ABSTRACT

This article explores the quantification of mental and behavioural impairment in the context of catastrophic impairment as defined by the Ontario Statutory Accident Benefit Schedule (the “SABS”). It reviews the relevant areas of the SABS, along with key arbitrations, appeals and court rulings relevant to the issue of quantifying mental and behavioural impairments, as well as a psychological perspective on this issue. The SABS mandates use of the 4th edition, 1993, of the AMA Guides to the Evaluation of Permanent Impairment (the “AMA Guides”). This article outlines approaches taken in various editions of the AMA Guides, with a particular focus on the 2nd, 4th and 6th editions. It also offers explanations of the approaches taken by Worker Safety Insurance Bureau of Ontario, Colorado Division of Workers’ Compensation, and the State of California Division of Workers’ Compensation. This article analyzes the merits and shortcomings of each of these approaches from a psychological perspective.

INTRODUCTION

Catastrophic impairment analysis is a thorny field requiring considerable caution for clinicians in Ontario. The Ontario Statutory Accident Benefit Schedule (the “SABS”) has established eight different legal tests for determining catastrophic impairment, and these tests present myriad challenges with respect to clinical interpretation and subsequent application to assessing patients. SABS f, the seventh of the eight catastrophic impairment tests, is based on quantifying a person’s impairments and combining them in a common framework or metric to arrive at an overall impairment rating of the whole person:

an impairment or combination of 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 impairment of the whole person.

MVA victims might sustain physical injuries with no psychological impairments. They might also develop psychological disorders with no physical injuries or with no ongoing physical impairments. There are also those whose physical injuries might be further complicated by the development of psychological disorders (e.g., Pain disorder associated with both psychological factors and a general medical condition, Major Depressive Disorder, or PTSD), and vice versa, leading to increased levels of overall impairment. The impairment rating for combined physical impairments alone cannot capture the increase to overall impairment posed by co-existing psychological disorder(s). From a psychological perspective, this higher level of overall impairment is captured best by combining both physical and psychological impairments to address the SABS f test.

What appears to have been a challenge to some health professionals, that psychological and physical impairments can co-exist in the same person, is a notion that must be understood if clinicians are to address fully the remedial intent of the SABS. Legal trends in FSCO arbitrations and appeals and Ontario Court decisions, as well as the landmark Supreme Court of Canada case of Nova Scotia v. Martin, show an awareness of the potential discrimination with respect to psychological impairments. As scientists, our post-Cartesian understanding is that the mind and body do not exist separately, nor does either exist outside the whole person. Contemporary scientific thought is in line with a consideration of mental and behavioural impairments being part of an overall whole person impairment.

From a clinical standpoint there is merit in quantifying mental and behavioural impairments, so that they can be combined with physical impairment ratings to gain a clearer picture of a person’s overall level of impairment. The question is whether mental and behavioural impairments can be quantified reasonably. If so, the next question is which method should be applied. This article explores these questions from a psychological perspective.

DEFINING IMPAIRMENTS

The World Health Organization defines impairment as “a loss or abnormality in body structure or physiological function (including mental functions).” Notably, the WHO states that “Body” refers to the human organism as a whole; hence it includes the brain and its functions, i.e., the mind. Mental (or psychological) functions are therefore subsumed
under body functions.” Impairment is defined in the SABS in a parallel fashion as “a loss or abnormality of a psychological, physiological or anatomical structure or function.” This definition appears consistent with the WHO definition.

The WHO defines disability as “an umbrella term for impairments, activity limitations or participation restrictions. It denotes the negative aspects of the interaction between an individual (with a health condition) and that individual’s contextual factors (environmental and personal factors).” In other words, disability captures not only the loss or deviation of a body structure or function, but also the impact on activities of daily life. Personal and environmental factors are understood as playing key roles in disability, which the WHO’s International Classification of Function (“ICF”) measures in terms of the impact on Activities of Daily Living (“ADLs”).

When we turn to the Guides 4th edition, which is used in catastrophic impairment determination under the SABS, impairment is defined as “an alteration of an individual’s health status.” However, reading the Guides further, we find the approach to impairment actually appears more consistent with the WHO definition of disability: “In the Guides, impairments are defined as conditions that interfere with an individual’s ‘activities of daily living.’” And, “The Guides is intended, among other purposes, to represent an informed estimate of the degree to which an individual’s capacity to carry out daily activities has been diminished.” The Guides 6th edition goes further to define an impairment rating as a “consensus-derived percentage-estimate of loss of activity reflecting severity for a given health condition, and the degree of associated limitations in terms of ADLs.”

