Improvements to the Rating of Impairments from Injury

Alan Colledge*
Gregory Krohm**

Even primitive workers' compensation schemes had intuitive systems for cash awards for permanent injury, with amputation of extremities being the easiest cases to assess and assign specific benefits.[1] Most modern workers' compensation systems have complex rules for awarding cash payments for differing degrees and types of loss of bodily function after healing from a work injury. Such systems specify benefits for certain classes of injury, after the worker attains "maximum medical improvement," based upon a measurement of the "permanent" harm that was done by the injury. A persistent problem in this system has been the lack of a consistent and reliable metric – almost always measured by a physician – of the nature and extent of the loss of use of a body part or bodily system.

This paper is about the problems of rating impairment, and suggests improvements for the system through guidance to medical evaluators to

* *Alan Colledge, MD, Medical Director, Utah Labor Commission. E-mail: farmboyac@aol.com*
** *Gregory Krohm, Executive Director, IAIABC. E-mail: gkrohm@iaiabc.org*

[1] Caribbean pirates in the early colonial era had developed written rules for compensating loss of hands, arms, eyes, etc in the course of their nefarious "trade."

facilitate more objective and consistent evaluations of the damage to the body from injury. It begins with a review of the empirical evidence on the variability and arbitrary nature of the rating process in North America. It reports on a survey of agencies on their perceptions about rating disability. Finally, it reviews the recent efforts by the International Association of Industrial Accident Boards and Commissions to develop and publish guidelines to assist jurisdictional administrative agencies who utilize ratings and physicians who provide those ratings of occupational impairments.

Evidence of a Problem

Permanent injury compensation is a large and growing component of workers' compensation system cost. In the US, it represents about two-thirds of all indemnity benefits paid (Berkowitz & Burton, 1987). Moreover, the frequency and cost of permanent injury is increasing as a share of all workers' compensation claims. Citing data from the National Council on Compensation Insurance, David Durbin states, "During the six-year period from 1988 to 1994, average PPD costs increased 25 percent, an increase of approximately 4 percent per year, while the frequency increased almost 29 percent or 4.4 percent annually. These increasing average costs and frequencies have resulted in an increase in the permanent partial cost per worker of approximately 52 percent (over 7 percent annually) over the same six year period" (Durbin & Kish, 1998).

In their statistical work, Durbin and Kish (1998) tried to measure the consistency of initial physician impairment ratings, disability ratings awarded, and final compensation given to injured workers across various U.S. jurisdictions. The authors conclude:

> The results show that impairment ratings are only one of a variety of factors that systematically influence the size of a final disability award. Specifically, even for cases with benefits awarded for non-economic loss, in addition to the treating physician's determination of physical impairment, the determination of the degree of permanent disability appears to take into account factors such as age, sex, pre-injury wage, weekly temporary total benefits, and whether an attorney is involved in the case. Moreover, even after these other factors are considered, a

> less than one-to-one relationship exists between impairment and final disability ratings, which might be expected.

Park and Butler (2000) found similar results. They found that degrees of permanent impairment assigned by physicians, even under Minnesota's relatively well-administered guidelines, were not statistically related to the injured worker's reduction in pre-injury wages after the injury. Even after adjusting permanent injury awards for age, occupation, and other economic factors, they found that the impairment ratings had very poor statistical relation to the actual wage loss. This finding is consistent with mainstream belief by medical and non-medical researchers in workers' compensation. Numerous wage-loss studies document that claimants in virtually every state are under-compensated for actual or predicted loss of wages after an injury.

Several factors account for this lack of correlation between permanent disability compensation and wage loss. First, most jurisdictions do not consciously or deliberately set out to match the benefit levels to the future loss of earnings. Park and Butler (2000) make a common mistake in their paper by equating the physician rating to an estimate of anticipated wage loss. The statutes and rules that establish permanent injury compensation do not equate impairment with disability nor do they explicitly state what the PPD award is intended to compensate. Rather, benefit levels are set in a political arena. The employer's cost of workers' compensation and how it affects the competitive position of one jurisdiction to its competitors is a far more common metric in the political debate than statistical measures of wage loss from permanent injuries.

