Addressing Contextual Variables in Pediatric TBI Rehabilitation

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NATIONWIDE CHILDREN’S
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Disclosure

Jennifer Lundine has no relevant financial or nonfinancial relationships to disclose.

Angela Hein Ciccia has no relevant financial or nonfinancial relationships to disclose.
Pediatric Acquired Brain Injury (ABI)

• Injury takes place within a developing system
  • Recovery
  • New Learning

• Interaction of environmental & personal factors
Contextualized Intervention

- Consideration of the broader context in which the child functions
  - Family, siblings
  - School supports
  - Psychosocial considerations
  - Socioeconomic factors
- International Classification of Function – Children & Youth Version (ICF-CY) provides a framework to consider these variables
International Classification of Function

Health Condition
(Disorder or Disease)

Body Structure & Functions  Activity  Participation

Environmental Factors  Personal Factors
The Big Questions

• Which environmental & personal factors may be the most important in influencing outcomes in pediatric ABI?

• How are these factors actually being addressed in clinical environments?
Purpose of This Study

- Identify how contextual variables, as defined by the ICF, are being addressed in current clinical practice for children & adolescents recovering from ABI
Methods: Retrospective Chart-Review

- Two, large, urban pediatric hospitals
- Subjects aged 0-19 years
- ICD-9 codes to indicate a diagnosis of ABI
- Participants must have completed rehabilitation and/or been discharged prior to chart review
- Included all levels of brain injury severity
- Collected data on
  - Personal & injury specifics
  - SLP consultation, assessment & goals for acute & rehab
  - Family training, Community integration, School re-entry
Charts Reviewed to Date

• 50 charts from NCH (covering a 4-month period 10/2013 – 2/2014)

• Data collection is just beginning at RBC

• We anticipate at least 125 total records to be reviewed
Age at Injury

Median: 98.5 mos (8 yrs)
Range: 1 – 214 mos (0-17.8 yrs)
Gender

- Male: 76%
- Female: 24%
Race

- Caucasian: 80%
- African American: 10%
- Hispanic: 2%
- Other: 8%
Mechanism of Injury

Traumatic (n = 35)

Non-Traumatic (n = 15)
Lowest Recorded GCS Scores

- **Mild**: GCS 13-15
- **Moderate**: GCS 9-12
- **Severe**: GCS 3-8

![Graph showing the distribution of GCS scores](chart_image.png)
Referrals for Speech Evaluation (Acute)

- No Info: 4%
- SLP Referral: 28%
- Other Therapies Referred: 38%
- No Therapies Referred: 30%

No info = transferred from outside hospital for rehab only
Referrals to Rehab

- D/C from Acute: 78%
- Rehab: 22%

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Referrals to Rehab by Mechanism of Injury

- Traumatic: 55% (n = 6)
- Non-Traumatic: 45% (n = 5)
Family Training

- Extensive, many disciplines: 22%
- Some therapy: 18%
- PM&R only: 30%
- None Documented: 30%

Rehab Patients
Return-to-School Training

- None Documented: 72%
- Family Only: 6%
- Family + Patient + School: 22%
- Rehab Patients: 6%
Community Re-Entry

- None: 78%
- Patient Only: 14%
- Patient + Family: 8%
- Rehab Patients: 0%
Speech Rehab Goals & the ICF

(n = 11)
Next Steps/Potential Clinical Implications

• Continue chart review at second hospital location

• Compare data between the two locations

• Individual clinicians need to consider significant lack of referrals to SLP

• Future research projects need to consider injury related variables and admitting service (hospital)

• Systematic methods to address documentation of contextual factors in acute care and rehabilitation
  • Prominent differences noted for patients admitted to rehabilitation
  • May inform clinical practice to make changes to documentation and goal-setting
Next Steps/Potential Clinical Implications

• May inform clinical practice regarding focus on context in addition to activity/participation rather than a focus on structure/function

• With shorter inpatient stays and a changing health care landscape, clinicians must consider how to incorporate contextualized rehabilitation and to help families plan for the future
References


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