Ultimately, it is unclear throughout the different versions of the Guides where the boundary is between measuring impairment and disability, and ultimately how uncontaminated are the impairment ratings. Given that the Guides ratings are used in the context of evaluating capacity to carry out ADLs, an element of disability seems included. In this sense, the title Guides to the Evaluation of Permanent Impairment might be a misnomer. As it is conceived, it might be more accurately construed as “Guides to the Evaluation of Permanent Disability.” Nonetheless, whether applied to disability or impairment, whether evaluated quantitatively or qualitatively, the Guides offers its ratings across chapters as “impairment ratings.”
The physician’s judgment and his or her experience, training, skill, and thoroughness in examining the patient and applying the findings to the Guides criteria will be factors in estimating the degree of the patient’s impairment. These attributes compose part of the ‘art’ of medicine, which, together with a foundation in science, constitute the essence of medical practice.23

The Guides makes it clear that the impairment ratings used throughout are estimates, and thus lack precision. Despite this, all chapters, with the exception of the chapter on mental and behavioural impairments, offer scales for quantitative impairment ratings without predictive validity and within ranges that do not allow for precision, to be combined in a framework that is not empirically validated.

QUANTIFYING MENTAL AND BEHAVIOURAL IMPAIRMENTS: DILEMMAS THAT FACE PSYCHOLOGISTS IN THE 4TH EDITION OF THE GUIDES

Chapter 14 of the 4th edition of the Guides does not endorse the quantification of mental and behavioural impairment ratings. As such, it is anomalous among the other chapters in that it does not offer a means to quantify the impairments it covers in order to combine them with other impairments of the whole person. However, it does offer a very clear qualitative approach. Guides 4th offers arguments for and against quantifying mental and behavioural impairments. The authors of the mental and behavioural disorders chapter ultimately decided against offering quantified ratings because of not having enough empirical data (not because rating should not be done), and because of the difficulty of determining the boundary between impairment and disability. However, as already noted, these issues are present throughout the Guides but go unacknowledged in the other chapters. Indeed, quantification of mental and behavioural impairments that was abandoned after Guides 2nd is brought back in Guides 6th in the mental and behavioural disorders chapter. Unfortunately, the lack of quantitative ratings in chapter 14 of the 4th edition reinforces the common misunderstanding that the physical is objective and quantifiable, but that the mental and behavioural is not.

Another problem presents itself with respect to the difficulty in separating impairment from disability due to mental disorder. A mental or behavioural disorder, by its very nature, involves mental and behavioural factors in an interplay with the environment, and so it is not clear how one would measure mental and behavioural impairment as distinct from disability. However, in chapter 4, the Nervous System (4th ed.), quantitative ratings are assigned to psychological impairment due to brain injury that is manifested as mental and behavioural impairment. Yet here, too, psychological factors necessarily create the conundrum of how much we are seeing is impairment and how much is disability. Interestingly, the authors of the neurological chapter are silent on this issue. Thoughts, feelings, and their products (behaviours and further thoughts and feelings) can not be factored out cleanly from other brain functions. The mind and the brain are not separable in any meaningful way, and the authors of chapter 4 can not achieve an uncontaminated impairment rating any better than the authors of chapter 14 with respect to mental and behavioural impairments. Nonetheless, quantitative ratings are offered in chapter 4 (apparently based on expert consensus), and not in chapter 14. This is a contradiction that the editors of the Guides left unresolved until the publication of the 6th edition in 2008. The issue is not that it cannot be done, nor was it impossible to offer quantifications of mental and behavioural impairments within Guides 4th, as this was done in Chapter 4 with respect to mental and behavioural impairments due to brain injury. The question that remains is how best to quantify mental and behavioural impairments due to psychological disorders in chapter 14.