Second, differences between workers cause the permanent disability formulae to be relatively more generous to some injured workers and relatively prone to under-compensate others. Especially in "pure" impairment states, the rules for scheduled injury benefits impose uniform awards for each degree of physical loss, e.g. a five percent loss of the wrist is the same for a concert violinist and cement finisher. Workers in the construction trades can suffer severe and certain job limitations from relatively minor impairments, while office workers are relatively immunized from performance and career limitations from physical limitations. In addition,

younger workers tend to be under-compensated for permanent injury as compared to workers nearing retirement.

The focus of this paper is on the third reason for lack of predictability of impairment ratings: the physical measurements of bodily loss are not reliably and consistently measured by doctors. Doctors do not set benefit levels for specific injuries, but the measurement of physical loss the doctors provide translate directly into dollar benefits. This lack of consistency between rating physicians is widely observed (for a review see Colledge, 1994).

There is much anecdotal evidence, and a few formal studies, that suggest a major problem with the system that revolves around the consistency and defensibility of the ratings made by physicians. Complaints are routinely reported in the trade press about problems with the consistency of permanent injury benefit administration.

This assertion has been found true when similar injury cases are presented to multiple practitioners. It is also true of the same practitioner evaluating similar cases over time. From the anecdotal evidence, the problem seems to exist in many jurisdictions. Some of the documented studies of these problems are reviewed below.

In a study by the State of Texas (1999), a significant number of the cases with multiple impairment ratings for the same injury showed disparities of 5 percent or greater:

- Almost one-quarter (24 percent) of the injured workers with multiple impairment ratings had no difference between the first and last impairment rating.
- One-third (29 percent) had a difference of 5-10 percentage points between the first and last impairment rating.
- 14 percent had a difference of 10 percentage points or more.

One of the authors has documented similar inconsistencies in the State of Utah prior to that state's re-codification of impairment rating guides (Colledge, 2001).

Many U.S. workers' compensation administrative agencies face constituent problems with the delays and high cost of litigation over benefits. In most jurisdictions, a leading source of disputes comes from permanent injuries, particularly non-scheduled injuries. A major source of these problems with permanent injury stems from poorly crafted laws or rules. States are inconsistent in awarding payment, how benefit levels are set, and the formulas and procedures for guiding physician impairment ratings. Victor and Boden (1991) contend that the clarity of law on evaluating permanent injury helps control disputes.

The medical community struggles with state laws, rules, and administrative law judges that are out of step with the best available medical evidence. Another problem is the inconsistency in methods and expectations among different jurisdictions. This is especially problematic for doctors who have multi-state practices or who attempt to deal with these issues from a national perspective.

To the extent that the benefit is ambiguous, disputes arise. The biggest source of ambiguity for permanent injury disputes is the extent of any physical reduction in the function or use of a body member or system caused by the injury. Related to this are issues of causation in injury claims that do not have a clear cause or etiology, e.g., sick building syndrome or stress claims. Disputes over the medical evidence are very expensive. They almost always involve "dueling doctors," the treating physician, and an expert hired by the payer of the claim. They also involve lawyers on both sides. Finally, they consume time of state agency staff and administrative law judges.

Workers' compensation judges and the support system for hearings tend to be one of the most expensive parts of an agency budget. State agencies are continually experimenting with techniques to reduce case backlogs and speed decisions.

Delays cause legislative inquiries. As constituent frustration levels rise, lawmakers are inclined to "reform" the system. Some states go through a cycle of reform-dissatisfaction-reform.

