THE NEW CATASTROPHIC IMPAIRMENT DEFINITION: BRAIN INJURY IN CHILDREN

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INTRODUCTION

The new definition of "catastrophic impairment", which comes into force on June 1, 2016, contains a specific definition for children with brain injuries that is different from the adult definition. This is a major change. This new definition is set out in section 3.1(5) of the *Statutory Accident Benefits Schedule – Effective September 1, 2010.* The "child" rules in subsection (5) apply to people under the age of 18, which is consistent with current thinking about brain development.

Unlike the changes to the definition in respect of adult brain injuries, the new definition in respect of children may not necessarily reduce the number of catastrophic impairment claims for children as compared with the old definition, but it will likely require more vigilance for the declarations to be obtained and the declarations will likely come with a greater delay. In fact, some children who may not have been found to be catastrophically impaired under the existing system may qualify as being catastrophically impaired under the new system.

The definition for catastrophic impairment for brain injuries in children is disjunctive. A child will be found to be catastrophically impaired if he or she meets any of the five parts of the definition. The different parts of the definition apply at different times: hospitalization, one month, six months, nine months and two years. It will be crucial that people who are caring for and acting for brain injured children give careful consideration to the issue of catastrophic impairment at each interval.

Because the issue of catastrophic impairment is going to have to be considered at different intervals, one key concern is who will ensure it is considered? If a lawyer is involved, the lawyer should ensure that it is considered. In many cases, there is a delay in retaining a lawyer. In those cases, who will ensure catastrophic impairment is considered at each stage? Will health care providers taken on that responsibility? Will insurers take on that responsibility? These questions remain to be answered.

CRITERION 1: HOSPITALIZATION AND IMAGING

Under section 5(i) of the new definition a child with a traumatic brain injury will be catastrophically impaired if he or she:

> "is accepted for admission, on an in-patient basis, to a public hospital named in a Guideline with positive findings on a computerized axial tomography scan, a magnetic resonance imaging 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 haemorrhages, diffuse axonal injury, cerebral edema, midline shift or pneumocephaly."

The essential elements of this definition are as follows:

1) In-patient admission to a public hospital named in a Guideline.

2) Positive findings of "intracranial pathology" that is a result of the accident.

3) The findings of intracranial pathology must be from a "medically recognized brain diagnostic technique."

The definition requires an in-patient admission. Therefore, a patient who is seen in the emergency room and discharged before admission will not be found to be catastrophically impaired under this criterion, even if they have positive findings of intracranial pathology at some point in time.

The findings must be of "intracranial" pathology. Therefore, the pathology must be within the cranium. Bleeding confined to the area outside the skull is not enough.

A further issue raised by the requirement for intracranial pathology is that concussions, which are not typically associated with findings on imaging, would be excluded from the definition. By no means would every concussion be expected to result in the level of disability that one would expect for a CAT designation; *however*, it is understood by the authors (who, admittedly, are not medically trained) that there is some evidence that concussions in succession have a compounding effect. In other words, if someone sustains his or her 3rd concussion it may have more disabling consequences than had it been a first concussion. In accident benefits, the test for causation is "material contribution"[1]. This means that if a child sustains, for example, a concussion in a car accident and that child has a history of two previous concussions (e.g. one from a fall at school and the other from sports), while this child may have a disabling brain impairment it would not be captured under the new CAT definition.

The part of this definition that is most ambiguous is "medically recognized brain diagnostic technique". Clearly, CT scans and MRI scans meet the test, since they are specifically mentioned. There may be debate about whether other forms of radiology (e.g. SPECT scans, PET Scans, Magnetic Resonance Spectroscopy) meet the test.

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[1] *Monks v. ING Insurance Company of Canada*, [2008] ONCA 269 (CanLII).

Neuro-psychological testing could also be argued to be a medically recognized brain diagnostic technique capable of determining intracranial pathology.

