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CATASTROPHIC SABS AMENDMENTS: HOW CATASTROPHIC ARE THEY?

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On June 1, 2016, significant changes to the *Statutory Accident Benefits Schedule* (SABS) came into effect.¹ These changes include:

1. Cutting the combined limit for attendant care benefits and medical rehabilitation benefits from \$2,000,000.00 to \$1,000,000.00;
2. Cutting off non-earner benefits after 2 years;
3. Eliminating the GCS criterion for catastrophic impairment;
4. The introduction of diagnostic imaging and the Glasgow Outcome Scale Extended (GOSE) as a CAT criterion;
5. Requiring a marked impairment in 3 domains (rather than 1) to qualify as catastrophic under Chapter 14 of the AMA Guides; and,
6. New “Kid-CAT” criteria for brain injury victims under the age of 18

This paper will seek to explain these changes in detail, as well as provide strategies and coping mechanisms for health care workers who will face a host of new challenges as a result of these amendments.²

¹ For a copy of the new CAT definition, as found in the revised SABS see Appendix A

² For a very brief summary of these legislative changes, see Appendix B

Before delving into the ramifications of the legislative amendments, it is worth taking a moment to consider the cause of these changes. These drastic cuts were brought about at the behest of the Insurance Bureau of Canada (arguably the most powerful lobby group in Ontario). Somehow, the Insurance Bureau of Canada convinced our self-styled “social justice Premier” that Ontarians with catastrophic brain injuries should have their med/rehab benefits slashed in half. Moreover, the Premier decided to cut these benefits without holding a single meaningful consultation with brain injury survivors, their treatment providers or their lawyers. It is imperative, that those who are concerned for the well-being of Ontarians living with brain injuries, speak up to ensure that in the future, their voices are heard.

1. Reduced CAT Limits

Moving on to the changes themselves; the first major change is a reduction in catastrophic benefits. Prior to June 1, 2016, persons with catastrophic injuries were entitled to receive \$1,000,000.00 in medical/rehabilitation benefits and an additional \$1,000,000.00 in attendant care benefits. Under the new legislation, these two types of benefits are combined, and capped at \$1,000,000.00.

What will this reduction in benefits mean for health care providers? There will be significant pressure on treatment providers to keep care costs low. Where previously, a high burn rate was desirable to secure an advantageous lump-out for the injured person, now, preserving as much of the limits as possible will be the order of the day.

Wherever possible, lower cost alternatives to attendant care must be considered. Whether it be by delaying discharge, enlisting family members in the provision of attendant care or the use of a single attendant for multiple patients, case managers, OTs and lawyers must find new ways to preserve attendant care benefits to ensure that sufficient monies are available to care for clients in the long-term.

On the medical-rehabilitation side, consideration must be given to reducing treatment to the necessities. Big-ticket items such as home modifications and new vehicles must be considered in the larger context of drastically reduced lifetime limits.

2. Reduced Non-Earner Benefits

Non-earner benefits have also been severely reduced. Previously, an injured person was entitled to receive non-earner benefits for as long as their injury rendered them “completely unable to carry on a normal life”. Intuitively, this is a fair system. It would be bizarre to set an arbitrary time limit, whereby someone would have their benefits revoked even though they continued to be “completely unable to carry on a normal life.” Bizarre though it may be, that is exactly what the new legislation does. For people injured in collisions after June 1, 2016, non-earner benefits will be cut off 2 years post-accident, even if the injured person continues to be completely unable to carry on a normal life.

Who does this effect? Generally, non-earner benefits are paid to people with serious injuries, who, prior to the collision, were students, stay at home parents,

unemployed people and people with pre-existing disabilities. In other words, they are paid to vulnerable people who have had a significant (often catastrophic) injury superimposed on their pre-existing vulnerability. That is who the government decided to target with these amendments.

As a result of the arbitrary two-year cap on non-earner benefits, it is important that counsel apply for these benefits as quickly as possible. The “waiting period” for non-earner benefits has been reduced from 6 month to 4 weeks, and with the benefits available for so little time, it is crucial that injury victims begin receiving these benefits on a timely basis.

3. Elimination of GCS as CAT criterion

The SABS change that patients, healthcare workers and lawyers are going to feel most acutely is the elimination of the GCS criterion. The effects of this change cannot be overstated. A GCS of 9 or less was, by far, the most common grounds for a CAT finding. Perhaps more importantly, it was, without question, the most efficient and timely way to achieve a CAT designation.

The timely assessment of catastrophic status allowed treatment providers and counsel to put into place the early intervention treatments that we know lead to better long-term outcomes. Under the new regime, there is no quick CAT designation. In fact, the minimum amount of time for a CAT designation based on brain injury is one

month post-accident. To qualify for CAT after one month, the patient must be in a vegetative state.

The vast majority of brain injuries do not result in a month-long vegetative state. How then are treatment providers to determine whether they should be providing services at CAT levels or non-CAT levels? This is where experienced counsel must play an important role. Lawyers who specialize in catastrophic SABS cases can and should provide an informed estimate on the likelihood if whether a patient will be accepted as catastrophic.

It is imperative that patients with brain injuries have counsel who are knowledgeable and experienced enough to give an accurate opinion on whether a patient will eventually be accepted as catastrophic. This opinion will allow treatment providers to assess their own risk and decide whether they are able to provide catastrophic-level treatment on the basis that they will be reimbursed once a CAT designation is achieved. It is unfair to ask treatment providers to provide services “on spec” unless counsel has sufficient knowledge of the SABS to confidently assess the likelihood of a future CAT designation.

Knowledge and experience are not the only tools counsel must bring to this new regime. Running CAT files just got exponentially more expensive for counsel. The GCS determination was certainly the cheapest route to a CAT designation. In most cases, it costs the patient/counsel \$0 to have a treating doctor fill out the OCF-19

attesting to a GCS of 9 or less. Now, plaintiffs' counsel must be ready, willing *and able* to pay for CAT assessments re: WPI and Chapter 14 marked impairments on a much greater number of files. Proper multi-disciplinary CAT assessments can cost between \$20,000.00-\$40,000.00, and, they will become increasingly necessary in light of the inability to use GCS to prove entitlement to catastrophic benefits.

This new reality comes with several difficulties. Counsel must ask themselves, is it ethical to gamble the majority of a client's non-CAT limits on a catastrophic assessment? In most cases, the answer must be a resounding no! Counsel are then left to consider whether they can afford to pay for the assessment themselves, in hopes that they will be reimbursed upon having the insured accepted as catastrophic. Some counsel can (and regularly do) pay for catastrophic assessments themselves. However, counsel at smaller firms with smaller budgets will have very difficult decisions to make. If they cannot afford to self-fund the assessment, is it fair (or ethical) to saddle the client with a litigation loan? Does that counsel have an obligation to refer the client out to a firm better-positioned to take the risk? These are difficult questions that counsel will have to ask and answer on a file-by-file basis.

4. Addition of GOSE criterion

One way to avoid the necessity of a full CAT assessment, is the diagnostic imaging/GOSE criteria.³ However, as mentioned earlier, these criteria are restrictive, and make timely CAT designations much more difficult.

³ For a Copy of the GOSE Structured Interview, see Appendix C

The diagnostic imaging/GOSE criteria are twofold. Firstly, the injured person must have “positive findings on a computerized axial tomography scan, a magnetic resonance imaging or any other medically recognized brain diagnostic technology”. In addition to the diagnostic imaging, they must also meet a prescribed level of disability on the GOSE. There are 3 ways in which an insured can qualify as catastrophic under the GOSE test:

1. they are in a vegetative state one month or more post-accident;
2. they satisfy threshold for Upper Severe Disability or Lower Severe Disability six months or more post-accident; or,
3. they have sustained a Lower Moderate Disability one year or more post-accident, they qualify.

