
The New CAT Definition: Brain Injury in Children

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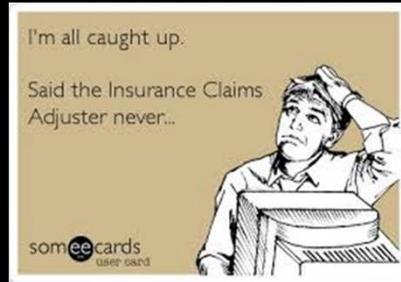
What is a Child?



What Are Key Times?

- 1) Hospitalization**
- 2) One Month**
- 3) Six Months**
- 4) Nine Months**
- 5) Two Years**

Who Will Ensure CAT Considered at Each Interval?



***Criterion #1:
Hospitalization and Imaging***

Criterion No. 1: Hospitalization and Imaging

- **“accepted for admission, on an in-patient basis, to a public hospital named in a Guideline with positive findings on CT, MRI or any other medically recognized brain diagnostic technology indicating intracranial pathology that is a result of the accident, including, but not limited to intracranial contusions or hemorrhages, diffuse axonal injury, cerebral edema, midline shift or pneumocephaly.”**

Criterion No. 1: Hospitalization and Imaging

- **Three essential elements:**
 - 1) **In-patient admission to public hospital;**
 - 2) **Positive findings of intracranial pathology;**
 - 3) **Findings must be from medically recognized brain diagnostic technique.**

***Criterion #2:
Admission to Pediatric
Rehabilitation Facility***

Criterion No. 2: Admission to Pediatric Rehab

- “accepted for admission, on an in-patient basis, to a program of neurological rehabilitation facility that is a member of the Ontario Association of Children’s Rehabilitation Services.”

Criterion No. 2: Admission to Pediatric Rehab

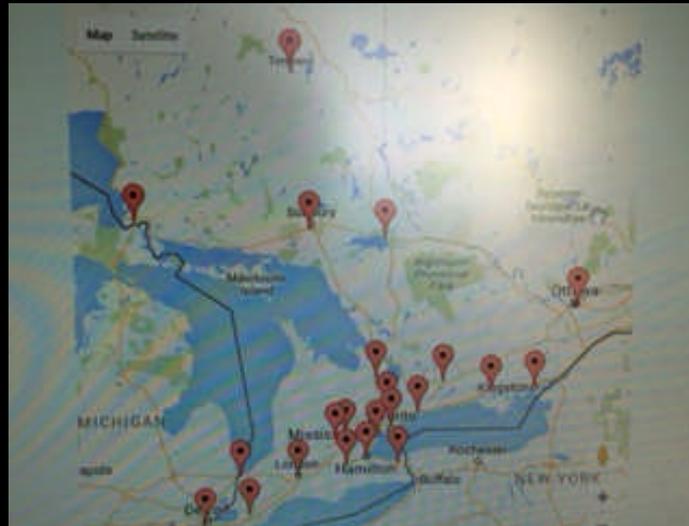
- What is OACRS?



Criterion No. 2: Admission to Pediatric Rehab

5 Concerns:

1. Discrimination re: remote areas



Criterion No. 2:
Admission to Pediatric Rehab
Cont. 5 Concerns:

2. Wait lists

3. Community-based rehab

4. In-patient admission requirements

5. “Program of neurological rehabilitation”

***Criterion #3:
Kings Outcome Scale
(1 to 5 months)***

*Criterion No. 3:
KINGS Outcome Scale (1-5 months)*

- **Kings Outcome Scale for Childhood Head Injury (“KOSCHI”).**
- **Studies have found KOSCHI to be of limited use in predicting long-term outcome.**
- **No guidance on who will do assessments.**

*Criterion No. 3:
KINGS Outcome Scale (1-5 months)*

- **KOSHCI rates impairment on following scale:**
 - 1) **Death**
 - 2) **Vegetative**
 - 3) **Severe Disability**
 - 4) **Moderate Disability**
 - 5) **Good Recovery**

*Criterion No. 3:
KINGS Outcome Scale (1-5 months)*

- **A child with a brain injury will be catastrophically impaired if, one month or more after the accident “his or her level of neurological function does not exceed category 2 (vegetative) on the Kings Outcome Scale for Childhood Head Injury (“KOSCHI”).”**

*Criterion No. 3:
KINGS Outcome Scale (1-5 months)*

- **Vegetative:**
- **“The child is breathing spontaneously and may have sleep/wake cycles. He may have non-purposeful or reflex movements of limbs or eyes. There is no evidence of ability to communicate verbally or non-verbally or to respond to commands”**

*Criterion No. 3:
KINGS Outcome Scale (1-5 months)*

Severe disability:

“The child is at least intermittently able to move part of the body/eyes to command or make purposeful spontaneous movements, for example, confused child pulling at nasogastric tube, lashing out at carers, rolling over in bed. May be fully conscious and able to communicate but not yet able to carry out any self care activities such as feeding.

*Criterion No. 3:
KINGS Outcome Scale (1-5 months)*

- **Very, very few children will be vegetative 1-5 month after injury.**
- **Study of 218 significant TBI's not one was found to be vegetative at time of discharge or follow up.**

***Criterion #4:
Kings Outcome Scale
(6 or more months)***

*Criterion No. 4:
KINGS Outcome Scale (6 + months)*

- 6 months +

“level of neurological function does not exceed category 3 (Severe Disability) on the KOSCHI.”

*Criterion No. 4:
KINGS Outcome Scale (6 + months)*

- Severe disability (A & B) = CAT

- B:

Implies a continuing high level of dependence, but the child can assist in daily activities, for example, can feed self or walk with assistance or help to place items of clothing. Such a child is fully conscious but may still have a degree of post-traumatic amnesia.

***Criterion No. 4:
KINGS Outcome Scale (6 + months)***

- **Moderate Disability (A & B) *not* CAT**

- **A:**

The child is mostly independent but needs a degree of supervision/actual help for physical or behavioural problems. Such a child has overt problems; for example, 12 year old with moderate hemiplegia and dyspraxia insecure on stairs on needs help with dressing.

*Criterion No. 4:
KINGS Outcome Scale (6 + months)*

- “High level of dependence” vs. “degree of supervision”
- Clinical judgement
- Pre-morbid problems
- Gaps in funding & ↓ limits
- Likelihood of meeting test

***Criterion #5:
Level of Function After 9
Months***

Criterion No. 5: Post 9 Months

- “Nine months or more after the accident, the insured person’s level of function remains seriously impaired such that the insured person is not age appropriately independent and requires in-person supervision or assistance for physical, cognitive or behavioural impairments for the majority of the insured person’s waking day.”

Criterion No. 5: Post 9 Months

- **Government-made test**
- **Areas of ambiguity & debate:**
 - **What constitutes “age appropriately independent”? Who determines?**
 - **What constitutes “in-person supervision or assistance”**
 - **What constitutes the “waking day”?**

Criterion No. 5: Post 9 Months

- **Disagreements =**
 - 1) **delays**
 - 2) **gaps in funding**
 - 3) **increased costs to all**

Concluding Thoughts

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- **Advocacy starts from day 1**
- **Team needs a “game plan” for point-in-time assessments**
- **WPI is still available [s. 3.1(6)]**
 - **Multiple disputes over multiple times**
 - **Ambiguities to be resolved in favour of child**

Thank you

Questions?

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