CHOICES WITHIN GUIDES 4TH FOR QUANTIFYING MENTAL AND BEHAVIOURAL IMPAIRMENTS

The chapter covering mental and behavioural impairments in Guides 4th informs us that “The guides user should be familiar with the guidelines and approaches of the system within which the evaluation was being performed.”29 In other words, there is recognition in the Guides that it may be nested within a larger system, and this is the case in Ontario in relation to the SABS. The SABS clearly directs clinicians to use the 4th edition of the AMA Guides in carrying out catastrophic impairment analysis. This puts the health professional in a unique position when interpreting and using the Guides, as the Guides is nested within the evolving common laws in Ontario. The Guides does not exist in a vacuum. Psychologists have been applying the Guides within the context of the SABS for more than a decade, and evolving their understanding of its application within this larger system that is increasingly clarified by arbitral decisions. When using the 4th edition of the Guides, as directed by the SABS, clinicians are
left with only two options: follow the reference to the second edition rating system, or rate by analogy using a different chapter in the 4th edition.

**USING THE RATING SYSTEM FROM GUIDES 2ND**

One option the clinician may choose is to follow the reference in the fourth edition to the rating system in the second edition. In the recent *Augello Appeal*, arbitrator Blackman opines that it is reasonable to use the ratings from Guides 2nd that are referenced in the mental and behavioural chapter in Guides 4th. The question is whether this legal opinion is consistent with a psychological understanding of the Guides.

The chapter on mental and behavioural disorders found in the 2nd edition of the Guides provides quantitative impairment ratings for psychiatric impairment. This chapter tells us,

> To help the evaluator make such judgments, this chapter provides a table listing the personal characteristics and abilities on which the evaluation of impairments should be based. Table 1 will help the evaluator make specific judgments based on elements of the mental status examination and on the activities of daily living; classify the amount of treatment or vocational potential and the expected duration of impairment; and estimate the overall potential for the individual’s impairments.

When we turn to this table, the evaluator is given ordinal impairment ratings to be applied to six mental status domains (intelligence, thinking, perception, judgment, affect, and behaviour), a domain addressing level of dependence (ability) with respect to engaging in activities of daily living, and a domain covering potential for rehabilitation or treatment. In contrast, in the corresponding chapter in the 4th edition of the guides, the domains examined are conceptualized very differently as four areas basic to human functioning: activities of daily life, social functioning, task completion (concentration, persistence, and pace), and adaptation (deterioration in work or work-like settings).

The table found in the 2nd edition of the Guides, which is largely based on the mental status examination, does not map to the four classes of functioning assessed in the 4th edition. The level of impairment descriptors for the functional classes in the 4th edition that are referenced to the 2nd edition are only similar to the mental status domain descriptors used in Guides 2nd. While some parallels can be drawn between the labels for the five ordinal levels of impairment in the 2nd edition, and the five ordinal impairment levels in the corresponding chapter in the 4th edition of the Guides, it is more difficult to draw parallels between the actual classes of impairment to which they are meant to be applied.

**RATING BY ANALOGY**

As an alternative to using Table 1 from the 2nd edition of the Guides, the clinician can rate by analogy to another chapter in the 4th edition. With respect to criteria f and g, the SABS indicates,

> an impairment that is sustained by an insured person but is not listed in the American Medical Association’s *Guides to the Evaluation of Permanent Impairment, 4th edition, 1993*, shall be deemed to be an impairment that is listed in that document and that is most analogous to the impairment sustained by the injured person.

Looking outside of Chapter 14 in Guides 4th for an analogous rating, mental and behavioural impairments are rated due to brain injury in Chapter 4 (table 3), and the approach is straightforward. The rating for emotional and behavioural changes after brain injury and disease (chapter four of Guides 4th) references the scheme used in the mental and behavioural disorders chapter, which also outlines clear and detailed criteria for assessing impairment, but does not assign a quantitative rating:

> These types of disturbances illustrate the interrelationships between the fields of neurology and psychiatry. The disturbances may be the result of neurologic impairments but may have psychiatric features as well, which may range from irritability to outbursts of rage or panic and from aggression to withdrawal. These illnesses may include depression, manic states, emotional fluctuations, socially unacceptable behaviour, involuntary laughing or crying, and other kinds of central nervous system responses. **The criteria for evaluating these disturbances (Table 3, below) relate to the criteria for mental and behavioural impairments (Chapter 14, p. 291).**