Vegetative state is pretty straight forward, but, what is a Upper/Lower Severe Disability, or a Lower Moderate Disability? The GOSE is an 8 question structured interview that covers topics such as ADLs, independence in travel, ability to return to work, etc. It is not within the purview of this paper to review every manner in which a person may be deemed CAT under the GOSE. However, a few examples may highlight the fact that a CAT designation based on the GOSE is not overly onerous. According to SABS' interpretation of the GOSE , an injured person is catastrophic, if:

1. six months post-accident, they need everyday assistance with ADLs or shopping; or,
2. one year post-accident, they are “able to work only in a sheltered workshop or non-competitive job, or currently unable to work”

For those who have worked with brain injury survivors, it may seem obvious that a CAT designation under the GOSE is not especially onerous. Perhaps the more stringent

gate-keeper will prove to be the requirement for “positive findings on a computerized axial tomography scan, a magnetic resonance imaging or any other medically recognized brain diagnostic technology”. Currently, there are significant wait-times for MRI and other diagnostic technologies. Plaintiffs’ counsel will now have to consider funding private MRIs in order to expedite CAT designations and allow for timely treatment. Another option counsel will have is obtaining a medical-legal report from a neuro-radiologist, who may be able to show a “positive finding” missed by the treating doctor.

5. More Restrictive Chapter 14 Definition

Previously, an insured was catastrophically impaired if they had a “marked impairment” in one or more areas of functioning under Chapter 14 of the *AMA Guides*. The new test requires that they have a “marked impairment” in three or more areas or an “extreme impairment” in one or more areas. The four areas of functioning are: Activities of Daily Living, Social Functioning, Concentration/Persistence/Pace and Adaptation in Work or Work-like settings. This new test is obviously much more restrictive. Chapter 14 may not be dead, but is suddenly a much more exclusive club.

6. New “Kid-CAT” Criteria

The new definition of “catastrophic impairment” contains a specific definition for children with brain injuries that is different from the adult definition. Unlike the changes to the definition in respect of adult brain injuries, the new definition for Kid-CAT should not reduce the number of catastrophic impairment claims, but it will require more

vigilance for the declarations to be obtained and the declarations will likely come with greater delay. 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: at the time of hospitalization, one month post-MVA, six months post-MVA, nine months post-MVA and two years post-MVA. 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 of those intervals.

a) CRITERION 1: HOSPITALIZATION AND IMAGING

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 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, later 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, 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.” 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.

b) CRITERION 2: ADMISSION TO A PAEDIATRIC REHAB FACILITY

A child 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.⁴

⁴ For a complete list of OACRS facilities, see Appendix D

c) CRITERION 3: KING'S OUTCOME SCALE (1-5 MONTHS POST INJURY)

The creators of the King's 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". However, like the Glasgow Coma Scale, which the government has done away with as part of the new catastrophic definition, the KOSCHI has been found to have limited use in predicting long-term outcome in head trauma. 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 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 of brain injury. Even among severe brain injuries very few children will be at this level a month after the injury.

d) CRITERION 4: KING'S 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 “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 is defined as: “The child is mostly independent but needs a degree of supervision/actual help for physical or behavioural problems.” Placing children in the severe disability vs. moderate disability categories is obviously going to involve an exercise of clinical judgment. Even the authors of the KOSCHI concede that there will be inter-observer variability.

e) CRITERION 5: IMPAIRMENTS 9 MONTHS OR MORE POST-MVA

A child with a brain injury is catastrophically impaired if, nine months or more after the accident, the child's level of function remains seriously impaired such that the child 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 any medical tests/procedures. It was 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?

Conclusion

All of us have been down this road before. This is certainly not the first time that insurers have attempted to avoid paying benefits; and it will not be the last time. However, one simply cannot underestimate the dedication and ingenuity of healthcare workers and Plaintiffs’ counsel. When you work for people suffering from life-altering brain injuries, you do not have to look very far to find the inspiration necessary to overcome the hurdles that insurers put in your way. The legal landscape may have changed, but the fight is the same one we have been having for decades. And, with your help, we will keep winning that fight.

APPENDIX A

APPENDIX A

Catastrophic impairment

3.1 (1) For the purposes of this Regulation, an impairment is a catastrophic impairment if an insured person sustains the impairment in an accident that occurs on or after June 1, 2016 and the impairment results in any of the following:

1. Paraplegia or tetraplegia that meets the following criteria:
 - i. The insured person's neurological recovery is such that the person's permanent grade on the ASIA Impairment Scale, as published in Marino, R.J. et al, *International Standards for Neurological Classification of Spinal Cord Injury*, Journal of Spinal Cord Medicine, Volume 26, Supplement 1, Spring 2003, can be determined.
 - ii. The insured person's permanent grade on the ASIA Impairment Scale is or will be,
 - A. A, B or C, or
 - B. D, and
 1. the insured person's score on the Spinal Cord Independence Measure, Version III, item 12 (Mobility Indoors), as published in Catz, A., Itzkovich, M., Tesio L. et al, *A multicentre international study on the Spinal Cord Independence Measure, version III: Rasch psychometric validation*, Spinal Cord (2007) 45, 275-291 and applied over a distance of up to 10 metres on an even indoor surface is 0 to 5,
 2. the insured person requires urological surgical diversion, an implanted device, or intermittent or constant catheterization in order to manage a residual neuro-urological impairment, or
 3. the insured person has impaired voluntary control over anorectal function that requires a bowel routine, a surgical diversion or an implanted device.
2. Severe impairment of ambulatory mobility or use of an arm, or amputation that meets one of the following criteria:
 - i. Trans-tibial or higher amputation of a leg.
 - ii. Amputation of an arm or another impairment causing the total and permanent loss of use of an arm.
 - iii. Severe and permanent alteration of prior structure and function involving one or both legs as a result of which the insured person's score on the Spinal Cord Independence Measure, Version III, item 12 (Mobility Indoors), as published in Catz, A., Itzkovich, M., Tesio L. et al, A

multicentre international study on the Spinal Cord Independence Measure, version III: Rasch psychometric validation, Spinal Cord (2007) 45, 275-291 and applied over a distance of up to 10 metres on an even indoor surface is 0 to 5.

3. Loss of vision of both eyes that meets the following criteria:
 - i. Even with the use of corrective lenses or medication,
 - A. visual acuity in both eyes is 20/200 (6/60) or less as measured by the Snellen Chart or an equivalent chart, or
 - B. the greatest diameter of the field of vision in both eyes is 20 degrees or less.
 - ii. The loss of vision is not attributable to non-organic causes.
4. If the insured person was 18 years of age or older at the time of the accident, a traumatic brain injury that meets the following criteria:
 - i. The injury shows 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.
 - ii. When assessed in accordance with Wilson, J., Pettigrew, L. and Teasdale, G., Structured Interviews for the Glasgow Outcome Scale and the Extended Glasgow Outcome Scale: Guidelines for Their Use, Journal of Neurotrauma, Volume 15, Number 8, 1998, the injury results in a rating of,
 - A. Vegetative State (VS or VS*), one month or more after the accident,
 - B. Upper Severe Disability (Upper SD or Upper SD*) or Lower Severe Disability (Lower SD or Lower SD*), six months or more after the accident, or
 - C. Lower Moderate Disability (Lower MD or Lower MD*), one year or more after the accident.
5. If the insured person was under 18 years of age at the time of the accident, a traumatic brain injury that meets one of the following criteria:
 - i. The insured person 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.
 - ii. The insured person 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.

- iii. One month or more after the accident, the insured person's level of neurological function does not exceed category 2 (Vegetative) on the King's Outcome Scale for Childhood Head Injury as published in Crouchman, M. et al, *A practical outcome scale for paediatric head injury*, Archives of Disease in Childhood, 2001: 84: 120-124.
 - iv. Six months or more after the accident, the insured person's level of neurological function does not exceed category 3 (Severe disability) on the King's Outcome Scale for Childhood Head Injury as published in Crouchman, M. et al, *A practical outcome scale for paediatric head injury*, Archives of Disease in Childhood, 2001: 84: 120-124.
 - v. 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.
6. Subject to subsections (2) and (5), a physical impairment or combination of physical impairments that, in accordance with the American Medical Association's Guides to the Evaluation of Permanent Impairment, 4th edition, 1993, results in 55 per cent or more physical impairment of the whole person.
 7. Subject to subsections (2) and (5) a mental or behavioural impairment, excluding traumatic brain injury, determined in accordance with the rating methodology in Chapter 14, Section 14.6 of the American Medical Association's *Guides to the Evaluation of Permanent Impairment*, 6th edition, 2008, that, when the impairment score is combined with a physical impairment described in paragraph 6 in accordance with the combining requirements set out in the Combined Values Table of the American Medical Association's *Guides to the Evaluation of Permanent Impairment*, 4th edition, 1993, results in 55 percent or more impairment of the whole person.
 8. Subject to subsections (3) and (5), an impairment that, in accordance with the American Medical Association's *Guides to the Evaluation of Permanent Impairment*, 4th edition, 1993 results in a class 4 impairment (marked impairment) in three or more areas of function that precludes useful functioning or a class 5 impairment (extreme impairment) in one or more areas of function that precludes useful functioning, due to mental or behavioural disorder. O. Reg. 251/15, s. 3; O. Reg. 116/16, s. 1.

