# *Member Report for the Iowa Task Force Regarding the AMA Guides to the Evaluation of Permanent Impairment, Sixth Edition*

John Kuhnlein, DO, MPH, CIME, FACPM, FACOEM
September 8, 2008

The First Edition of the Guides to the Evaluation of Permanent Impairment was published in 1971, and was based on a series of articles published in JAMA "beginning in 1958 and continuing until August 1970."[1] From the beginning, and through the first five editions of *The Guides to the Evaluation of Permanent Impairment*, impairment values assigned by physicians using the various Editions of The Guides have never been determined to be scientifically derived, or an accurate representation of actual physical impairment.

Previous editions of The Guides have been evolutionary in their approach to providing impairment ratings. However, *The Sixth Edition of the AMA Guides to the Evaluation of Permanent Impairment* represents a revolutionary change in the way impairment ratings are derived and calculated, based on a different model than previously used. This edition represents a change not only in the methodology, but in the numeric values themselves (this is not exclusive to the Sixth Edition, values have been changed in previous editions as well), sometimes with potentially significant decreases in numeric values (for example, in cervical spinal fusion), sometimes with increased values (such as lumbar spinal fusion) and impairment ratings where none existed in the Fifth Edition previously in use in Iowa (mental health issues, tendinitis, and certain nerves that had not been addressed specifically in previous editions).

I applaud Dr. Rondinelli and the editors for their significant efforts in trying to make the impairment rating process more objective, as previous editions of The Guides have all had problems with the objective determination of physical impairment associated with injury, a problem carried forward into this edition of The Guides. This was a herculean undertaking of several years duration, and from the statements made by the individuals who have testified before the task force, it was a very difficult and sometimes contentious process. However, this edition of The Guides does not address the needs of Iowa's worker's compensation system as it is currently published, for reasons that will be discussed in this paper. I would recommend that Iowa wait and watch other state's experience with this new paradigm over a period of time, perhaps three or four years, to assess the true positive and negative impacts of this new approach prior to considering implementation here.

This dramatic paradigm shift produced by the American Medical Association and the Editors of The Guides has the real possibility of creating a number of issues for the State of Iowa with respect to the use of The Guides, on a broad number of fronts related to the rights of Iowa's employers, employees, insurance companies, and healthcare providers,

[1] AMA Guides to the Evaluation of Permanent Impairment, 5th Edition, Page 1.

with the real potential for untoward, unanticipated, and potentially harmful effects on all groups.

Several of the Editors have stated (Rondinelli, Melhorn) or written (Brigham) that the primary issue does not relate to the physicians who have written this edition of The Guides, but the issue is that the worker's compensation systems that need to "catch up" to the physicians and that state worker's compensation systems should evolve in response to The Guides. These same physicians have indicated that this is a book written by physicians for physicians to use, without apparent concern for what untoward social consequences might develop from the use of this new paradigm, or how difficult implementation of such changes may be within the Iowa worker's compensation system. This philosophy might be called many things, but it would never be called responsive or considerate to the needs of its end customers.

At least one member of the Executive Editorial Board (Mueller) is the Medical Director for the Colorado State worker's compensation system, and one of the reviewers (Dionne) is the Executive Director for the Maine system, and so the Editors clearly should understand how difficult it is for states' entire worker's compensation systems to adapt to a book written by physicians for physicians.

There are a number of significant disadvantages to Iowa's use of the *AMA Guides to the Evaluation of Permanent Impairment, Sixth Edition,* across a broad variety of fronts:

## The Paradigm Shift

While Dr. Rondinelli and other authors have spoken and written of the disadvantage of previous methods (which is true to some degree) and of the advantages of the paradigm shift represented by the Sixth Edition (which is unproven), they did not ask the true end users in advance of such a dramatic change whether this change would be welcome and useful. It appears from statements before the Task Force that this paradigm shift was put into place without any consideration regarding the practical impact that this new approach would have on the various end users, in this case, the Worker's Compensation System of the State of Iowa.

Despite the AMA's assertions that the Sixth Edition "will move the *AMA Guides* forward" or that there was "a lack of internal consistency" in previous editions, or that there was a need for a "paradigm shift", there are still multiple practical issues of whether these Guides can be reasonably implemented by the State of Iowa in a cost effective manner due to the multiple issues that have been noted by the Task Force in reviewing the book. The American Medical Association and the Editors do not seem to have considered what the practical impact these changes might produce in the various states as they were promulgating their paradigm shift.