For these reasons, it is vital that the management of permanent injury benefits improve. The keys to success include:

- fixed conditions under which permanent injury benefits can be awarded
- a clear trigger for when permanent injury can be evaluated
- well-defined responsibilities for the physician who is to make the legally required medical determinations
- uniform procedures for the measurement and evaluation of the parameters of permanent impairment to the body
- an objective and consistent way to express the basis for the impairment rating

Whenever any one of these is lacking, doubt and mistrust by workers or their employers color the benefit award. Also, opportunists find ways to exploit ambiguities to maximize gains by "gaming" the system. Gaming the system or adversarial disputes are signs of system failure in workers' compensation.

Most Problematic Injury Types

A wide variety of common injuries are amenable to reasonable concrete and precise formulae that convert measured losses to percentages of loss of use of a limb or the whole body. Historically, this type of injury is classified as a scheduled injury, which most jurisdictions initially included in their systems. The rating of many scheduled injuries is not particularly difficult or ambiguous for a reasonably trained practitioner. For example, amputations or total loss of use of extremities are not a major source of error or inconsistency. They are objective and relatively easy to measure.

Problems can arise, though, through the evaluation of partial loss to an extremity. At what point does nerve, tendon, joint, or muscle damage render an arm or hand functionally useless? The rules on rating such partial disabilities are variable among jurisdictions. Likewise, the rules for converting an estimate for a specific body part to the "body as a whole" are sometimes vague and generally differ among jurisdictions.

The State of Wisconsin presents an example of a smoothly functioning impairment system for scheduled injuries. Wisconsin Administrative Rule 80.20 specifies quite clearly how impairments from scheduled injuries translate into percentages of body part loss. Loss of motion for fingers is a good example: the physician need only measure the loss of flexion and extension at each joint of the injured finger(s) to produce a precise measure of impairment under Wisconsin law. Even more serious and complex injuries to the knee have explicit standards. Finger and knee impairment ratings by treating physicians are almost never challenged by claims adjusters and are virtually never litigated.

Clearly, simple and direct rules work. They mete out compensation with efficiency and speed. Of course, some would object that "cookie cutter" justice is unfair. Yet, the very basis of workers' compensation is exchanging administrative simplicity in benefit delivery for the individualistic tort-based approach to equitable benefit determination.

A much greater problem arises in rating injuries to the spine, which are governed by much more general and subjective guidelines. This is not to say that medical judgment is out of place. Rating many kinds of spinal partial impairment is inherently judgmental, and therefore varied.

Another common problem area is apportioning a number of separate injury events over time to the same body part. This is especially problematic when the loss of use is severe and the medical record on treatment of previous injuries is sketchy or availability has been limited by unresolved privacy concerns.

Psychological or mental injury and all its related behavioral and motivational consequences are another intractable problem. Psychological injury is real; not only is it difficult to differentiate from pre-existing psychological illness not related to the workplace, but it is also difficult to rate or measure. For these reasons psychological injury is a lightning rod where it is considered compensable. New South Wales is one recent example:

> ...the rights of the people of NSW have been gravely compromised by the Government's subsequent decision to use the very flawed and

> unfair Psychiatric Impairment Rating Scale (PIRS) to measure such impairments, and by excluding psychologists from assessment of psychological and psychiatric impairment. Apparently the Government is attempting to save on compensation payouts at the expense of psychologically impaired workers. This is a dangerous election ploy. (Shumack, 2002)

Rating pain is the greatest problem of all. Some jurisdictions take the position that pain is not compensable in workers' compensation. Others hold that the pain must be directly linked to the loss of use of body part, e.g., acute pain limiting the range of motion of a limb. Policymakers in such jurisdictions apparently hold the belief that workers' compensation is a no-fault system that tries to get away from the problems of measuring pain and suffering that are so difficult to evaluate in civil tort cases. Other jurisdictions make some allowance for pain, if only in an indirect or implicit way. For example, some jurisdictions assign minimum impairment ratings for surgery even if the outcome was rated as 100 percent successful in restoring function. This might implicitly be regarded as a reward to the injured worker for the uncertainty and trauma of the surgical procedure.