(2) Paragraphs 6 and 7 of subsection (1) do not apply in respect of an insured person who sustains an impairment as a result of an accident unless,

- (a) two years have elapsed since the accident; or
- (b) an assessment conducted by a physician three months or more after the accident determines that,

- (i) the insured person has a physical impairment or combination of physical impairments determined in accordance with paragraph 6 of subsection (1), or a combination of a mental or behavioural impairment and a physical impairment determined in accordance with paragraph 7 of subsection (1) that results in 55 per cent or more impairment of the whole person, and
- (ii) the insured person's condition is unlikely to improve to less than 55 per cent impairment of the whole person. O. Reg. 251/15, s. 3.

(3) Paragraph 8 of subsection (1) does not apply in respect of an insured person who sustains an impairment as a result of the accident unless,

- (a) two years have elapsed since the accident; or
- (b) a physician states in writing that the insured person's impairment is unlikely to improve to less than a class 4 impairment (marked impairment) in three or more areas of function that precludes useful functioning, due to mental or behavioural disorder. O. Reg. 251/15, s. 3.

(4) Subsection (5) applies to an insured person who was under the age of 18 at the time of the accident and whose impairment is not a catastrophic impairment within the meaning of subsection (1). O. Reg. 251/15, s. 3.

(5) If the insured person's impairment can reasonably be believed to be a catastrophic impairment for the purposes of paragraph 6, 7 or 8 of subsection (1), the impairment shall be deemed to be the impairment referred to in paragraph 6, 7 or 8 of subsection (1) that is most analogous to the impairment, after taking into consideration the developmental implications of the impairment. O. Reg. 251/15, s. 3.

APPENDIX B

APPENDIX B STATUTORY ACCIDENT BENEFITS SCHEDULE SUMMARY®

(for accidents on or after June 1, 2016 *)

TYPE OF BENEFIT	SABS SECTION	MINOR INJURY GUIDELINE	NON-CATASTROPHIC IMPAIRMENT	CATASTROPHIC IMPAIRMENT
Medical and Rehabilitation Benefits	14, 15 & 16, 18, 20	\$3,500 maximum - can be increased to \$65,000 if there is compelling evidence that a pre-existing medical condition will prevent the insured person from achieving maximal recovery with access to only \$3,500	\$65,000 maximum - available for 5 years or until age 28 for minors (but see combined limit)	\$1,000,000 maximum - available for life (but see combined limit)
Attendant Care	19	Not Available	\$3,000 per month maximum - available for 5 years or until age 28 for minors (but see combined limit)	\$6,000 per month maximum - available for life (but see combined limit)
Combined Med/Rehab and Attendant Care Limit - NEW	20	Not Available	\$65,000 combined total limit of the med/rehab and attendant care benefits (available for 5 years or until age 28 for minors)	\$1,000,000 combined total limit of the med/rehab and attendant care benefits (available for life)
Assessments, Examinations and Preparing Reports	18 (5)	All fees and expenses for conducting assessments, examinations and preparing reports are to be paid out of medical and rehabilitation benefits and, where applicable, attendant care limits (excluding insurer examinations and accounting reports for income replacement benefits and excluding CAT assessments as set out in jurisprudence see <i>Henderson v. Wawanesa</i> - FSCO A-14-001758)		
Maximum Cost of Assessments and Examinations and Disallowing Future Care Reports	25 (5)	Absolute cap of \$2,000 for fees and expenses associated with any assessment or examination, including the cost of preparing reports (and including insurer examinations), along with a prohibition on an insurer paying for a future care or similar plan		
In-Home Assessments and Examinations	25 (2)	Not Available	Available	Available
Case Manager Services	17	Not Available	Not Available	Available (paid out of med/rehab limits)
Transportation	3 (1)	Only for the portion of any distances over 50 kms		Yes
Housekeeping and Home Maintenance	23	Not Available		Maximum of \$100 per week - available for life
Lost Educational Expenses	21	Up to \$15,000 payable to those enrolled in school who are unable to continue with their program		
Visitor Expenses	22	Available to certain immediate family members - available for 2 years post accident		Available to certain immediate family members - available for life
Damage to Clothing	24	Reimbursement for damage to clothing, medical and dental devices lost or damaged in the accident (no limit)		
Death Benefits	26	If fatality, \$25,000 to spouse, \$10,000 to supported former spouse and \$10,000 per dependant (or more if no spouse)		
Funeral Benefits	27	Paid up to a \$6,000 maximum in cases of fatality		
Income Replacement Benefits	4, 5, 6 & 7	If unable to return to work, paid at 70% of gross income to a maximum of \$400 per week (not payable for first week and qualifying test changes at two year anniversary)		
Non-Earner Benefits	12	If completely unable to carry on a normal life, paid at \$185 per week for maximum of 2 years (and not available for first 4 weeks)		
Caregiver Benefits	13	Not Available		If substantially unable to engage in caregiving activities, available at \$250 per week for "incurred" care in relation to the first person in need of care plus \$50 per week for all other persons in need of care (available only after the 2 year anniversary if the person suffers a "complete inability to carry on a normal life")

* Always check if Optional Benefits are available as optional benefits will increase the benefits available and for pre June 1, 2017 accidents check for access to an insurance policy that has not yet been renewed as then old insurance policy limits would apply.

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SUMMARY OF TOP 5 SABS CHANGES[®]

(for accidents on or after June 1, 2016 *)

	SABS CHANGES	SABS SECTION	
1	Half CAT Limits *	A reduced combined total of \$1,000,000 is now available to the "catastrophically impaired" for medical, rehabilitation and attendant care benefits (down from the previous \$2,000,000 combined total, namely \$1,000,000 for med/rehab benefits and \$1,000,000 for attendant care benefits)	18 (3)(b)
2	Total Non-CAT Benefits Reduced *	A reduced combined total of \$65,000 is now available for those with "non-catastrophic impairments" for medical, rehabilitation and attendant care benefits (down from the previous \$86,000 combined total, namely \$50,000 for med/rehab benefits and \$36,000 for attendant care benefits)	18 (3)(a)
3	Duration of Non-Earner Benefits Reduced to 2 Years *	Weekly non-earner benefits available to the unemployed, students, stay at home parents, etc. who qualify as completely unable to carry on a normal life are now only available for up to 2 years post-accident, rather than for life (albeit after a shorter 4 week post-accident waiting period, down from the previous 6 month waiting period)	12(3)
4	Insurer Must Agree "Other Goods and Services" are Essential *	For uncommon expenses, the insurer is only responsible if they agree that the "other goods and services" are essential (as opposed to the previous requirement that the expense was reasonable and necessary)	15(1)(h) & 16(3)(l)
5	The Narrowing and Redefining of "Catastrophic Impairment"	A new definition of "catastrophic impairment" will apply to all accidents that occur on or after June 1, 2016	3.1
(a)	Elimination of the GCS test!	The new CAT definition removes the Glasgow Coma Scale test as a means to qualify for a CAT designation (previously, a post-accident GCS score of 9 or less was the most commonly relied on provision to obtain a CAT designation and was a simple, efficient and timely means to obtain the crucial designation)	N/A
(b)	Requirement for 3 "marked impairment" domains	The new CAT definition requires "marked impairments" in three domains, or an "extreme impairment" in one domain pursuant to Chapter 14 of The AMA Guides 4th edition (the previous requirement, as determined by the courts, was a marked impairment in just one domain)	3.1 (1) para 8
(c)	Use of GOS-E for Adult Brain Injuries	The Glasgow Outcome Scale Extended (GOS-E), along with brain imaging showing a brain injury, will be used to determine whether a brain injury qualifies for a CAT designation. The necessary GOS-E rating for CAT is: Vegetative State (VS) one month after the accident; Upper Severe Disability (SD+) or Lower Severe Disability (SD-) six months after the accident ; or, Lower Moderate Disability (MD-) one year or more after the accident	3.1(1) para 4
(d)	Changes to the WPI Ratings	WPI ratings for combined physical and mental behavioral (non-TBI) impairments will use the AMA Guides 4th edition to rate the physical impairment and will now use the AMA Guides 6th edition to rate the mental/behavioural impairment (rather than the 4th edition)	3.1(1) para 7
(e)	New "Kid-CAT" criteria	Minors will be accepted as CAT if they meet any of the following criteria: 1. brain diagnostic technology reveals TBI; 2. admission as in-patient to a recognized neurologic rehab facility; 3. category 2 (Vegetative) on King's Outcome Scale for Childhood Head Injury one month or more post injury; 4. category 3 (Severe disability) on the King's Outcome Scale for Childhood Head Injury six months or more post injury; or, 5. nine months or more after the injury, minor is not age-appropriately independent and requires supervision for the majority of the waking day.	3.1(1) para 5
(f)	Narrowing of other CAT criteria	Paraplegia, tetraplegia, amputation and vision loss have narrower definitions under the amended SABS	3.1(1) para 1-3