Given that there is no clear understanding of the exact practical impact this paradigm shift will have on the stakeholders in the Iowa worker's compensation system, and in consideration of the issues set forth in more detail below, it is recommended that Iowa's best course with respect to this paradigm shift is to acknowledge that this approach is

intriguing, but that Iowa should choose to wait and watch what effects that this dramatic paradigm shift will produce in other states that mandate the use of *The Guides to the Evaluation of Permanent Impairment, Sixth Edition* prior to considering implementation here in Iowa. Put another way, at this time there is too much potential risk that outweighs any potential short term benefit to Iowa's citizens and the businesses for which they work in implementing *The Guides to the Evaluation of Permanent Impairment, Sixth Edition* without further study.

It is recommended that Iowa let other state systems be "test subjects" at least in the near term to see the effects this paradigm shift produces. Other states that mandate *The Guides to the Evaluation of Permanent Impairment, Sixth Edition* may experience both beneficial and adverse impacts prior to implementation of this new paradigm in Iowa. There is less potential harm in continuing to use a familiar, albeit flawed, system than rushing to implement a new and radically different system that has the potential to do harm to any or all of the major stakeholders in the Iowa worker's compensation system.

## Changes in Impairment Rating Ordinal Values

There are legitimate concerns about potential changes in impairment rating values with respect to implementation of the Sixth Edition in the State of Iowa. There is no way to predict at this time whether overall impairment ratings will rise, remain the same, or decrease overall if the Sixth Edition is implemented. For specific conditions, it seems clear that specific impairment ratings will be significantly higher than in the past (e.g., mental health, tendinitis) and dramatically lower for other conditions (e.g., cervical fusion).

It is acknowledged that there have been changes in impairment ratings in past editions, but previous editions of *The Guides to the Evaluation of Permanent Impairment* were evolutionary in approach and not revolutionary, and in some cases the decreases in the Sixth Edition appear to be dramatic. The overall outcomes to the Iowa worker's compensation system are simply not known at this time, nor can they be predicted with any degree of certainty. It seems unfair to suggest to either the employers and insurance companies, or injured workers, that their respective outcomes in their cases would be better if only an injury had occurred a few years ago and been rated under a different system.

For example, a cervical fusion claim with a 25% whole person impairment under the Fifth Edition might be 6% whole person, or even 0% whole person impairment under the Sixth Edition. This represents a significant change in financial remuneration to the injured worker. Conversely, the addition of numeric values for mental health impairment may increase impairment ratings significantly to the point that employers are placed at a disadvantage when compared to similar claims from previous years.

As with issues regarding the paradigm shift, it is recommended that Iowa's best course is to wait and watch the effects that this change will have on the impairment rating process in other states, prior to considering implementation here in Iowa. Other states that mandate the use of *The Guides to the Evaluation of Permanent Impairment, Sixth Edition*

can find out whether there are in fact significant shifts in ratings, and then Iowa can adapt at a later date if necessary based on other states experiences.

## Cultural and Racial Issues

There are significant concerns regarding the possibility that this edition of The Guides may inadvertently produce disparate impact on people of culture and color.

Questionnaires being used to modify ratings (PDQ, QuickDASH, AAOS lower extremity survey) are not culturally sensitive, according to discussions with Dr. Rondinelli in his statements to the Task Force, and by Dr. Ranavaya in an ABIME seminar in Memphis in June 2008 that I attended. In response to a series of written questions, Dr. Brigham indicated that the questionnaires are available in different languages, but did not answer as to whether these instruments were culturally sensitive. The fact that questionnaires are available in a variety of languages does not confirm that these are in fact sensitive to people of other cultures, who are at times also people of different color.

In chapter two of the Sixth Edition, the Editors acknowledge that Waddell's signs, typical signs of nonphysiologic findings commonly used in lumbar examinations, are not culturally sensitive. Such concerns do not seem to have disseminated to other chapters of the Guides. If it is true that these questionnaires are culturally insensitive, the significant cultural (and potentially racial) impact produced by use of the questionnaires is uncertain and speculative. However, there is a risk that the questionnaires may produce a disparate impact on impairment ratings.

The questionnaire scores in an Anglo worker may be different than in a worker of a different culture, not because of the injury, but because of cultural influences not considered by these measures. These differences may place either the worker or the employer at a disadvantage in the rating process. As outlined on page 447-448 of *The Guides*:

> "Permanent impairment for focal neuropathy may be calculated even when the patient has declined surgery. However, the functional score should reflect symptoms insufficiently severe to warrant surgery. If an individual has a QuickDASH functional score greater than 60, and chooses not to have surgery, the examiner should suspect symptom magnification on the QuickDASH Questionnaire…If symptom magnification is not present, a psychiatrist or a psychologist may be consulted to document a phobia relating to surgical treatment".