Ideally, a skilled practitioner using a well-defined set of criteria might be able to fairly rate the intangibles of an injury, most importantly pain. However, there is ample evidence to suggest that pain is difficult to evaluate and is subject to a host of psychosocial overlays that often have nothing to do with the injury itself. The physician evaluator can also create or prolong a disability mentality by the way he or she communicates with the injured worker. Two examples will illustrate this:

1. The worker has a known self-perception of disability, but the physician heightens the sense of disability by delaying return to work and prolonging marginal therapies.

2. The worker has a strong sense of disability that the physician reinforces by delaying return to work and rating the person's condition as poor and severely impaired.

We emphasize again that this is not contending that physicians are acting unethically or "against the system." Rather, they may have a professional commitment to patient advocacy and protection. Many physicians do not appreciate that what they are doing may actually facilitate disability and endanger the re-entry of a worker to normal pre-injury lifestyle by excessively protective treatment.

This discussion leads the authors to the conclusion that necessary changes are needed to reduce administrative problems and individual inequities.

The role of physician or administrative judgment has been circumscribed by many jurisdictions. Policymakers have reacted to ambiguity in various ways: (1) eliminating the compensability of a class of injuries, (2) constraining the range of judgment about certain injuries, or (3) assigning a narrow range of estimates. These understandable responses to uncertainty have the undesirable consequence of introducing inequity. Some workers simply are not compensated as much as they should be relative to other workers with more tangible and specific injuries. This is a political, not a medical, issue.

Supplemental Guides Produced

In the past, many jurisdictions, especially in North America, have defaulted to the *American Medical Association Guides for the Evaluation of Permanent Impairment* (AMA Guides) for rating occupational injuries. These guides have gone through years of evolution and are now in their 5th Edition. Their evolution has not mitigated disputes over the clarity and consistency of the guides. Spieler et al. (2000) best catalogued the shortcomings of the AMA Guides in the *Journal of the American Medical Association*. A 2002 IAIABC survey of workers' compensation agencies showed a high degree of dissatisfaction with the AMA 5th Edition.

Unfortunately, because of the AMA Guides' lack of sensitivity and specificity toward injured workers, some jurisdictions have set out their own standards. As an example, the background section to the 1996 Florida Uniform Impairment Rating Schedule states:

> In the past much confusion has resulted from inadequate understanding by physicians and others of the scope of medical responsibility in the evaluation of permanent disability and the difference between "permanent disability" and "permanent impairment." It is vitally important for every physician to be aware of his or her proper role in the evaluation of permanent disability under any private or public program for the disabled. It is equally important that physicians have the necessary authoritative material to assist them in competently fulfilling their particular responsibility – the evaluation of permanent impairment. (Section 440.1 3, Florida Statutes)

Wisconsin, Florida, and at least seven other jurisdictions in the US have developed their own guides for impairment rating. To date, there has been little sharing of information among the states on "best practices."

During Fall 2001, the IAIABC began to study the feasibility of a way to assist physicians in rating permanent occupational injuries. A special committee of 16 doctors and other medical experts was formed to develop a supplemental guide to the AMA Guides for rating occupational permanent loss. Its focus was on occupational impairment rating and the injury types that are most difficult to rate.

These supplemental guides contain:

- an introduction on the nature of occupational impairment rating
- definitions of key terms and concepts, such as maximum medical improvement
- discussion of general issues, especially the measurement of pain
- guides to rating surgical and non-surgical injuries of the back
- guides for rating the upper and lower extremities
- standardized reporting worksheets

An introduction to impairment rating is critical because many physicians who do ratings are unsure of their role or have misunderstandings about the rating procedure in a given jurisdiction. This is particularly true of those who only do ratings on an occasional or infrequent basis, or who are

confronted with a rating scheme from a jurisdiction outside their normal practice.