* For accidents prior to June 1, 2017, check if you can access an auto insurance policy that has not yet been renewed as that will provide for access to the old higher benefit limits and always check if optional benefits are available.

THOMSON ROGERS

PERSONAL INJURY LAWYERS

APPENDIX C

APPENDIX C

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Structured Interviews for the Glasgow Outcome Scale and the Extended Glasgow Outcome Scale: Guidelines for Their Use

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ABSTRACT

The Glasgow Outcome Scale (GOS) is the most widely used outcome measure after traumatic brain injury, but it is increasingly recognized to have important limitations. It is proposed that shortcomings of the GOS can be addressed by adopting a standard format for the interview used to assign outcome. A set of guidelines are outlined that are directed at the main problems encountered in applying the GOS. The guidelines cover the general principles underlying the use of the GOS and common practical problems of applying the scale. Structured interview schedules are described for both the five-point GOS and an extended eight-point GOS (GOSE). An interrater reliability study of the structured interviews for the GOS and GOSE yielded weighted kappa values of 0.89 and 0.85, respectively. It is concluded that assessment of the GOS using a standard format with a written protocol is practical and reliable.

Key words: Glasgow Outcome Scale; outcome assessment

INTRODUCTION

THE GLASGOW OUTCOME SCALE (GOS) (Jennett and Bond, 1975) has become the most widely used scale for assessing outcome after head injury and nontraumatic acute brain insults. Despite its popularity, the GOS is increasingly recognized to have important shortcomings (Anderson et al., 1993; Gouvier et al., 1986; Grant and Alves, 1987; et al., 1985; Maas et al., 1983). The aim of the present paper is to argue that many of the main criticisms may be overcome by adopting a standard, well-specified format for the interview, and by being clear about the purposes and limitations of the GOS assessment. A set of guidelines are proposed for using the GOS and the extended GOS, and information is given concerning the reliability of the structured interviews.

ADDRESSING LIMITATIONS OF THE GOS

Traditionally, outcome on the GOS has been assigned after a short interview, usually unstructured, and not involving a written protocol. This open-ended format encourages impressionistic use of the scale; the results are variable among individual assessors (Maas et al., 1983), and there is evidence of systematic bias between different professional groups (Anderson et al., 1993). The upper levels of the GOS are multidimensional, and the criteria for the upper categories are therefore ambiguous (Grant and Alves, 1987). The approach described below attempts to overcome such problems by adopting a standard format for the interview and identifying specific criteria for assigning an outcome category. The major categories of outcome used in the present structured

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interviews (Appendix) follow closely the descriptions of the Glasgow Outcome Scale provided by Jennett and Bond (1975), Jennett et al. (1981), and Jennett and Teasdale (1981). The questionnaires are designed to achieve greater objectivity and reliability than the traditional method of assigning an outcome category.

The GOS is sometimes interpreted as emphasizing physical rather than cognitive and emotional problems (Anderson et al., 1993). In fact, Jennett and Bond (1975) and Jennett et al. (1981) pointed out that mental change was more important than physical limitation in determining disability after head injury. However, in practice this precept is often overlooked: thus, Good Recovery may be taken to be physical independence in the absence of neurological deficits (Htitter and Gilsbach, 1993). In constructing the questionnaires, we used the aspect of social disability described by Jennett et al. (Jennett and Bond, 1975; Jennett et al., 1981; Jennett and Teasdale, 1981), including effects on social and leisure activities and disruption to family and friendships. This approach will necessarily assign fewer patients to the Good Recovery category than an interpretation restricted to physical or neurological limitations, but is more faithful to the original concept of social disability.

The GOS has also been criticized because there are no guidelines for dealing with commonly encountered problems, including the effects of extracranial injury, epilepsy, and preinjury unemployment (Anderson et al., 1993; Boake, 1996). These specific issues are discussed below, and suggestions are made for resolving the difficulties that can arise.

It is often commented that the GOS categories are broad, and the scale is therefore insensitive to subtle changes in functional status (Gouvier et al., 1986; Hall et al., 1985; Hall, 1992). Jennett et al. (1981) suggested that the GOS can be extended by dividing each of the upper three categories into "better" and "worse," but did not give criteria for making these distinctions. Several schemes for extending the GOS have been suggested (Horne and Schremitsch, 1989; Livingston and Livingston, 1985; Maas et al., 1983; Smith et al., 1979), but a general consensus has not emerged. The eight-point, extended Glasgow Outcome Scale (GOSE), develops the proposal of Jennett et al. (1981) by providing various criteria to subdivide the upper three categories of the scale. These criteria evolved through pilot work, and, in the final version, they are easy to apply and reliable, and give a division of the patients in each category. The questionnaires used to obtain the GOS and GOSE are identical apart from the inclusion of the additional items in the GOSE.

There are many contexts in which a more detailed assessment of specific limitations and their effects than that provided by either the GOS or GOSE is appropriate and

desirable. The precise neurological, neuropsychological, emotional, and behavioral indices used will depend on the purpose of the assessment and the resources available to carry it out. An issue not fully resolved is the best choice of tests to supplement the GOS when it is adopted as a primary end point: sensible decisions require an understanding of the relationship between the GOS and other measures of impairment and disability.

GUIDELINES FOR STRUCTURED INTERVIEWS FOR THE GOS AND GOSE

Purpose of the GOS

The Glasgow Outcome Scale was developed to allocate people who have suffered acute brain damage from head injury or nontraumatic brain insults into broad outcome categories. The scale reflects disability and handicap rather than impairment; that is, it focuses on how the injury has affected functioning in major areas of life rather than on the particular deficits and symptoms caused by injury (World Health Organization, 1980). It is not intended to provide detailed information about the specific difficulties faced by individual patients, but to give a general index of overall outcome. It is of particular value in allowing the outcome of different groups of patients to be compared in a simple and easily interpreted fashion (Marshall, 1987). It has been recommended as a measure of outcome for clinical trials (Clifton et al., 1992) and has been widely adopted for this purpose.

Principle Areas Requiring Judgement

The questionnaires are designed to be used in a structured interview, and some background knowledge is necessary in order to administer the scale. Areas that may sometimes involve exercise of judgement can be summarized in four rules for applying the GOS:

1. *Disability due to head injury is identified by a change from preinjury status.* The scale is designed to assess changes and restrictions that have taken place as a result of head injury. Questions are included concerning preinjury status because pilot work indicated that this was a major confounding factor when determining outcome in the general head-injured population. In research samples, patients with premorbid difficulties are often excluded, and the issue of preinjury status may be less salient. The inclusion of questions concerning preinjury status makes it possible to assess preexisting disability and to make appropriate qualifications on the assessment of outcome after head injury; there are more detailed instructions under "scoring" below.

