

## *Long Term Consequences of Pediatric Acquired Brain Injury*

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## *Study #1*

- A retrospective review of 10 years of information collected in Bloorview MacMillan Children's Centre ABI clinical database.
  - 656 children were reviewed
  - 63% male
  - Age at Injury: 6 months – 18 years
  - 64 % severe (CGS/PTA)

## *Study #2*

- We prospectively collected in-depth information through the use of new outcome measures, questionnaires and structured interviews to determine the relationship between persisting limitations and restrictions on participation of children who are between 3 and 5 years post-injury

## *Study #3*

- We collected additional academic information to investigate the relationship between school performance and:
  - communication skills,
  - functional outcome,
  - quality of life &
  - family stress.

## *Consequences of ABI*

- 55% of children improve in the first 3 years after injury.
- Substantial improvement is rare when the (adapted) MPAI cognitive subscale shows no improvement.
- Older children show better recovery than children injured <5 years.

### *Additional Consequences*

- Difficulties with anger, endurance, initiative, sleep, processing speed are reported.
- These difficulties are not associated with recovery, but persist long term despite severity.

### *Conclusions*

- Communication skills and quality of life are significantly correlated with each other!

### *Conclusions*

- Quality of life and child's pragmatics/communication skills are also associated with
  - Level of functional disability
  - Family stress

### *Conclusions*

- Poor reading comprehension was associated with family stress.
- Poor reading comprehension was not associated with quality of life

### *Conclusions*

- In contrast to Study #1, children/adolescents and families are not currently reporting school concerns – 3-5 yrs post-injury.
- Most children/adolescents are receiving school/therapy support.
- Expectations adjusted.
- Biggest concern (2/3) is fatigue.

### *Summary Statement*

- A wide range of limitations and impairments can arise from even mild brain injury.
- Young age at injury is NOT protective
- Communication difficulties are prevalent and associated with family stress and may be central to functional outcome.
- Children and their families require comprehensive professional interventions (i.e. social/psychological, academic, PT/OT/SLP) for a long period after injury.