Methodology

The Impairment Rating Committee embraced some guiding principles in developing the supplemental guides:

- They should be based on the best available empirical evidence on the reliability of tests, measurements, and correlations of measurements to biomechanical limits on the normal use and functioning of the body.
- They should be practical and consistent in their administration by physicians.
- They should be clearly explainable to practitioners.

These principles are challenging to implement. They involve tradeoffs. For example, sophisticated measures that could arguably be more precise might be impractical and costly for a non-specialist physician.

Pain is a particularly controversial issue. It is a real consequence of injury and surely affects post-injury reintegration into work and non-work activities of daily living. Having said this, the committee could not find many reliable and practical tools for rating most injuries for residual pain.[2]

The goals of objectivity and practicality often fly in the face of individual equity. The participants in the preparation of the draft IAIABC Guides have elected to err on the side of simple consistent rules based on objective medical evidence.

---

[2] Some psychological tools may be able to consistently differentiate between simulated pain and "real" or felt pain. Further, such tools may be able to gauge the approximate degree of felt pain. However, the tools available to the drafters appeared to fall short of being easily learned and applied by treating physicians who do not specialize in occupational injury.

Results

To date, a draft of this supplement to the AMA Guides has been produced.[3] It provides specific guidance on issues not fully or clearly addressed in the AMA Guides for occupational injuries.

Part 1 of the IAIABC Supplemental Guides provides general background on the workers' compensation system and the role of the physician in awarding benefits for permanent work injuries. Much of this educational material is common knowledge for jurisdictional administrators, workers' compensation managers, and claims adjusters. Yet, it is surprising how few physicians who do not practice occupational medicine understand these fundamental concepts. Physician-raters must have an appreciation of their role and its order in the benefit process for the system to work in accordance with the law.

This first part of the Supplemental Guides also reviews some of the generic concepts of impairment rating, such as maximum medical improvement and apportionment of injury. The highly controversial subject of pain that became eligible for a rating in the AMA 5th Edition is also clarified.

Part 2 of the Supplemental Guides addresses issues and problems associated with injuries to the back. Table A (next page) describes the topics covered in this portion of the guides.

Part 3 (now under development) is for rating upper and lower extremities. It clarifies the schedules from the 5th Edition that are to be applied for rating injures in these areas. Likewise, new schedules are presented that more accurately direct the rater to consider actual joint pathology as observed during arthroscopic surgery.

The review process of the exposure draft continues. The IAIABC parent committee will discuss the draft later in 2003, with the goal of publishing the guides once further comments and suggestions have been reviewed and incorporated.

---

[3] The exposure draft of the IAIABC Supplemental Guides can be downloaded from the IAIABC Web site at: http://www.iaiabc.org/Impairment/Impairment_index.htm

TABLE A
Topics Treated in the Supplemental Impairment Guide, Part 2

Introduction

Spine and Pelvis Conditions
Apportionment of Soft Tissue Impairment
Spine Impairment Clarification Concepts

Spinal Translocation, or Isolated Spinal Segmental Instability (ISSI)
Determinations of ISSI
Measuring Impairment Related Secondary to ISSI

Schedules
- Schedule I. Soft Tissue, Developmental, and Degenerative Spine Conditions
- Schedule II. Surgically Treated Spine Conditions
- Schedule III. Radiculopathy Schedule
- Schedule IV. Vertebral Fractures
- Schedule V. The Pelvis
- Schedule VI. Severity Indexing Prior Conditions and Summary of Basic Principles of Apportionment

Calculating Neurological Loss
Spine with Associated Severe Neurological Injuries

Schedule Forms
- Schedule I Form for Computing Spinal Impairments
- Schedule II Form for Computing Surgical Spinal Impairments

Examples of Spine Impairments

Uses to Date

To date, the best practical application of these guides is in the State of Utah. In many respects, the guides resemble the administrative rules Utah adopted for the rating of permanent injuries.