2. *Only preinjury status and current status should be considered.* The person's initial state after injury and hopes for the future are not relevant in determining outcome. "Current" status includes problems and capabilities evident over the past week or so. Some patients are more severely injured than others, and some seem to make a "remarkable" recovery considering their initial state. Nevertheless, as previously stated, a patient should not be said to have made a good recovery "considering how bad he was" (Jennett et al., 1981). Such considerations are not relevant in determining outcome, because it is the level reached that is important, and the severity of initial injury should not be taken into account. For research studies, it is recommended that the person who is assigning the GOS not be someone who has been involved in the acute care of the patient (Anderson et al., 1993). Similarly, interview at a stage when there has recently been relatively rapid improvement in the patient's state may produce an overoptimistic view, because there is an expectation of continuing recovery in the future. It is important to establish current capabilities independently of hope for future progress.

3. *Disability must be a result of mental or physical impairment.* The injury is an event that has occurred at a particular time, but not all changes that have taken place following the event will be due to the injury. Thus, if a patient is capable of performing the activity but does not do it for some reason they are not considered disabled. For example, the patient's financial circumstances may have changed, and this can produce a restriction in lifestyle. The precise question that is being asked is sometimes hypothetical: what exactly is the patient capable of even though they do not actually do it? If the answer to a question indicates that the head-injured person has some difficulty in a particular area, then it may be necessary to probe more deeply. After most of the main questions is a note amplifying the hypothetical issue that is being addressed, and there are further notes below. If necessary, the questioning should be continued to determine the answer to the hypothetical question.

4. *Use the best source of information available.* A necessary limitation of the approach is that it relies on verbal report, and much of the time the information provided will have to be taken at face value. However, it is important to remain aware of the circumstances in which information given is likely to be misleading, and the practical steps that can be taken to improve the quality of information: (a) In some cases a patient will lack insight, and whenever possible a relative or close friend of the head injured person should also be interviewed (Anderson et al., 1993; Jennett et al., 1981; McKinlay and Brooks, 1984). Patients are particularly likely to deny psychological changes, but it should be noted that there is also some evidence that relatives who are "worriers"

may overreport postinjury problems (McKinlay and Brooks, 1984). The questionnaire is worded so that it can be used either with the patient or with a caregiver or relative, and information can be recorded separately from these sources if desired. (b) Particular indices such as return to work should not be given too much weight (Jennett et al., 1981). Enquiry may reveal that special arrangements have been made by an employer to accommodate the patient or that the patient is capable but work is lacking. (c) Responses that are contradictory or inconsistent indicate the need to explore more deeply or find another informant. (d) We recommend that the complete questionnaire be normally administered, because sometimes responses to later items can indicate the need to go back and question more thoroughly on earlier points or reevaluate the significance of earlier answers. For example, occasionally, a patient will give responses that indicate that they have specific problems with shopping or travel, but subsequent questioning indicates that they have returned to work, or normal social and leisure activities. Further consideration may indicate that such a person should be considered to be moderately disabled rather than severely disabled, that is, that they are capable of activities of independence outside the home, even if they have some difficulties with them.

Other Considerations

Risk of epilepsy. A patient may be prevented from driving after head injury because there is a risk of late epilepsy, although the person has not actually had a seizure. The restriction on driving may interfere with return to previous employment and other aspects of return to normal life even when the patient has otherwise made a complete recovery. We suggest that in these cases the restriction should be ignored for the purposes of determining an overall score on the GOS/GOSE. On the other hand, if the patient has actually suffered a seizure, then restrictions imposed by the risk of epilepsy should be taken into account.

Effect of head injury versus effects of other injuries or illness. Although the scale is directed at the effect of brain injury, it does not itself distinguish changes due to injury to the brain from disability caused by injury to other parts of the body. Some patients with multiple injuries may have lost functioning due to injuries to the limbs. Depending on the purposes for which the scale is used, it may be important at the time of interview to distinguish any such effects from those caused by brain injury. Anderson et al. (1993) found that general practitioners may assign GOS score on the basis of physical disability independent of head injury. It is usually relatively easy to

discount any minor effects of injury to other parts of the body. However, in some cases when such injuries are severe, for example, major spinal injury, it will be difficult to assign a GOS that reflects only the effects of head injury. This should be noted appropriately when reporting the GOS.

Age Range

The GOS has customarily been used with both adults and children. However, the reliability of the GOS applied to children is unknown; in the case of very young children, the GOS criteria appear to be largely inapplicable. The current approach is designed for use with people aged 16 years and upwards.

Timing of Assessment Postinjury

The scale is intended for use after discharge from hospital, and, in particular, moderate disability and good recovery are not assessable until after discharge. Reports should always include the timing of assessment.

Assigning an Outcome Category

The GOS and GOSE are simple hierarchical scales in which the patient's overall rating is based on the lowest outcome category indicated. Outcome categories are given in brackets on the right side of the questionnaires.

Severe disability. Obtain answers to all the main questions concerning independence and the questions concerning preinjury problems in these areas (Q2—Q4). If the patient was fully independent before the injury, and the answers to one or more of the dependence questions indicate that this is no longer the case, then they are Severely Disabled (SD).

Moderate disability. Obtain answers to all the main questions concerning disability, and the questions concerning preinjury problems (Q5—Q7). If the patient had no prior problems and the answers to one or more of the questions concerning current difficulties indicate that this is no longer the case, then they are Moderately Disabled (MD). If the patient had prior difficulty in one or two of the areas, then they can usually be rated on the basis of the answers to the remaining questions. Sometimes a patient will have had prior problems, but these have become markedly worse as a result of injury, and this change can be used in rating. If the person was unemployed and not seeking work before the injury, then they should be rated on the answers given to questions 6 and 7. For example, if the person is long-term unemployed or retired, then they should be rated on social and leisure activities and personal relationships. Question 6c is included because people may have a very restricted preinjury social repertoire (for example, the chronically ill or people who are socially isolated), and it may not be

sensible to rate them on this question. In general, it is not uncommon for people to have preinjury difficulties in one or two of these areas, and it will usually be possible to determine an outcome on the basis of the other questions.

Good recovery. If the patient does not fulfill the criteria for any of the lower outcome categories, then they are considered to be a Good Recovery. Note that the "Good Recovery" category includes people with minor disability. On the GOSE, patients with minor disability are assigned to the lower band of Good Recovery, and those without any head injury related disability to the upper band.

Preinjury disability. There are some cases that are problematic because of the presence of very significant preinjury problems and severe preinjury dependency. Such cases will be excluded from studies aimed at researching the nature of the effects of injury on the brain but must be included in comparisons of clinical cohorts managed in different ways. It is therefore important to be able to give a rating to everyone if necessary. The approach suggested here is to rate such people on their current functional status and to indicate the existence of preinjury disability by putting a "*" beside the rating. These ratings can then be interpreted as meaning "still disabled at this level" or "disability no worse than this level" and dealt with appropriately in analysis. The circumstance in which we specifically suggest that cases are treated in this way is as follows. If the patient was not fully independent before injury, then they should be rated Severely Disabled* (SD*) (or upper or lower SD* on the GOSE depending on the degree of preinjury disability). Depending on the purpose of the study, this approach could be extended by collecting more detailed information concerning the nature and level of preinjury disability.

In addition to the overall rating, the form gives a permanent record of current problem areas and prior limitations. This information serves as a source for audit of the data and can also be coded and used in analysis of outcome. The responses can be recorded as numerals in the boxes to aid computer coding (it is not intended that these digits should be added up). It should be borne in mind that responses to individual items may have lower reliability than the overall rating.

Definition of terms and notes to individual questions are given in the Appendix. The information given is deliberately detailed to allow the scales to be used by the nonspecialist.

Reliability

Patients. Fifty patients (eight female) were recruited from head injury admissions to the regional neurosurgi-

STRUCTURED INTERVIEWS FOR THE GOS AND GOSE

TABLE 1. DISTRIBUTIONS OF GOS RATINGS MADE BY A PSYCHOLOGIST AND RESEARCH NURSE FOR 50 HEAD-INJURED PATIENTS

Nurse	Severe	Moderate	Good	
Psychologist	disability	disability	recovery	
Severe disability		0	0	36%
Moderate disability		11	0	24%
Good recovery	1 40%	2 26%	2 34%	40%

cal unit. The patients were aged 18-76 years of age at the time of injury (mean = 39.4; SD = 16.5). Classification of severity of injury by worst recorded GCS indicated that 30% were severely injured (GCS 3-8), 14% had moderate injuries (GCS 9-12), and 56% were mild (GCS 13-15). The study was restricted to conscious survivors.