The point may be raised that mental and behavioural impairment due to brain injury or disease is not analogous to mental and behavioural impairment due to another psychological disorder. However, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) does not make this distinction in applying a Global Assessment of Function (“GAF”), which is a symptom severity or functional impairment rating, as a part of any psychological diagnosis. This rating is independent of etiology. Clinicians use the same scale whether symptom se-
verity or functional impairment is due to the effects of brain injury/illness or other psychological disorder. The authors of Guides 6th also recognize this, and they use a GAF table in both the neurological chapter’s rating of mental and behavioural impairment due to brain injury and rating in the chapter devoted to mental and behavioural impairment due to psychological disorder. The Authors in Guides 6th do not take issue with the analogy, and do not take issue with quantifying mental and behavioural impairments due to psychological disorders not caused by brain injury or disease to be combined in a whole person impairment rating with ratings from the other chapters covering bodily impairments.

In Guides 4th, when rating by analogy from Chapter 14 to Chapter 4, it is important to note that the four classes of functioning described in Chapter 14 overlap, and that ratings based on the qualitative criteria in Chapter 14 are ordinal. Thus there is no reliable method for arriving at an overall rating based on either averaging or combining the four class ratings. However, there is a Guides convention that is used in the neurological chapter when impairment ratings overlap: choosing the highest level of impairment among overlapping classes as standing for the patient’s level of impairment. The patient will exhibit at least this level of impairment, in combination with whatever levels of impairment are determined in the other classes. Thus, rating by analogy to Chapter 4, Table 3, using the most severe impairment rating, based on a chapter 14 impairment analysis, must be done with the understanding that it necessarily under-represents the actual overall level of mental and behavioural impairment, which is likely higher when additional impairments are determined with respect to the other three classes of function.

It is incumbent upon the assessor to gather enough data to make a clear case for how the data fit the ratings criteria outlined in Chapter 14, in order to consider an analogous rating in Chapter 4. The Chapter 14 ratings should flow in an obvious manner from the clinical data. Chapter 14 offers ample descriptive criteria for the classes of functioning and impairment levels, making the selection of an impairment range for each functional class clear and relatively straightforward. Further, in rating by analogy, there is reasonable concordance with the criteria offered in the table of mental status impairments and emotional and behavioural changes after brain injury and disease in Chapter 4.

In using Table 3 from Chapter 4 to arrive at a final whole person impairment rating for mental and behavioural impairments, clinicians are left with the task of determining a rating within the ranges offered. Selecting a score within that range is difficult to do with precision. However, this is the case throughout the Guides, and clinicians are reminded of the necessity of using their clinical experience and judgment. One approach is to select the midpoint of the appropriate range as representing a reasonable estimate within that range. Another approach is to offer the entire range as an estimate.

From a psychological perspective, one marked class of functioning is sufficient to meet SABS g criteria for catastrophic impairment.

However, when rating by analogy from Chapter 14 to Chapter 4, table 3, a marked impairment will not result in a WPI of 55 percent or higher, and thus would not meet SABS f criteria for catastrophic impairment. An argument might be made that this situation would indicate that an extreme impairment should exist in order to meet SABS g criteria, as the analogous rating would then be 55 percent or higher. However, the SABS tests are not meant to be equivalents. They each stand as separate tests for catastrophic impairment. Notably, in the revised SABS effective September 1, 2010, a person who loses a leg would meet SABS criteria for catastrophic impairment, although the WPI rating would fall below the 55 percent threshold of SABS f.

REFUSING TO QUANTIFY

Some clinicians working within the framework of the 4th edition of the Guides refuse to assign quantitative ratings to mental and behavioural impairments. Such a stance is supported in the 3rd, 4th and 5th editions of the Guides. The 3rd edition of the Guides moves away from quantifying mental and behavioural impairments, offering ordinal impairment ratings ranging from no impairment (Class 1) to extreme impairment (Class 5), to be used across four areas of functional impairment (activities of daily living, social functioning, concentration, and adaptation). Two main arguments are offered in Guides 3rd and echoed in Guides 4th and 5th: that it is difficult to separate impairment and disability when examining mental and behavioural phenomena, and that there is no empirical data to support the notion of precise ratings. Instead, ordinal scales are offered with clear descriptive criteria to guide the clinician in determining the best fit in assigning
an impairment rating. Ironically, as already pointed out, the other chapters in the Guides provide rating systems that are imprecise and not based on empirical data. It is also unclear how well other chapters address the issue of disability and impairment, especially since the Guides approach to impairment is more consistent with the notion of disability, with impairment ratings considering the impact on ADLs.