The use of the Utah guides has dramatically reduced litigation over impairment disputes. Since the revised impairment guides were adopted in 1997, fewer than one percent of claims with permanent disability have been litigated. This reduction produced a dramatic cost savings to the Utah Labor Commission, since the direct cost to the agency is estimated to be $5,200 per case litigated. The chief administrator of the Utah Commission reports that the 1997 guides have been well received by attorneys, insurers, and worker representatives.

Based on the IAIABC survey of state administrators, there is a good deal of dissatisfaction with the AMA Guides, particularly the 5th Edition. Conversations between the authors and agency administrators suggest considerable interest in some states in using portions of the IAIABC Guides to supplement the AMA Guides, as practiced in Utah.

The IAIABC Supplemental Guides will not displace the need for the AMA Guides. Rather, they provide support, clarification, and extension of the AMA Guides as related to occupational injuries. Individual states may wish to adopt portions of the IAIABC Guides for specific issues or classes of claims.

Summary

Awarding benefits for permanent injury from a work injury is the most expensive and most contentious part of the process of indemnifying injured workers. Regulators and claims handlers are challenged to get fair permanent injury benefit levels and to administer claims swiftly so as to avoid disability syndromes and legal disputes.

We re-emphasize that impairment rating does not predict disability or loss of earning capacity. Further, we take no position on whether a jurisdiction should use pure impairment ratings, adjustments for age/occupation, wage loss, or some hybrid system that takes all of these factors into consideration. The purpose of this paper was to discuss the fact that many impairment ratings based on the AMA Guides or state guides have been found inconsistent and indefensible.

Ambiguity and uncertainty over rating permanent injury produce higher administrative costs for workers' compensation systems:

- Multiple examinations caused by disputed ratings are expensive.
- Litigation over large discrepancies in ratings causes delay in benefits and further administrative cost.

One cure for the above problems of compensating for permanent injury is to establish clear and simple rules for awarding benefits. The downside to simplicity is a loss of individual equity and fairness among injured workers, i.e., some are relatively better off and some are disadvantaged by rules that do not consider the effects of their physical loss on their earnings potential.

This paper has argued for rating systems that stress objective medical evidence and consistent guidelines.[4] For many common occupational injury types this is possible and desirable. However, the AMA Guides used in many North American jurisdictions often leave questions in the minds of physician evaluators and administrators on how to objectively measure loss of function or use.

The IAIABC Supplemental Guides are intended to make three contributions:

- Explain the role of impairment rating in workers' compensation relative to other disability compensation roles doctors find themselves supporting.

[4] Of course this ideal may run afoul of equitable compensation for real but immeasurable injuries to body systems, including pain.

- Clarify definitions, terms, and procedures in the AMA Guides that some doctors find unclear.
- Extend and improve the objective rating of back, upper, and lower extremity injuries.

The IAIABC Supplemental Guides do not offer a means of rating subjective conditions like pain or psychological injury. Rating pain is a highly controversial area for which (except for a few specific conditions like phantom pain from amputation) these guides offer little objective medical support. Of course this does not mean that the pain is not real. Evaluating and compensating for it pose great practical problems, such as increases in disputes, challenges, and litigation, which many jurisdictions want to avoid. In effect, this subordinates the quest for better individual equity on claims with overall system savings. Thus, purely subjective conditions, if they are to be compensated, should be addressed by explicit norms and rules outside the purview of medical examiners and raters.

Impairment is defined as "the loss, loss of use, or derangement of any body part, organ system or organ function." Although an impairment rating may be derived from a well-structured set of physical observations, it does not convey information about an individual's capacity to meet personal, social, or occupational demands (referred to as *disability*). Evaluation of disability requires non-medical judgments that are generally outside the scope of the physician's expertise. Only when there is an accepted impairment methodology that objectively and reliably measures physical loss can the economic implications of impairment ratings be addressed effectively in the administrative, legislative, and political arenas. This is particularly relevant in that no major clarifications or revisions to the new 5th Edition of the AMA Guides are foreseen for the immediate future. The IAIABC methodology provides an improved and proven impairment model for workers' compensation jurisdictions to seriously consider.