In simpler terms, a worker from another culture may answer the questions in these instruments honestly, given the influences any culture imparts to a person's outlook, and then unwittingly be accused of being either a symptom magnifier or having a surgical phobia, when neither is present. Independent of the rating process, this may unnecessarily have an unfortunate impact on the perception of an injured worker by an employer, an insurance company or a health care provider.

Using the QuickDASH score in the upper extremity chapter as an example, these scores are used to modify the functional history modifier, which may move an impairment rating value up or down based on its impact on the Net Adjustment Formula. Because the QuickDASH is not culturally sensitive, if high scores are due to powerful cultural influences, then the worker from a culture that is demonstrative of pain who answers honestly may be told that their pain is due either to symptom magnification or a surgical phobia, where neither exists, or if the score makes the modifier two levels higher than the diagnostic class, then it is thrown out completely. The rating then may be either inappropriately higher or lower than it should be. In one case the employer is disadvantaged, and in the other the worker is disadvantaged. In any case such an outcome would be unacceptable to society as a whole.

Taken to a different level, an impairment rating may be higher for a person of color or culture than an Anglo worker, which could potentially place the Anglo worker with the same diagnosis at an impairment rating disadvantage. Higher QuickDASH scores could make the ultimate impairment rating higher than it should be based on its influence on the Net Adjustment Formula, and so the Anglo worker would have a lower impairment rating based solely on the influence of the QuickDASH score on the Net Adjustment Formula. Ultimately the impairment ratings produced by this new paradigm shift may produce inaccurate ratings within the new system simply because of normal cultural influences, not because of the severity of the injury or the diagnosis.

I do not personally believe that the potential cultural bias was intentional, if true. I do not believe the AMA or the Editors are inherently insensitive to issues of color or race; putting this book together was an incredibly complex process, and the editors had multiple issues with which to deal in putting this new paradigm together. This issue is significant because this is a well known societal issue that is commonly considered in other settings. This issue could have been addressed for the various states and countries in which this book will be used, given the impact the Guides have on society as a whole.

As mentioned elsewhere there is nothing scientific about the rating process, but these questionnaires are one issue that could be scientifically validated as to cultural sensitivity. The editors who testified made statements to the task force as to how they wanted to make the process more scientific, and yet this issue was not scientifically evaluated prior to inclusion in the three chapters most used in worker's compensation systems - the upper extremity chapter, the lower extremity chapter, and the spine chapter. This issue also was not mentioned in the recently published Errata.

It is important for the Task Force to consider the potential impact this may have on Iowa's worker's compensation system prior to implementing *The AMA Guides to Evaluation of Permanent Impairment, Sixth Edition.* Because of the cultural bias uncertainty, and because this was not addressed either in the initial process or when correcting errors in the recent Errata, it is recommended that Iowa’s best course is to wait and watch the effects that this may produce in other states, prior to considering implementation here in Iowa. Iowa should choose to wait for other states that mandate

the use of *The AMA Guides to Evaluation of Permanent Impairment, 6th Edition* to find out if these racial and cultural concerns are real and significant.

It is recommended that there is no harm to Iowans in waiting, and that such a conservative course provides the best short and long term protection for all involved parties prior to implementation of this new system.

Again it should be understood that I do not believe the AMA or the Editors want to knowingly discriminate against people of culture or color. But if both Dr. Ranavaya and Dr. Rondinelli are knowledgeable and accurate, the potential exists and should be examined prior to implementation of this edition of The Guides.

## Physician Issues

I have concerns regarding risk to Iowa physicians based on the potential medical double standards created, probably unwittingly, by this edition of The Guides. The potential for harm to physicians may be significant in the Sixth Edition, based on current language regarding carpal tunnel syndrome on pp. 445-447 of The Sixth Edition. In the Upper Extremity Chapter of the Sixth Edition, the Editors specifically create a double standard for treating and rating entrapment neuropathies, which some members of the Task Force find to be troubling for Iowa physicians.