The remedial nature of the SABS seeks through the establishment of catastrophic impairment criteria to establish a patient’s level of impairment with respect to the need for further rehabilitation and care needs. As already noted, case law appears to have established that mental and behavioural impairments are to be quantified and considered among all rateable impairments under SABS f. Refusing to quantify mental and behavioural impairments is certainly an option for the clinician, but does not offer any assistance to the trier of fact. The trier of fact must contend with the ultimate question of a whole person impairment rating to be answered with respect to the SABS f test. Refusing to quantify is hardly a helpful choice. In forensic settings the expert assessor is best positioned to offer meaningful information to the trier of fact with respect to SABS f and quantifying mental and behavioural impairments in the context of future treatment and care needs.

LOOKING TO A LATER EDITION OF THE GUIDES FOR ASSISTANCE

Though the SABS is clear in stipulating the use of the Guides 4th in impairment analysis, some clinicians turn to later editions of the Guides to inform their impairment ratings. When we turn to the most recent edition of the guides (Guides 6th), which is offered by the editors as an improvement on previous editions, we find that it remains a very difficult area of clinical science to measure and then equate impairments in body systems in an overall framework of impairment ratings.

There is no outcome study of the Guides 6th impairment ratings that validates that the various measured body systems are being considered within a common metric, such as the RAND study conducted for the state of California. For example, loss of an arm at the shoulder is assigned a wpi of 60 percent, whereas the most profound brain injury is assigned no higher than a 50 percent wpi. Clearly there are significant issues that remain to be ironed out with respect to equating quantified impairment ratings to be considered within the context of a whole person in a common and meaningful metric.

When we turn our attention more specifically to the chapter on mental and behavioural impairments in Guides 6th, we find further problems with respect to quantifying. The clinician is instructed to apply three different measures: the Brief Psychiatric Rating Scale (“BPRS”), the Psychiatric Impairment Rating Scale (“PIRS”), and the Global Assessment of Function (“GAF”). The assessor then converts the score from each measure to a WPI score according to the tables provided in the mental and behavioural chapter. Finally, the Guides instructs the assessor to take the median to represent the person’s level of impairment.

The BPRS was developed with the expressed purpose of providing a “highly efficient, rapid evaluation procedure for use in assessing treatment change in psychiatric patients while at the same time yielding a rather comprehensive description of major symptom characteristics.” However, it is not clear what the total score and cut-off values mean from a clinical perspective. This problem is compounded when the BPRS score is converted in Guides 6th to a WPI with no empirical basis.

The PIRS was developed as a modification of the rating scale used in Guides 2nd. Davies offers an extensive critique of the PIRS, concluding that the scoring is neither proportionate nor statistically meaningful. This is of course compounded in Guides 6th by converting PIRS scores to WPIs that are not supported empirically. Also of note, Davies states, “The developers of the scale specifically stated that the aim was to reduce the level of rated impairment and thus insurance payouts.” With respect to the PIRS using a median-based scoring system, he notes, “the data from the present study clearly show that the use of this method significantly biases the assessed impairment downward.”

As an integral part of multiaxial diagnosis in the DSM-IV-TR, the GAF is very familiar to psychologists. While the GAF is commonly used and well researched, the descriptive criteria for the ranges are limited and combine symptom severity and functional impairment. Also, though it may appear otherwise, the GAF is an ordinal scale. It has no true zero point, nor does the scale consist of truly equal intervals. The numbers assigned as GAF ratings are descriptive, but they are not the equivalent of percentages. A range may be chosen accurately based on descriptive criteria, such as the criteria provided in table 3 of chapter 4 in the 4th edition of the Guides. However, selecting a score within that range is determined by professional judgment, just as it is in Table 3. There are no data to guide clinicians in
selecting a GAF score with any precision within a range.