CRITERION 2: ADMISSION TO A PAEDIATRIC REHAB FACILITY

Subsection 5(ii) of the new definition provides that a person who was under 18 years of age at the time of the accident and suffers a traumatic brain injury is catastrophically impaired if he or she:

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

The Ontario Association of Children's Rehabilitation Services ("OACRS") is a membership organization that represents the interests of children's rehabilitation facilities in Ontario and aims to influence policy, programs and funding. Currently there are 21 facilities that are members of OACRS.

Therefore, if a child with a brain injury is admitted to one of these facilities for a program of neurological rehabilitation he or she is catastrophically impaired regardless of whether there is positive neuro-imaging of intracranial pathology.

One concern about this criterion is that it may discriminate against people injured in remote parts of Ontario. OACRS is most heavily represented in central and southern Ontario. It does not seem fair that a child from Ontario's far north would lose out on catastrophic designation when a child with the same injury in southern Ontario may end up in a OACRS facility.

Another concern about this criterion is that it ties entitlement to catastrophic benefits to the availability of beds in residential OACRS facilities. The availability of in-patient beds may change with time. There are wait lists for many programs and facilities already and if admission requirements change in the future due to funding, the catastrophic definition will change without any regard to the severity of injury.

Moreover, many of the OACRS facilities are community based. For example, in Thunder Bay the George Jeffrey Children's Centre is an OACRS facility. However, unlike Holland Bloorview Kids Rehabilitation Hospital in Toronto, the George Jeffrey Children's Centre focuses on out-patient clinics and community based rehabilitation. A brain injured child in Thunder Bay may miss out on catastrophic funding that a child with the same injury in Toronto would have merely because of the type of facilities available in Thunder Bay.

Even in communities where there is in-patient treatment available, admission does not necessarily equate to severity of injury. If a severely brain injured child does not

demonstrate the potential to increase his or her functional level with rehabilitation then he or she might not be admitted to a facility like Holland Bloorview.

There may also be questions over what constitutes a "program of neurological rehabilitation". Many of the OACRS facilities do not specify that they offer "neurological rehabilitation". Rather, these facilities often individually list the types of services provided such as occupational therapy, speech language pathology, etc. (the combination of which treatments *presumably* would form as "neurological rehabilitation program.") Accordingly, where a child suffers a combination of injuries including a brain injury and is admitted for multi-disciplinary rehabilitation, there might be a dispute about whether he or she has been admitted to a "program of neurological rehabilitation".

CRITERION 3: KINGS OUTCOME SCALE (1-5 MONTHS POST INJURY)

The creators of the Kings Outcome Scale for Childhood Head Injury ("KOSCHI) "set out to produce a modification of the GOS which would provide a robust, simple description of outcome after paediatric TBI in the short, medium or long term".[2] However, like the Glasgow Coma Scale, which the government has done away with as part of the new catastrophic definition (for both adults and children), the KOSCHI has been found to have limited use in predicting long-term outcome in head trauma.[3] However, the government has adopted the KOSCHI as part of the new catastrophic definition.

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 KOSCHI".

This criterion will only capture the most severe head injuries. The King's Outcome Scale for Childhood Head Injury ("KOSCHI") rates impairment on the following scale: 1 Death, 2 Vegetative, 3 Severe Disability, 4 Moderate Disability and 5 Good Recovery.

The definition of "Vegetative" is as follows:

> The child is breathing spontaneously and may have sleep/wake cycles. He may not have non-purposeful or reflux movements of limbs or eyes. There is no evidence of ability to communicate verbally or non-verbally or to respond to commands.

[2] M. Crouchman et al, "A practical outcome scale for paediatric head injury" *Arch Dis Child* 2001; 84:120-124 [the "KOSCHI article"].

[3] Calvert et al, "The King's Outcome Scale for Childhood Head Injury and injury severity and outcome measures in children with traumatic brain injury" *Dev Med Child Neurol*. 2008: 50:426-431.