The Upper Extremity chapter on pp. 445-447 states that physicians can use one set of standards to diagnose and treat carpal tunnel syndrome, but must use the electromyographic criteria outlined in The Guides to the Evaluation of Permanent Impairment, Fifth Edition to provide impairment. If the values in the EMG/NCV don't meet the criteria outlined in Appendix 15-B, then the diagnosis is changed (see pp.445-446). The impairment rating is also changed, to a lower value for nonspecific wrist pain. There is no explanation in the Guides why it was thought necessary to create this seeming double standard for treatment and impairment rating.

Despite statements that the Editors wanted to make the Guides more objective, the Task Force has been told that the EMG/NCV criteria outlined in the Guides are not standards established by their professional component societies, and that instead these standards were developed internally by group consensus of various contributors as this Edition was being prepared. It is uncertain why this new criteria would even be necessary in a book written by physicians for physicians, when standards for EMG/NCV studies already exist. It is uncertain why it was necessary to create a difference between the treating diagnosis and the rating diagnosis, in a book written for physicians by physicians.

For example, a patient may complain of symptoms of carpal tunnel syndrome. An EMG/NCV study may be interpreted as showing carpal tunnel syndrome. A surgeon may agree with that diagnosis and perform surgery, noting median nerve compression at surgery. But when the time comes for an impairment rating, (which may be as soon as a month after surgery, based on new information in this edition of the Guides), the diagnosis may change to "nonspecific wrist pain" with a much lower rating. Therefore what was once diagnosed and treated as carpal tunnel would now be diagnosed for

impairment rating as "nonspecific wrist pain". This may place Iowa physicians in the difficult position of explaining to their patients injured at work that while they were treated and had surgery for carpal tunnel syndrome, they are going to be rated for nonspecific wrist pain, where this would not occur in a nonwork related case where *The Guides to the Evaluation of Permanent Impairment, Sixth Edition* would not be used.

Insurance companies and employers, as well as injured workers, may question physicians about why the diagnosis has changed. Insurance companies may be confused as to why what was once diagnosed as carpal tunnel syndrome is now being called nonspecific wrist pain, and may question physicians whether surgery is usually performed for nonspecific wrist pain, to which the answer would be no. They would then perhaps deny payment for surgery, based on this new diagnosis, despite previous documentation. Uninformed injured workers may take offense that a surgeon would perform surgery "unnecessarily", and file complaints with the Iowa Board of Medicine against the surgeon for performing unnecessary surgery, or attempt to file a malpractice claim against an Iowa physician. It is unproven that this will occur, but given this situation it is possible. There is no need for Iowa to place it's physicians at risk until the exact magnitude of that risk can be determined.

Physicians may start using the electrodiagnostic criteria outlined in the Guides to diagnose work related nerve entrapment differently than similar nonwork related conditions; physicians will use standards outlined by professional societies to diagnose nonwork related conditions, but use the criteria outlined in the Guides to diagnose alleged work related cases. Perhaps they may do so to avoid the situation outlined above. Because the EMG/NCV standards outlined in *The Guides to the Evaluation of Permanent Impairment, Sixth Edition* are not those of any professional group, this may serve to create a double standard for the same diagnosis based on whether it is alleged to be work related or not. If a condition is real it should be diagnosed as such whether work related or not. This is not farfetched; there are cases where the Guides are now used to make the diagnosis of CRPS, despite The Guides criteria not being referenced as being those of any professional society under the AM umbrella. This would create yet another medical double standard, as work related entrapment neuropathies in the upper extremity would be diagnosed and treated differently than nonwork related conditions. This seems to be unfair to patients and the doctors who treat them.

In the Sixth Edition, on page 448, the Editors have outlined a procedure for the rare instance in which three nerves are entrapped. The first nerve gets full impairment value. The second gets 50% value, but the third nerve gets 0%. This places physicians in the difficult position of having to explain to workers why the third nerve is apparently worthless even though there are objective physical findings and perhaps functional deficits. In previous editions, the Combined Values Chart would address this issue. It was not explained in The Guides as to why this change was put into place. Dr. Melhorn, in his statements to the Task Force, indicated the belief that he felt this was a fair means to address this admittedly rare issue, based on the actual functional deficit noted in such cases. However, physicians will still be placed in difficult and uncomfortable positions trying to explain this apparent bias to their patients. Because of the location of the text,

this will be missed by many physicians who teach themselves to use the Sixth Edition, which will lead to more errors in impairment ratings.