Alan Colledge, MD, is a graduate of the University of Utah School of Physical Therapy and the Medical University of South Carolina. He is Board Certified and specializes in the prevention and non-surgical treatment of spine and occupational injuries. He is currently Medical Director for the Labor Commission of Utah. Dr. Colledge has published extensively and presents nationally and internationally.

References

Cocchiarella, L., Turk, M., & Andersson, G. (2000). Improving the evaluation of permanent impairment. *Journal of the American Medical Association,* 283, 532-533.

Colledge, A. (1994, July). Impairment ratings. *Occupational Health and Safety.*

Colledge, A., Sewell, J., & Hollbrook, B. (2001, January). Impairment ratings in Utah: Reduction of variability and litigation within workers' compensation. *Disability Medicine*, ABIME, 1(1).

Berkowitz, M., & Burton, J.F., Jr. (1987). *Permanent disability benefits in workers' compensation.* Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

Durbin, D., & Kish, J. (1998, March). Factors affecting permanent partial disability ratings in workers' compensation. *Journal of Risk and Insurance,* 65(1).

Gloss, D.S., & Wardle, M.G. (1982). Reliability and validity of American Medical Association's guide to ratings of permanent impairment. *Journal of the American Medical Association*, 248, 2292-2296.

Park, Y., & Butler, R. (2000). Permanent partial disability awards and wage loss. *Journal of Risk and Insurance*, 67, 331-350.

Shields, J., & Lu, X. (2003, Spring). Early results of changes to the impairment rating system for injured workers in Texas. *Texas Monitor,* 8(1).

Shumack, L. (2002, April 5). NSW Executive. *The Australian Psychological Society.*

Spieler, E., Barth, P.S., Burton, J.F., Jr., Himmelstein, J., & Rudolph, L. (2000). Recommendations to guide revision of the guides to the evaluation of permanent impairment. *Journal of the American Medical Association*, 283, 519-523.

State of Texas. (1999, August). *Impairment rating trends in the Texas workers' compensation system.* Retrieved from http://www.roc.state.tx.us/ir.htm

Victor, R., & Boden, L. (1991, November 18). Model states show lawsuits can be prevented. *National Underwriter.*

A Reviewer's Note

Some Thoughts on the IAIABC Impairment Rating Initiative

Kathryn Mueller*

The article by Gregory Krohm and Alan Colledge illustrates the problems inherent in using medical impairment ratings to determine permanent disability in the workers' compensation system. It is readily acknowledged that there is no proof of the validity of the *AMA Guides for the Evaluation of Permanent Impairment* (AMA Guides). That is to say that the impairment ratings established by the AMA Guides have never been correlated to the disability status of any population of workers (Cocchiarella, Turk, & Anderson, 2000; Spieler, Barth, & Burton, 2000).

There has also been significant controversy as to how reliable the AMA Guides are in practice. In other words, when multiple physicians use the AMA Guides in an attempt to rate the same patient, how likely is it that their ratings will be within several percentage points of each other? Older published studies have indicated a lack of reliability, particularly of the spinal range of motion portion of the AMA Guides (Rondinelli, Murphy, & Esler, et al., 1992; Nitschke, Nattrass, & Disler, 1999; Shirley, O'Connor, & Robinson, 1994). Spinal range of motion is not advocated as the initial impairment rating process except for conditions with multiple spinal injuries. Thus the reliability of this portion of the AMA Guides would not affect the majority of spinal injuries. Many of the suggestions contained in

**Kathryn Mueller, MD, Medical Director, Colorado Division of Workers' Compensation. E-mail: Kathryn.Mueller@state.co.us*