The next category of "Severe Disability" is as follows:

(a) 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.
(b) Implies a high level of dependency, 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.

The SABS provide no guidance on who should do the KOSCHI assessment, nor does the KOSCHI, itself, identify those qualified to employ the scale.

If a child is still in the vegetative category a month after the collision, he or she has suffered the most severe form or brain injury. Even among severe brain injuries very few children will be at this level a month after the injury. Query, from a "big picture" standpoint, however, how much private medical and rehabilitative care this type of child would need in any event or for how long a period of time. In other words, if there was a severely reduced life expectancy due to the nature of these injuries, the non-CAT policy limits may be sufficient in some circumstances.

Even if a child is otherwise non-responsive but pulls at his or her nasogastric tube he or she will fall into the severe disability category and will not be found to be catastrophically impaired under this criterion.

In a study of 24 child patients with intracranial hemorrhage, not one child was found to be in the "vegetative" range on follow up between 0.3 and 7.5 months.[4] In a study of 218 significant traumatic brain injuries not one was found to be vegetative at the time of discharge or follow-up.[5]

CRITERION 4: KINGS OUTCOME SCALE (6 MONTHS OR MORE POST INJURY)

Six months or more post-injury a brain injured child will be found to be catastrophically impaired if his or her:

[4] L. Beslow et al, "Predictors of Outcome in Childhood Intracerebral Hemorrhage", *Stroke*, 2010; 41:313-318.
[5] M. Adamo, "Comparison of accidental and nonaccidental traumatic brain injuries in infants and toddlers; demographics, neurosurgical interventions and outcomes", *J. Neurosurgery & Pediatrics*, 2009, 414-419.

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

Therefore, at six months a child with a brain injury will be found to be catastrophically impaired if he or she has a "high level of dependency" as described in the definition of severe disability B above.

If a child has only a moderate disability at the six month mark, he or she will not qualify. A moderate disability A under the KOSCHI (whereas sub-category B would be an even lower level of disability) is defined as:

> "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 or needs help with dressing."

Placing children in the severe disability vs. moderate disability categories is obviously going to involve an exercise of clinical judgment. Given the nature of these definitions, it is easy to envision assessors disagreeing over whether a child is in the severe disability B category or the moderate disability A category. The degree of disagreement might be even more pronounced if there is a discrepancy in the qualifications/expertise of the assessors. It will not always be easy to decide between a "high level of dependency" and "a degree of supervision/actual help.

Consider, for example, a 16 year-old who has a frontal lobe injury. She can take care of her personal care tasks but frequently needs help making appropriate decisions because of disinhibition and impairment judgment. Does she have a "high level of dependence" (severe disability – CAT) or just need a "degree of supervision" (CAT). Is it more likely that a community-based occupational therapist who sees the "real world" implications of the 16 year-old's impairment is more likely to find that a high level of dependence is needed than, for instance, the 16 year-old's paediatric neurologist who sees her in a clinical setting every six months to one year?

Even the authors of the KOSCHI concede that there will be inter-observer variability. In a system where assessments are done on behalf of injured people and insurers this is likely to create a major problem with respect to funding. If an application for catastrophic impairment is put in at six months and goes to an insurer examination, the delay associated with the insurer examination may well mean that the child will in the interim run out of money for care, given the limited money available in non-catastrophic cases. Recall that a further component of the upcoming June 1, 2016 changes is the new combination of medical, rehabilitation, and attendant care benefits under one "benefit" with a (reduced overall) limit of $65,000.00. The further question will be how these types of disputes will be resolved since the new dispute resolution process through the Licence Appeal Tribunal ("LAT"), effective April 1, 2016, is still in its infancy.

Even without a dispute there is a chance that forcing a severely impaired brain injured child to wait six months before applying for catastrophic impairment status may result in a gap where treatment funds run out. If rehabilitation is most effective when provided early and consistently, these children will suffer further harm.