Procedure. Patients were interviewed 5-17 months postinjury (mean = 10.2 months; SD = 3.9). In 36 cases, the patient was interviewed alone, and in 14 the patient was seen together with a caregiver, relative, or friend. The outcome category was independently assigned by a research psychologist and either one of two research nurses. Interviews were carried out face to face on the same day. Raters carried out a structured interview using the GOSE questionnaire and used the information to assign outcomes on both eight-point and five-point scales.

Results. Preinjury limitations were reported in the following areas (number of cases in brackets): independence in home (1); shopping (1); work (17); social and leisure activities (2); family and friendships (6); other complaints (4). Two cases were rated as upper SD*, and these were treated as upper SD in the analysis. Distributions of ratings for the GOS and GOSE are shown in Tables 1 and 2. Overall agreement between raters was 92% for the GOS and 78% for the GOSE. As can be seen from Table 1, there were four cases in which there was disagreement between raters on the GOS, and in one case there was a

disagreement of two categories. Review of these cases indicated that in three instances the respondent had given different information to the interviewers, and in one case the interviewer had misinterpreted a question. The patient with the largest disagreement had a history of alcoholism and was suffering from a wasting disease of the spine; he told one interviewer that he needed assistance for daily activities and did not like being away from home; however, he told the second interviewer that he went out six or seven times per week. The weighted kappa statistic was computed for observations between raters; this statistic takes into account the seriousness of disagreement between raters (Brennan & Silman, 1992). For the five-point scale κ_w was 0.89 and for the eight-point scale κ_w was 0.85.

CONCLUSION

The proposed structured interviews achieve a systematic subdivision of patients into outcome categories and have satisfactory interrater reliability. The kappa values for both the GOS and GOSE are regarded as "very good" (Brennan and Silman, 1992). Overall levels of interrater agreement in the present study compare favorably with previous reports (Anderson et al., 1993; Jennett et al., 1981; Maas et al., 1983): for example, Maas et al. (1983) report kappa values of 0.77 for the five-point scale and 0.48 for the eight-point scale in a "live" situation. Improved reliability does not completely eliminate limitations such as the use of broad social roles to define outcome categories, the reliance on verbal report, and the need for the exercise of some judgement by the interviewer. Nevertheless, the advantages of the GOS remain its simplicity, wide recognition, and the fact that differ-

TABLE 2. DISTRIBUTIONS OF GOS RATINGS MADE BY A PSYCHOLOGIST AND RESEARCH NURSE FOR 50 HEAD-INJURED PATIENTS

Nurse	Severe disability		Moderate disability		Good recovery		
Psychologist	Lower	Upper	Lower	Upper	Lower	Upper	
Severe disability							
Lower	a						16%
Upper	3	2					20%
Moderate disability							
Lower		1	7				18%
Upper							6%
Good recovery							
Lower		1	2		2		28%
Upper						2	12%
22%		18%	18%	8%	20%	14%	

ences in disability are clinically meaningful. Provided that the purpose and limits, as well as the benefits, of the GOS are appreciated, it can continue to have a central place in the assessment of head injury outcome.

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APPENDIX: Notes to Questions and Definition of Terms

Q1. Vegetative State

The definition of the vegetative state given in Q1 follows that given by Jennett et al. (1981). The Royal College of Physicians have published guidelines for deciding whether a patient is in a persistent vegetative state, and the simple approach suggested here is not intended to replace these guidelines in the management of the individual patient. If the patient is unable to obey commands or say words for some other reason, for example, because they are severely demented, then they are not in the vegetative state. "Any words" includes repetition of a simple word such as "No." A person able to communicate using a code would no longer be in the vegetative state.

Q2. Independence in the Home

Q2a. Dependency may be caused by physical impairment, but it is also often due to mental changes. People may require actual assistance with activities of daily living, they may need prompted or reminded to do things, or they may need someone with them to supervise them because they would be unsafe otherwise. In all these cases, they are dependent. However, many people receive assistance, but do not absolutely depend on it. This care or protection that is given by others should be distinguished from dependency: the person may well benefit from this help and may well have a real need for it, but such care does not mean that they are dependent in the sense required here.

A difficulty may arise if an activity was not normally carried out before the injury. For example, many men have little practical involvement in domestic matters and quite often will not usually prepare meals for themselves. In this case, it is sufficient that the person could, if the necessity arose, prepare food, even if this would be in a simple fashion.

Examples of minor domestic crises: what you do if . . . a glass gets dropped and broken, a tap is left running, a light goes out, it begins to get cold, a stranger comes to the door, . . . The person should be able to use the telephone to report problems or summon help.

Q2b (GOSE only). The patient is considered to be in the lower category of severe disability if they cannot be left alone for 8 h. This limit implies that a relative who is caring for them cannot work. If it is necessary to establish a time limit, it can be helpful to ask "what is

the maximum amount of time they can be left alone?"

Q3. Shopping and Q4. Travel: Independence Outside the Home

Independence outside the home requires ability to plan, to take care of money, and behave appropriately in public. It must be established if the person is actually capable of carrying out these activities, rather than whether they do or not.

Q5. Work

Work is only used as an indicator of outcome if the person was working or actively seeking work before the injury, or if they were studying.

Q5a. "Work" refers to jobs that are paid at a reasonable rate and which, in principle at least, are open to others. "Reduced capacity for work"—Any of the following indicate reduced capacity for work: (a) change in level of skill or responsibility required; (b) change from full-time to part-time working; (c) special allowances made by employer (e.g., increased supervision at work); and (d) change from steady to casual employment (i.e., no longer able to hold steady job).

Note that sometimes change in employment status may be unrelated to head injury, e.g., due to end of contract, retirement, or redundancy. Such changes do not indicate a reduced capacity for work.

Students Q5a. If the person was a student before injury, then "study" can be substituted for "work." Students should be able to return to their previous course and not have noted adverse effects on their ability to study. If someone has been absent from college because of injury, then there may be some disruption caused by the absence itself, and this needs to be discounted when considering if the person has problems due to the head injury. Examples of problems which indicate reduced capacity for study: (a) increased difficulties in studying (e.g., needing to spend much more time than before); (b) unaccustomed problems with progress (e.g., failing examinations); and (c) revised program of study because of problems (e.g., studying for a lesser qualification).

Q5b (GOSE only). "Noncompetitive work" includes work done voluntarily, jobs that are specifically designated for disabled people, and work in sheltered workshops. Normally, ability to work is indicative of independence; however, occasionally, someone in the upper severe disability range may be working in a sheltered workshop.

Students, Q5b. (a) If the student has a reduced capacity for study but is still studying, then they are Upper Moderate disability; and (b) if the student is currently unable to study, then they are Lower Moderate disability.

Q6. Social and Leisure Activities

Social and leisure activities will vary depending on the age and background of the patient. Representative social and leisure activities reported by patients in Glasgow include the following: (a) participating in sport, e.g., football, swimming etc., (b) attending sporting events as a spectator, (c) going walking, (d) going to a club or pub, and (e) visiting friends.

Some leisure activities are seasonal, and one must be careful to exclude changes in activity that are simply due to this factor.

Typical problems that may interfere with social and leisure activities: lack of motivation or initiative, avoidance of social involvement, physical problems such as loss of mobility, cognitive problems such as poor concentration, and problems such as poor temper control or impatience.

Q6b. Extent of restriction. If it is necessary to question in detail, then ask the person how often they participated in social and leisure activities outside the home before the injury (i.e., how many occasions per week) and how often they participate now.

Measuring extent of participation is in terms of occasions per week emphasizes a quantifiable aspect of social and leisure activities. Sometimes, quality of participation is affected by the head injury; for example, the person may become a spectator in a sport rather than an active participant. However, changes such as this are very difficult to quantify and can reflect the specially demanding nature of some sports. Thus, for the sake of simplicity, it is the fact of participation that is rated in the interview. Experience suggests that the main effect of head injury on social and leisure activities tends to be

withdrawal from activities that involve social interaction: the simple approach adopted here is sensitive to such changes.

Q6c. Participating regularly in social and leisure activities means participating in at least one activity outside the home each week.