Also, in the Guides 6th neurological chapter, mental and behavioural impairments are rated using a GAF table with conversions to WPIs. These same conversions to WPIs are found in the GAF table in the mental and behavioural chapter. This of course makes sense, as the DSM approach to diagnosis uses the GAF to rate symptom severity and functional impairments across all psychological diagnoses, whether Alzheimer’s (seen as neurological) or PTSD (seen as psychological). However, in both chapters, the empirical basis for conversion from a GAF to a WPI is questionable, and not clearly explained. Rondinelli and Eskay-Auerbach state, “Rating values have been established in accordance with a consensus among experts (as in other chapters of the Guides) using reproducible tools that are available to assess symptom severity and functioning.” These consensus ratings are then not considered in comparison with the ratings offered in other chapters of the Guides with respect to establishing a common metric. As noted above, even the most severe brain injury cannot be rated as high as the loss of an arm, and can never be greater than 50 percent WPI.

There are no empirical data that tie scores on the BPRS, PIRS and GAF to the corresponding WPIs offered in the Guides 6th conversion tables. It remains an unresolved problem that the highest possible WPI for even the most severe brain injury cannot never surpass 50 percent WPI, while loss of an arm is rated at 60 percent. These different ratings tools also have areas of overlap. The logic applied elsewhere in the Guides when using overlapping measures of impairment is to take the highest rating obtained to stand for the impairment present. There is no sound scientific or statistical basis for taking the median, as suggested by Guides 6th. Further, if each measure is reliable and valid, but measures impairment in a different way, a trier of fact would be justified in wanting to know why either of the two measures not selected could not also be used to represent the patient’s level of impairment.

LOOKING OUTSIDE OF THE GUIDES ALTOGETHER: OTHER ATTEMPTS AT QUANTIFYING MENTAL AND BEHAVIOURAL IMPAIRMENTS

WSIB

If clinicians ignore the SABS mandate to use Guides 4th, they also may look outside of the Guides altogether for another source that quantifies mental and behavioural impairments. The Worker Safety Insurance Bureau of Ontario provides guidelines for rating permanent disability due to mental and behavioural disorders. Similar to the Ontario WSIB, Colorado drafted guidelines that turn to the American Medical Association Guides to the Evaluation of Permanent Impairment, Third Edition (Revised). It should be noted again, that this edition of the Guides does not offer quantitative impairment ratings in the chapter designated for assessment of mental and behavioural impairments. However, the Colorado guidelines do note that “Any physician determining permanent mental or behavioural disorder impairment shall … Use the instructions contained in the AMA Guides
giving specific attention to Chapter 4, ‘Nervous System’; and (b) Chapter 14, ‘Mental and Behavioural Disorders’. **46** Thus, the Colorado system also appears to be endorsing an analogous rating system that utilizes mental and behavioural impairment ratings based on brain injury in the assessment of all mental and behavioural impairments due to a psychological disorder.

The Colorado system makes use of a worksheet that lists impairment categories ranging from 0 to 6, no permanent impairment to maximum category of impairment. Four areas of function are addressed on the worksheet: activities of daily living; social functioning; thinking concentration and judgment; and adaptation to stress. Each of these components of the areas of functioning is rated using an ordinal scale with clear descriptive criteria, ranging from “minimal” through “maximum,” and the overall rating in each area of function is taken as the average of the two highest impairment scores. The two highest ratings for the areas of function, which are ordinal ratings, are then averaged, and this is applied to a table that converts to the score to a WPI rating. There is no indication how this conversion was determined, and there is no reference to empirical data. It also is unclear why this approach adopted an average of two ordinal ratings, as this is not statistically sound. Further, the rated areas overlap, so that an average means even less statistically. In Chapter 4 of the AMA Guides, whether in the 3rd or 4th edition, only the highest impairment rating from five tables of overlapping impairment areas is selected to represent the person’s level of impairment. The Guides approach avoids the statistical dilemma of either potentially underestimating impairment by taking an average or potentially overestimating impairment by combining five overlapping ratings.

