education about brain injury should be initiated as early as possible.
 - Increases understanding of what has happened
 - May help a family to prepare for recovery process
 - Helps a family manage expectations
 - May be provided throughout recovery
 - Important for the parent, those caring for the child, and the child

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Three Tiered Approach to Education

- The family
- Hospital staff and professionals
- The child



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Family Perspective

- Devastation associated with a brain injury is often beyond comprehension
- It is not just physical injury that can be "treated" by medicines or rehabilitation
- Recovery depends on many factors
 - Access to services
 - Support system
 - Family attitudes and values
 - Finances
 - Pre-injury functioning
 - Understanding about what has happened



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Stages of Grief

- One to three months
 - Shock, denial, guilt, hope, uncertainty
- Three to nine months
 - Anger, fear, depression, loss
- Six months to one year
 - Escalation of fear or frustration
 - Concerns about future
 - Information seeking



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Tier One: Family Involvement in Recovery

- Starts on day of admission
 - Orientation to the hospital
 - Explanation of the rehabilitation process
 - Written materials about brain injury
- Meet and greet
 - Introduction of family to therapists
 - Discuss results of initial evaluation
 - Encourage questions
 - Discuss plan of care



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Tier One: Family Education

- Family Group
 - Open to families in the hospital and outside the hospital
 - Provides information about brain injury
 - Brain Anatomy
 - Rancho scales
 - Brain injury and development
 - School and IEPs



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Tier One: Family Education

- Educational resources
 - Published materials
 - Family education manual
- Communication book
 - Therapists document activities in therapy and progress
 - Families write down questions and concerns
- Family meetings



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Education for Community Outings

- Children are taken on community outings as part of their rehab
- Type of outing depends on their level of recovery-policy for outings (see handout)
- Outings are videotaped with family consent and reviewed by parents and therapists
- Parents are given a pre-test and a post-test
- Education Applications:
 - Baseline
 - Intermediate
 - Pre-discharge
 - Caregiver outings



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Community Outing Criteria for Brain Injury/Multi-Trauma Clinical Pathways

	Baseline Outing	Outing	Outing	Discharge
Medical	Medically stable. Medications administered prior to outing. No assessment of patient with track.	Medically stable. Medications administered prior to outing. No assessment of patient with track.	Medically stable. Medications administered prior to outing. No assessment of patient with track.	Medically stable. Medications administered prior to outing. No assessment of patient with track.
Caregiver Involvement	Primary caregiver reviews type of outing independently with observation form.	Primary caregiver reviews type of outing with clinicians.	Primary caregiver reviews type of outing with clinicians.	Primary caregivers are strongly encouraged to attend outing prior to discharge with clinicians.
Supervision	Patient on individual or small group outing with therapist (PT, OT, speech, neuropsych). Patient 1:1 or both to attend.	Patient on individual or small group outing with therapy (PT, OT, speech, neuropsych).	May attend C/TFR outing following therapy recommendations. Appropriate level to be determined by Team.	Primary caregivers are strongly encouraged to attend outings with patient and clinician prior to discharge. Multiple outings may be appropriate.
Rancho Level	V-VI	V-VI	V-VI	V-VI
Stimulation Level of Outing <i>*where see level of outing</i>	Baseline Outing Level to be determined by Team.	Level One-Two Low stimulation with time constraints.	Level Two-Three Increased, but moderate level of stimulation with increased length of time.	Level Three Increased amount of stimulation with increased length of time.
Agitated Behavior Scale	No greater than 20	No greater than 18 <i>*may repeat level per Team discretion</i>	No greater than 18 <i>*may repeat level per Team discretion</i>	No greater than 14
Videotaping	Mandatory. Must be used as therapeutic feedback/caregiver education with observation form.	May be used by direction of clinicians.	Mandatory. Must be used as therapeutic feedback/caregiver education for progress from first outing.	Primary caregivers to receive education from outing prior to discharge with post observation form.

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Caregiver Outings

- Occur prior to discharge
- Families are strongly encouraged to participate
- Highest outing level to challenge
- Purpose:
 - Observe behavior in the community
 - Opportunity for parents to identify concerns
 - Recognize strengths and weaknesses
 - Recognizing the important role they play in the child's continued recovery

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Tier Two: The Staff

- Understanding that every child is different
- Understanding the stages of recovery
- Understanding the behavior of the parent and child
- Understanding the role of culture
- Understanding the stages of grief
- Recognizing the important role they play in recovery



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Tier Two: Approaches

- Nursing orientation
- Classes for nurses and PCA's
- Activity sheets for Rancho Levels to encourage participation
- Complete Agitated Behavior Scale
- Write in communication book



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PCA's Role in Recovery

- Encourage PCA's to participate in rehab activities
- Increases their own awareness and knowledge of brain injury
- Encourages their participation as a part of the team
- Demonstrates the VERY important role they play in recovery



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Tier Three: The Kids

- Cognitive Group
- Therapeutic Outings
- Cool Kids Group
- Adolescent Group
- Transition Books
- Presentations



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Cognitive Group

- Co-lead by speech and occupational therapy
- Focuses on community reentry skills
- Application of planning, problem solving, memory, and various cognitive skills
- Reinforces appropriate social behaviors
- Facilitates application of life skills



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Therapeutic Outings

- Participate in outings with occupational therapy, physical therapy, speech therapy, and neuropsychology
- Individual and group outings
- Various levels of outings to control level of stimulation and set up for success
- Transition to larger group, Child Life outings → encourage participation outside of hospital
- Patients participate in planning outings



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Cool Kids Group

- Group for children ages 6-12
- Support for peers who are in the hospital
- Share feelings about what has happened
- Learn how to cope with illness or effects of injury, surgery etc.
- Provides fun activities for kids to do with their same-aged peers
- Encourages ownership and education about their injury



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Adolescent Group

- Group for children ages 12+
- Support for peers who are in the hospital
- Share and process feelings about what has happened
- Learn how to cope with illness or effects of injury
- Provides age appropriate activities
- Addresses age appropriate issues
- Encourages ownership and education about injury



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Transition Books

- Patients create book to take to setting outside of MWPH
- Includes:
 - Presentation
 - Goals
- Can be tailored to different age groups, levels of functioning
- Use transition book to educate family and peers



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Presentations

- Patients create presentations to give to hospital staff
- Encourages education about the brain
- Provides insight into progress and deficits



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Please Welcome...

Dalontai,
MJ,
and
Blair

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Conclusions

- Education and recovery from TBI is a tiered approach
- Education of the child is as important as education of the caregiver → allows them to be a part of their recovery
- Education increases the patient's awareness of:
 - Their injury
 - Their progress
 - Strategies for difficulties and challenges
- Many children enjoy the opportunity to tell their own story

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Questions??

Thank you!!

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