Q7. Family and Friendships

The question is specifically aimed at alterations in relationships as a result of head injury. The presence of a reported change in personality is not of itself sufficient to warrant classifying the person as moderately disabled—the change must be having an adverse impact on family and friendships.

Q7b. Extent of disruption or strain. The following definitions apply: (a) Occasional—Some problems since injury, but less than once a week and not causing continuous strain. For example, occasional bad temper, but things blow over. (b) Frequent—Problems at least weekly, strain on relationships, but regarded as tolerable. For example, temper outbursts at least once a week resulting in modification of closeness of relationships. (c) Constant daily problems—Breakdown or threatened breakdown of relationship within family or friendship; problems regarded as intolerable. If a family have become very withdrawn and socially isolated as a result of injury, then this also represents constant disruption.

Q8 (GOSE Only). Return to Normal Life

Q8a. The list of problems here includes those described as the postconcussion syndrome. The problems are impairments; in order to cause disability, they must impinge on functioning in everyday life. Similar problems are reported in the general population: it is thus important to establish that the problems have developed since injury.

STRUCTURED INTERVIEWS FOR THE GOS AND GOSE

Glasgow Outcome Scale

Patient's name: _____ Date of interview: _____

Date of Birth: _____ Date of injury _____ Gender: M / F

Age at injury: _____ Interval post-injury: _____

Respondent: Patient alone ___ Relative/ friend/ carer alone ___ Patient + relative/ friend/ carer ___

Interviewer: _____

CONSCIOUSNESS

1. Is the head injured person able to obey simple commands, or say any words? 1 = No (VS)
2 = Yes

Anyone who shows ability to obey even simple commands, or utter any word or communicate specifically in any other way is no longer considered to be in the vegetative state. Eye movements are not reliable evidence of meaningful responsiveness. Corroborate with nursing staff. Confirmation of VS requires full assessment as in the Royal College of Physician Guidelines.

INDEPENDENCE IN THE HOME

2a Is the assistance of another person at home essential every day for some activities of daily living? 1 = No
2 = Yes (SD)

For a 'No' answer they should be able to look after themselves at home for 24 hours if necessary, though they need not actually look after themselves. Independence includes the ability to plan for and carry out the following activities: getting washed, putting on clean clothes without prompting, preparing food for themselves, dealing with callers, and handling minor domestic crises. The person should be able to carry out activities without needing prompting or reminding, and should be capable of being left alone overnight

2c Was assistance at home essential before the injury? 1 = No
2 = Yes

INDEPENDENCE OUTSIDE THE HOME

3a Are they able to shop without assistance? 1 = No (SD)
2 = Yes

This includes being able to plan what to buy, take care of money themselves, and behave appropriately in public. They need not normally shop, but must be able to do so.

3b Were they able to shop without assistance before the injury? 1 = No
2 = Yes

4a Are they able to travel locally without assistance? 1 = No (SD)
2 = Yes

They may drive or use public transport to get around. Ability to use a taxi is sufficient, provided the person can phone for it themselves and instruct the driver.

4b Were they able to travel locally without assistance before the injury? 1 = No
2 = Yes

WORK

5a Are they currently able to work to their previous capacity? 1 = No (MD)
2 = Yes (GR)

If they were working before, then their current capacity for work should be at the same level. If they were seeking work before, then the injury should not have adversely affected their chances of obtaining work or the level of work for which they are eligible. If the patient was a student before injury then their capacity for study should not have been adversely affected.

5c Were they either working or seeking employment before the injury (answer 'yes') or were they doing neither (answer 'no')? 1 = No
2 = Yes

SOCIAL & LEISURE ACTIVITIES

6a Are they able to resume regular social and leisure activities outside home? 1 = No - Go to 6b
2 = Yes (GR)

They need not have resumed all their previous leisure activities, but should not be prevented by physical or mental impairment. If they have stopped the majority of activities because of loss of interest or motivation then this is also considered a disability.

6b What is the extent of restriction on their social and leisure activities?
a) Participate a bit less: at least half as often as before injury. 1 = a (GR)
b) Participate much less or unable to participate 2 = b (MD)

6c Did they engage in regular social and leisure activities outside home before the injury? 1 = No
2 = Yes

FAMILY & FRIENDSHIPS

7a Have there been psychological problems which have resulted in ongoing family disruption or disruption to friendships? 1 = No (GR)
2 = Yes - Go to 7b

Typical post-traumatic personality changes: quick temper, irritability, anxiety, insensitivity to others, mood swings, depression, and unreasonable or childish behaviour.

7b What has been the extent of disruption or strain?
a) Occasional - less than weekly 1 = a (GR)
b) Frequent or constant - once a week or more 2 = b (MD)

7c Were there problems with family or friends before the injury? 1 = No
2 = Yes

If there were some problems before injury, but these have become markedly worse since injury then answer 'No' to 7c.

Epilepsy:

Since the injury has the head injured person had any epileptic fits? No / Yes
Have they been told that they are currently at risk of developing epilepsy? No / Yes

What is the most important factor in outcome?

Effects of head injury ___ Effects of illness or injury to another part of the body ___ A mixture of these ___

Scoring: The patient's overall rating is based on the lowest outcome category indicated on the scale. Refer to Guidelines for further information concerning administration and scoring.

- | | |
|---|--------------------------|
| 1 | Dead |
| 2 | Vegetative State (VS) |
| 3 | Severe Disability (SD) |
| 4 | Moderate Disability (MD) |
| 5 | Good Recovery (GR) |

Glasgow Outcome Scale - Extended

Patient's name: _____

Date of interview: _____

Date of Birth: _____

Date of injury _____

Gender: M / F

Age at injury: _____

Interval post-injury: _____

Respondent: Patient alone ___ Relative/ friend/ carer alone ___ Patient + relative/ friend/ carer ___

Interviewer: _____

CONSCIOUSNESS

1. Is the head injured person able to obey simple commands, or say any words?

1 = No (VS)
2 = Yes

Anyone who shows ability to obey even simple commands, or utter any word or communicate specifically in any other way is no longer considered to be in the vegetative state. Eye movements are not reliable evidence of meaningful responsiveness. Corroborate with nursing staff. Confirmation of VS requires full assessment as in the Royal College of Physician Guidelines.

INDEPENDENCE IN THE HOME

- 2a Is the assistance of another person at home essential every day for some activities of daily living?

1 = No
2 = Yes

If "No" go to question 3a.

For a 'No' answer they should be able to look after themselves at home for 24 hours if necessary, though they need not actually look after themselves. Independence includes the ability to plan for and carry out the following activities: getting washed, putting on clean clothes without prompting, preparing food for themselves, dealing with callers, and handling minor domestic crises. The person should be able to carry out activities without needing prompting or reminding, and should be capable of being left alone overnight.

- 2b Do they need frequent help or someone to be around at home most of the time?

1 = No (Upper SD)
2 = Yes (Lower SD)

For a 'No' answer they should be able to look after themselves at home for up to 8 hours during the day if necessary, though they need not actually look after themselves.

- 2c Was assistance at home essential before the injury?

1 = No
2 = Yes

INDEPENDENCE OUTSIDE THE HOME

- 3a Are they able to shop without assistance?

1 = No (Upper SD)
2 = Yes

This includes being able to plan what to buy, take care of money themselves, and behave appropriately in public. They need not normally shop, but must be able to do so.

- 3b Were they able to shop without assistance before the injury?

1 = No
2 = Yes

- 4a Are they able to travel locally without assistance?

1 = No (Upper SD)
2 = Yes

They may drive or use public transport to get around. Ability to use a taxi is sufficient, provided the person can phone for it themselves and instruct the driver.

- 4b Were they able to travel without assistance before the injury?

1 = No
2 = Yes

WORK

- 5a Are they currently able to work to their previous capacity? 1 = No
2 = Yes

If they were working before, then their current capacity for work should be at the same level. If they were seeking work before, then the injury should not have adversely affected their chances of obtaining work or the level of work for which they are eligible. If the patient was a student before injury then their capacity for study should not have been adversely affected.

- 5b How restricted are they? 1 = a (Upper MD)
2 = b (Lower MD)
a) Reduced work capacity.
b) Able to work only in a sheltered workshop or non-competitive job, or currently unable to work.