**CALIFORNIA**

The State of California developed a Schedule for Rating Permanent Disabilities**47** that incorporates the 5th edition of the AMA Guides, as well as recommendations from the RAND Institute**48** based on empirical research. The California Schedule states that “Psychiatric impairment shall be evaluated by the physician using the Global Assessment of Function (GAF) scale shown below. The resultant GAF score shall then be converted to a whole person impairment rating using the GAF conversion table below.”**49** However, rating of mental and behavioural impairments does not end here in the California system. This is clearly described as a first step. The Schedule states, Initial impairment ratings are consolidated by body part (See Adjusting AMA Impairments and Combining Ratings on page 1-11) and converted into a whole person impairment rating (hereinafter referred to as ‘impairment standard’). The impairment standard is then adjusted to account for diminished future earning capacity, occupation and age at the time of injury to obtain a final permanent disability rating.**50**

It is critical to underscore that use of the GAF to WPI conversion table constitutes only one step in arriving at a WPI for mental and behavioural impairments, so that any WPI determined by using this table and going no further is incomplete within the framework used in California. As noted, The State of California had a review of their system performed by the RAND Institute and incorporated their findings in their system. The RAND Institute found, through empirical research, that the impairment ratings for various injury classes should be adjusted (essentially by applying a multiplier to the WPI rating) to account for the differential impact of those impairments (which they measured in terms of future earning capacity, or FEC). Adjustment factors are also offered for age and occupation, which is at variance with the Guides approach to rating impairments of the average person. Still, the FEC remains an interesting consideration, as it addresses the predictive validity of WPIs across injury types.

Reading further into the California Schedule, we find that “RAND data was used to establish the ratio of average California standard ratings to proportional wage losses for each of 22 injury categories.”**51** “Psychiatric” is one of these injury categories. The Schedule informs us, “AMA whole person impairment ratings for injury categories that correspond to greater relative loss earning capacity will receive a higher FEC adjustment. For example, a psychiatric impairment receives a higher FEC adjustment because RAND data shows a relatively high wage loss corresponds to the average psychiatric permanent disability rating.”**52** The adjustment factor for psychiatric injuries is ranked as the largest, at 1.4000. This adjustment factor results in a 40 percent increase when applied to the AMA whole person impairment rating. The FEC takes into account the variable impact of different injury classes that have been assigned WPI ratings in the guides, in a sense giving them a common metric and placing them within a consistent and meaningful framework for comparison and combination based on predictive validity data. To this author’s knowledge it is the only data set of its kind that addresses potential inequities in the WPI ratings offered.
in separate chapters of the Guides by separate committees that do not otherwise truly conform to a common metric to assess impairment of the whole person. The FEC serves to place the separate injury classes in the Guides in a validated common framework, and applying this factor is an essential step in arriving at a final WPI for any injury class, including psychological impairments, within the California system.

CONCLUSIONS

Along with Glasgow Coma Scale ("GCS") and Glasgow Outcome Scale ("GOS") catastrophic criteria for cases of traumatic brain injury, the SABS allows for both quantitative and qualitative analyses of mental and behavioural impairments (f and g respectively), whether or not the impairment is due to brain injury. The presence of SABS g as a distinct test has great importance, as it shows awareness that a person may be catastrophically impaired due to psychological issues when physical issues play a role or none at all, and that such a situation deserves due consideration alongside the assessment of purely physical impairments. However, a critical point is that SABS f and g are different legal definitions that are not meant to be equated. This is noted most recently in the Augello Appeal. 54

The SABS f and g tests follow very different criteria. A fundamental difference is that SABS f is a quantitative test and SABS g is qualitative. Another fundamental difference is that SABS f considers impairment of the whole person, whereas SABS g more discretely examines the impact of mental and behavioural impairments.

Psychologists are uniquely positioned as experts able to determine a mental and behavioural impairment rating in the context of a person’s rehabilitation treatment and care needs. Understanding that the mind and body are not separable, clinicians quantify mental and behavioural impairments so they can be included with all impairments (physiological and psychological) that are rated on SABS f, in order to reach a whole person impairment rating to assist the trier of fact and to address the remedial intent of the SABS.