Dealing with children with pre-morbid difficulties is likely to give rise to further disagreements. The KOSCHI article suggests that where there is a pre-morbid learning or behaviour problem, as a general rule, the categorization should be based on the *change* in function. The problems here include, but are not limited, to:

1. The fact that this "general rule" is not prescribed in the SABS;
2. This "general rule" is not consistent with the test for causation for accident benefits (material contribution);
3. Where there is a dearth of information or even conflicting medical reports about the child's pre-morbid difficulties or diagnosis, the "waters will be further muddied."

Lastly, it is noted that even children with very significant traumatic brain injuries may not be found to be in the severe disability category. In the study of 219 brain-injured children referenced above only 0.6% were found to be in the severe disability category by the time of follow up.[6]

CRITERION 5: IMPAIRMENTS POST 9-MONTHS

A child with a brain injury is catastrophically impaired if:

> 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.

This definition is not from the KOSCHI. It is something drafted by the government.

There is much in this definition that is open to debate. Who will determine what is consistent with "age appropriate independence"? What is meant by "in-person" supervision or assistance? Does it mean strictly hands-on supervision, or is being available in the same house or by phone/Skype enough? Is the "in-person" requirement a qualification of the word "supervision" or of the phrase "supervision or assistance" (i.e. is it sufficient to just require assistance or must in-person assistance be needed)? What is a "waking day" when the insured child takes naps or is up at intervals throughout the night?

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[6] *Supra,* note 5.

Again, it is anticipated that this definition will lead to disputes, delays in catastrophic impairment designations, and gaps in treatment.

CONCLUDING THOUGHTS

The new definition is a complex one that requires determinations to be made at different periods of time. It will be essential that someone advocate for a brain injured child to ensure that the appropriate applications are made. This advocacy will have to start from the moment the child is brought to the hospital from the scene of the crash (in order to try to get the child admitted to the hospital and not just discharged from the E.R.) and continue on nine months-post crash (when the last point-in-time assessment can be undertaken).

These various point-in-time assessments will be difficult to manage. Where there is a "team" responsible for the child [parents, a paediatrician, rehabilitation treatment providers, lawyers, and (arguably) insurers] there can be a diffusion of responsibility. From the outset, the team should identify who will be responsible for setting appropriate limitation reminders and taking the initiative to arrange these various point-in-time assessments so as to take advantage of every opportunity to have the child declared catastrophically impaired. Otherwise, if the "left hand" assumes that the "right hand" is monitoring these important points-in-time, the child's chance at a catastrophic impairment may fall through the cracks. It is relatively simple for lawyers to set limitation reminders, if requested to do so, as most firms have software built for this very purpose. Where there is a delay in retaining counsel, this responsibility will likely fall to parents as treatment providers and paediatricians cannot necessarily be expected to keep track of each patient and insurers cannot be expected to take the initiative (though, in first party insurance where there is a duty of utmost good faith to the insured it is certainly hoped that insurers would take this initiative).

If the first two criteria do not apply, there will be a significant risk that the medical-rehabilitation needs of a child with a significant brain injury will be negatively impacted. There will be many disputes about the application of the KOSCHI and the post-nine month criteria. Any delay in resolving these disputes risks leaving a child with no money for treatment.

Do keep in mind that if a child does not qualify under sub-section (5) of the new definition, the whole person impairment subsection (6) remains available to him or her. However, changes have been made (beyond the scope of this paper) that make it more difficult to qualify as being catastrophically impaired based on whole person impairment.

The new system may increase costs. In many cases multiple assessments will be done at different periods of time. The KOSCHI and the post-9 month assessment may involve both doctors and occupational therapists.

The new definition leaves much to be debated. We will not have a clear handle on how the definition will be interpreted for years. However, because the SABS are supposed to be consumer protection legislation any ambiguities in the definition should be resolved in favour of the injured child.

Questions? Comments?

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