- 5c Were they either working or seeking employment before the injury (answer 'yes') or were they doing neither (answer 'no')? 1 = No
2 = Yes

SOCIAL & LEISURE ACTIVITIES

- 6a Are they able to resume regular social and leisure activities outside home? 1 = No
2 = Yes

They need not have resumed all their previous leisure activities, but should not be prevented by physical or mental impairment. If they have stopped the majority of activities because of loss of interest or motivation then this is also considered a disability.

- 6b What is the extent of restriction on their social and leisure activities? 1 = a (Lower GR)
2 = b (Upper MD)
3 = c (Lower MD)
a) Participate a bit less: at least half as often as before injury.
b) Participate much less: less than half as often.
c) Unable to participate: rarely, if ever, take part.

- 6c Did they engage in regular social and leisure activities outside home before the injury? 1 = No
2 = Yes

FAMILY & FRIENDSHIPS

- 7a Have there been psychological problems which have resulted in ongoing family disruption or disruption to friendships? 1 = No
2 = Yes

Typical post-traumatic personality changes: quick temper, irritability, anxiety, insensitivity to others, mood swings, depression, and unreasonable or childish behaviour.

- 7b What has been the extent of disruption or strain? 1 = a (Lower GR)
2 = b (Upper MD)
3 = c (Lower MD)
a) Occasional - less than weekly
b) Frequent - once a week or more, but tolerable.
c) Constant - daily and intolerable.

- 7c Were there problems with family or friends before the injury? 1 = No
2 = Yes

If there were some problems before injury, but these have become markedly worse since injury then answer 'No' to Q7c.

RETURN TO NORMAL LIFE

- 8a Are there any other current problems relating to the injury which affect daily life? 1 = No (Upper GR)
2 = Yes (Lower GR)

Other typical problems reported after head injury: headaches, dizziness, tiredness, sensitivity to noise or light, slowness, memory failures, and concentration problems.

- 8b Were similar problems present before the injury? 1 = No
2 = Yes

If there were some problems before injury, but these have become markedly worse since injury then answer 'No' to Q8b.

Epilepsy:

Since the injury has the head injured person had any epileptic fits? No / Yes

Have they been told that they are currently at risk of developing epilepsy? No / Yes

What is the most important factor in outcome?

Effects of head injury ____ Effects of illness or injury to another part of the body ____ A mixture of these ____

Scoring: The patient's overall rating is based on the lowest outcome category indicated on the scale. Refer to Guidelines for further information concerning administration and scoring

-
- 1 Dead
 - 2 Vegetative State (VS)
 - 3 Lower Severe Disability (Lower SD)
 - 4 Upper Severe Disability (Upper SD)
 - 5 Lower Moderate Disability (Lower MD)
 - 6 Upper Moderate Disability (Upper MD)
 - 7 Lower Good Recovery (Lower GR)
 - 8 Upper Good Recovery (Upper GR)
-

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APPENDIX D

Appendix D

OACRS Member Directory

Complete Listing of Children's Treatment Centres in Ontario



BELLEVILLE

Quinte Children's Treatment Centre
Quinte Health Care
265 Dundas Street East
Belleville, ON K8N 5A9
Ph: 613-969-7400
Fax: 613-968-9154
<http://www.quintectc.com/>



BRANTFORD

Lansdowne Children's Centre
39 Mount Pleasant Street
Brantford, ON N3T 1S7
Ph: 519-753-3153
Fax: 519-753-5927
<http://www.lansdownecentre.ca/>



CHATHAM

Children's Treatment Centre of Chatham-Kent
355 Lark Street
Chatham, ON N7L 5B2
Ph: 519-354-0520
Fax: 519-354-7355
<http://www.childrenstreatment-ck.com/>



HALTON-PEEL

ErinoakKids Centre for Treatment and Development
2695 North Sheridan Way
Suite 120
Mississauga, ON L5K 2N6
Ph: 905-855-2690
Fax: 905-855-9404
<http://www.erinoakkids.ca/>



HAMILTON

Ron Joyce Children's Health Center
Hamilton Health Sciences
325 Wellington Street North Hamilton, ON
Ph: 905-521-2100
Ext: 44446
Fax: 905-318-2805
<http://www.mcmasterchildrenshospital.ca/>



KINGSTON

Child Development Centre
Hotel Dieu Hospital
166 Brock Street
Kingston, ON K7L 5G2
Ph: 613-544-3400
Ext: 3181
Fax: 613-545-3557
<http://www.kingstoncdc.ca/>



LONDON

Thames Valley Children's Centre
779 Base Line Road East
London, ON N6C 5Y6
Ph: 519-685-8680
Fax: 519-685-8699
<http://www.tvcc.on.ca/>



NORTH BAY

One Kids Place/La place des enfants
400 McKeown Ave.
North Bay, ON P1B 0B2
Ph: 705-476-KIDS (5437)
Fax: 705-498-6708
Toll-Free: 866-626-9100
<http://www.onekidsplace.ca/>



OSHAWA

Grandview Kids
600 Townline Rd South
Oshawa, ON L1H 7K6
Ph: 905-728-1673
Fax: 905-728-2961
Toll-Free: 800-304-6180
<http://www.grandviewcc.ca/>



OTTAWA

Ottawa Children's Treatment Centre
Centre de Traitement pour Enfants d'Ottawa
2211 Thurston Drive
Ottawa, ON K1G 6C9
Ph: 613-688-2126
Fax: 613-688-2143
<http://www.octc.ca/>



PETERBOROUGH

Five Counties Children's Centre
872 Dutton Road
Peterborough, ON K9H 7G1
Ph: 705-748-2337
Fax: 705-748-3526
<http://www.fivecounties.on.ca/>



ST. CATHARINES

Niagara Children's Centre
567 Glenridge Avenue
St. Catharines, ON L2T 4C2
Ph: 905-688-3550
Fax: 905-688-1055
Toll-Free: 800-896-5496
<http://www.niagarachildrenscentre.com/>



SARNIA

Pathways Health Centre for Children
1240 Murphy Road
Sarnia, ON N7S 2Y6
Ph: 519-542-3471
Fax: 519-542-4115
<http://www.pathwayscentre.org/>



SAULT STE. MARIE

Children's Rehabilitation Centre Algoma
74 Johnson Avenue
Sault Ste. Marie, ON P6C 2V5
Ph: 705-759-1131
Fax: 705-759-0783
<http://www.crcalgoma.ca/>



Children's Treatment Network

SIMCOE YORK

Children's Treatment Network
13175 Yonge St.
Oak Ridges, ON L4E 0G6
Ph: 905-773-4779
Toll-Free: 877-719-4795
Fax: 905-773-7090
<http://www.ctn-simcoeyork.ca/>



Health Sciences North Horizon Santé-Nord

SUDBURY

Children's Treatment Centre
Health Sciences North
41 Ramsey Lake Road
Sudbury, ON P3E 5J1
Ph: 705-523-7337
Fax: 705-523-7157
<http://www.hsnsudbury.ca/>



George Jeffrey Children's Centre

ENRICHING CHILDREN'S LIVES

THUNDER BAY

George Jeffrey Children's Centre
200 Brock St. East
Thunder Bay, ON P7E 0A2
Ph: 807-623-4381
Fax: 807-623-6626
<http://www.georgejeffrey.com/>



TIMMINS

Cochrane Temiskaming
Children's Treatment Centre
733 Ross Avenue East
Timmins, ON P4N 8S8
Toll-Free: 800-575-3210
Fax: 705-268-3585
<http://www.ctctc.org/>

Holland Bloorview

Kids Rehabilitation Hospital

TORONTO

Holland Bloorview Kids Rehabilitation Hospital
150 Kilgour Road
Toronto, ON M4G 1R8
Ph: 416-425-6220
Fax: 416-425-6591
Toll-Free: 800-363-2440
<http://www.hollandbloorview.ca/>



WATERLOO

KidsAbility Centre for Child Development
500 Hallmark Drive
Waterloo, ON N2K 3P5
Ph: 519-886-8886
Fax: 519-886-7292
<http://www.kidsability.ca/>

WINDSOR

John McGivney Children's Centre
3945 Matchette Road
Windsor, ON N9C 4C2
Ph: 519-252-7281 Fax:519-252-5873
Toll-Free: 800-976-5622
<http://www.jmccentre.ca/>