Dr. Melhorn indicated the belief that a physician who picked up the book to learn it on his own might have to take between 25-30 hours to learn how to use the book appropriately, and 8 hours in a training course. I took an ABIME training course in Memphis in late June, and my own experience suggests that this may be fairly accurate for most cases. This is still a significant amount of time for physicians who only use The Guides occasionally, or as a minor focus in their practice, and ratings for some conditions (e.g., carpal tunnel syndrome, mental health) do not follow the typical grid model used for most of The Guides, which can create more ratings errors. There is also a concern that physicians will simply pick up the text without reading it and begin assigning numbers without understanding the need to use the Net Adjustment Formula or modify the impairment, which can create more errors. This would lead to more expense for the system overall.

In addition, a 52 page Errata was recently published. One member of the Task Force took 3.5 hours making the corrections in the Guides; most physicians who use the guides casually will not take the time to do so, increasing errors. In Dr. Rondinelli's second meeting with the Task Force, he indicated that further errors may be published in the future. It is uncertain how many physicians who rarely use the book will spend the time to correct the book several times. If physicians do not make the corrections, further errors will occur. Given the new methodology, and the possibility of further errata being published in the future, the likelihood of errors in impairment rating is increased. This may also force the Deputy Commissioners who adjudicate these claims to continually have to check the ratings to make sure the errata were incorporated correctly. If the ratings are incorrect there is a concern that this will adversely affect the Iowa system.

The Task Force is concerned that with this change in methodology that fewer physicians will be willing to perform impairment ratings, or may charge higher fees to do so, because of the additional length of time needed to perform ratings. For trained physicians, the time frame should not be significantly different, but most physicians who perform impairment ratings are not trained and do not perform impairment ratings frequently. For such physicians, the time frame to perform ratings would be longer. Iowa does not mandate training courses to perform impairment ratings, and so this would mean that those physicians would in fact take more time at more cost to the payor to provide impairment ratings.

I believe that the best course of action is to protect Iowa's physicians until it is proven by the experiences of physicians in other states that there is no greater risk to them by this new and as yet unproven approach. I believe that work related medical conditions should be identified using standards accepted by professional medical societies, rather than those developed solely for use in The Guides. These conditions should also be treated appropriately and fairly under the worker's compensation system rather than unfairly having the financial burden for these cases pushed to private insurers. Nor should the financial burden be unfairly shifted to the public in the form of public assistance for the uninsured simply because a change in diagnostic standards makes physicians change the

way they treat and diagnose a condition out of fear of being reported for unnecessary surgery or sued for malpractice in work related cases for misdiagnosing a condition. As with the other issues outlined above, Iowa feels that the best course is to let other states that mandate the use of the Sixth Edition find out whether these are real and significant possibilities. Certainly no harm would be done by waiting for a period of years to assess whether these are real issues.

## "Consensus"

The Task Force has identified a troubling issue regarding the consensus that derived the values published in this edition of The Guides. As with other editions, the impairment ratings in the Sixth Edition have been derived by consensus. As has been made apparent to the Task Force, the problem is that consensus decisions depend upon the composition of the group making the determination, i.e., if the group is biased, the outcome is biased.

Iowa has been unable to determine the specific authors of the various chapters beyond section heads. Dr. Mark Melhorn, in his statements, and in response to a direct question as to his fellow authors of the upper extremity chapter, told the Task Force to ask the American Medical Association. The Task Force had already done so. The American Medical Association's response to specific written questions regarding who wrote the various chapters was to tell us to consult the book without being more specific.

Such behavior raises questions as to why the Editors and the AMA are being vague as to who was involved in developing the chapters. When values are derived by consensus, the results may vary significantly depending upon those who are included or excluded from the consensus process. Without knowing the composition of the groups that determined the ratings in this book, the Task Force could not determine the biases of the individual physicians to determine if there was a fair group composition. If the authors were heavily biased one way or the other, the resultant chapters would be heavily biased to one side or the other. The Task Force could not determine whether such bias in authoring this book existed; we were unable to identify the specific members of the consensus that determined the impairment rating values, and so have no idea what biases are inherent in the book.

Members of the Task Force are also concerned about the biases of the consensus, based on correspondence received from Dr. Douglas Martin, an Iowa physician who was one of the reviewers for this Edition of The Guides to the Evaluation of Permanent Impairment, Fifth Edition. Dr. Martin is also on the Editorial Board of The Guides, is the current president of the Iowa Association of Family Practitioners, and past president of the American Academy of Disability Evaluating Physicians, in which capacity he serves on the Editorial Advisory Board. In correspondence and in a meeting with the Task Force, Dr. Martin expressed concerns about "hidden agendas and biased allegiances which many physicians (involved in the development of the Sixth Edition) cannot say". This is an extremely troubling statement from a member of the Editorial Advisory Board, and calls into question the consensus that derived the impairments to be assigned in this book.