This article has reviewed a number of approaches to rating mental and behavioural impairments that fall outside of what the Ontario SABS mandates. All of these approaches have their merits and shortcomings. Guides 6th is fraught with problems, both generally and within the Mental and Behavioural Disorders chapter, though it does revive quantitative impairment rating in the Mental and Behavioural Disorders chapter for consideration in an overall WPI. The Ontario WSIB relies on a rating system that is tied to ratings in the Nervous System chapter of Guides 3rd. The Colorado system has methodological problems, as the approach averages ordinal ratings and it is not clear what empirical basis there is for the conversions to WPI ratings. The California system utilizes research data to recalibrate WPIs that are determined first by applying a GAF to a conversion table. The use of empirical data in the California system is a step forward, correcting WPIs across injury classes in the Guides so that they may be combined in a validated and common metric. However, the use of the GAF with respect to rating mental and behavioural impairments remains subject to the same imprecision as any of the scales used in the Guides that rely on clinical judgment to select a score within a range, and the descriptive criteria for GAF ratings are limited.

While a number of approaches may have utility in quantifying mental and behavioural impairments, the SABS clearly directs clinicians to use the 4th Edition of the AMA Guides with respect to determining catastrophic impairment. In Guides 4th there are only two options available to assessors for quantifying mental and behavioural impairments: using the rating system from the 2nd Edition of the Guides that is referenced in the 4th Edition chapter on mental and behavioural impairments, or rating by analogy elsewhere in the Guides. Rating by analogy to Table 3 in Chapter 4 (The Nervous System) has more concordance with the framework offered in Chapter 14 for rating mental and behavioural impairments than using the ratings approach offered in the 2nd Edition of the Guides. The Guides 2nd approach is focused on symptoms, while the Guides 4th approach is focused on function and offers extensive descriptive guidance. Also, the Guides 4th, in offering criteria for emotional or behavioural impairments due to brain injury, includes a clear reference to the criteria for rating impairments in the Mental and Behavioural Disorders chapter. That impairment ratings based on brain injury are analogous to mental and behavioural impairment ratings due to other mental disorder is supported by the GAF used in DSM-IV-TR across all psychological diagnoses, the parallel ratings systems used in the Nervous System and Mental and Behavioural Disorders chapters in Guides 6th, and the systems used by the Ontario WSIB and the states of Colorado and California. Further, in undertaking an analysis of mental and behavioural impairment as directed by SABS g, the...
clinician will already have gathered a wealth of qualitative data organized according to the framework provided in Guides 4th, Chapter 14. In order to provide a quantitative rating for SABS f consideration, rating by analogy to Chapter 4 Table 3 in the 4th edition becomes a relatively simple exercise. None of the approaches reviewed in this article offers an improvement over the use of analogous ratings in the 4th edition of the Guides, and this approach remains consistent with legislative direction in Ontario.

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1 Statutory Accident Benefits Schedule — Accidents on or after November 1, 1996, O. Reg. 403/96, as amended.
2 Revisions to the SABS, effective September 1, 2010, include only seven different legal tests for determining catastrophic impairment. The criteria for SABS f and g remain the same, though under the revised SABS they are re-designated as SABS e and f respectively.
3 *Supra* note 1, s. 2(1.1).
6 *Supra* note 4.
13 *Supra* note 1, s. 2(1).
14 *Supra* note 11, p. 213.
15 *Ibid*.
21 *Supra* note 19, p. 8, Table 1-2.
23 *Supra* note 16, p. 3.
25 *Supra* note 9.
27 *Supra* note 1, s. 2.3.
28 *Supra* note 16, pp. 141-142, emphasis added.
31 *Supra* note 16, p. 143, Table 3.
32 *Supra* note 30.
33 *Supra* note 9.
40 *Ibid*. pp. 210-211.
41 *Supra* note 19, p. 334.


Ibid., s. 12-5.


Supra note 35.

Supra note 47. p. 12.

Ibid. p. 2.

Ibid. p. 6.

53 Ibid. p. 7, Table A.

54 Supra note 9.

55 In the recent Kusnierz v. Economical decision (Kusnierz v. The Economical Insurance Company, [2010] O.J. No. 4462, Court File No. 64834/02), Justice Lauwers finds “it is not permissible under the SABS to assign percentage values to mental and behavioural disorders under Chapter 14 of the Guides … and then combine them with the percentage values derived from impairments assessed under the other chapters of the Guides …”. In contrast, this article provides an alternative conclusion based on a psychological perspective on Guides 4th; a perspective that is absent from the expert testimony relied upon in this case. From a psychological perspective, this article shows that quantifying mental and behavioural impairments under Chapter 14, for combination with bodily impairment ratings, is supportable within the methodology of Guides 4th as nested within the SABS.