In presentations it has been mentioned that a modified Delphi process was used to produce this text. In review of the Delphi process, reviewers are supposed to be anonymous so as to avoid allowing knowledge of their biases enter into the process; it's supposed to be the content of the criticism, not *who* is making the criticism that is supposed to be important. If the identity is known, bias may creep into the process. Dr. Martin indicated in his statements that when he was reviewing material, he signed his name to the review. Perhaps this was how the Delphi Process was modified, but it also raises questions as to whether individual biases were allowed into the overall end product based upon the outcome of this book.

In the Lower Extremity chapter, the Guides state that in many cases the diagnosis of CRPS is incorrect. This statement is unreferenced in the text. In the Bibliography there are four references (page 556) to CRPS, with titles including such terms as 'possible' and 'proposed' with reference to diagnostic standards. This is troubling. The Guides are for impairment, not diagnosis, and the reader has no idea where this statement came from. As before, the Task Force has been unable to identify the authors to find out who wrote this, and why such a statement was included without scientific reference (again this is a contradiction between the stated objectives of making The Guides more scientific and evidence based, and their actual content.). This again points to issues of who made up the consensus that decided the impairment rating values that will be used to compensate injured Iowans.

There are also questions as to the composition of the Editorial Advisory Board. We have been told that their primary function is to work on the next edition. When looking at the members of the Advisory Committee, the members of the State Medical Societies do not use the Fifth Edition, except California, which only implemented use of The Guides in 2006. New York does not use The Guides. Texas uses the Fourth Edition of The Guides, according to www.impairment.com. Wisconsin uses its own Guides. Therefore, the physicians from these particular Medical Societies involved in the Editorial Board have very little experience with the most recent Guides, and only California may move to the Sixth Edition. It is uncertain why the Editorial Advisory Board would not include representatives from states that will be actively using the Sixth Edition, to maintain what works in the new paradigm and discard what doesn't work. It is interesting that the Task Force has been able to learn more about the composition of the Editorial Advisory Board than the authors of the Sixth Edition.

Without knowing the composition of the consensus, it is impossible to determine the biases of the authors of this book to determine whether this was a fair negotiated process. If the authors were in fact heavily biased to one side or the other, then their ultimate product may be biased, and the Task Force has no way to determine if this is the case.

Given the concerns about the composition and function of the consensus that determined the methodology and impairment values outlined in the Sixth Edition, I believe that Iowa's best course is to wait and watch the effects that the changes created by this consensus will produce in other states, prior to considering implementation here in Iowa.

## Editorial Concerns

Two Medical Directors for State Worker's Compensation Systems, Dr. Alan Colledge, and Dr. Hal Stockbridge, withdrew from the editorial process of the Sixth Edition. Dr. Stockbridge withdrew for unrelated reasons, according to Dr. Rondinelli. Dr. Colledge testified before the Task Force that he withdrew because of disagreements over the content and the methodology being developed for the Sixth Edition. Dr. Colledge has practical experience in worker's compensation settings from clinical practice and impairment rating to medicolegal settings, to government experience as Utah's worker's compensation Medical Director.

The remaining state Worker's Compensation Medical Director, Kathryn Mueller, M.D., is not listed as the Medical Director for the Colorado Worker's Compensation System; she is listed as being on the Faculty at the University of Colorado. It is uncertain why her affiliation with the Colorado Worker's Compensation System was not made more transparent in the book. Colorado uses the Third Edition, Revised, and there has been no public indication that Colorado will be moving to the Sixth Edition.

Dr. Rondinelli in his presentation indicated that he spends 85% of his practice taking care of catastrophically injured patients and only 15% of his time on work related cases. Dr. Rondinelli has written extensive scholarly articles on the topic. In meeting with the Task Force, Dr. Rondinelli indicated that this book was about 65% of what he had hoped for. In his second meeting with the Task Force Dr. Rondinelli indicated that he felt the Sixth Edition was a "beta version".

Dr. Christopher Brigham is listed as a Senior Contributing Editor. It is uncertain what role Dr. Brigham actually played in the development of The Guides, and it is uncertain what his specific contributions were to each particular chapter as Senior Contributing Editor. Dr. Rondinelli indicated that Dr. Brigham organized the tables in The Guides and helped to write some aspects of the chapters. .Reviewing his website www.impairment.com, and his various writings, Dr. Brigham's practice seems to be primarily Defense-oriented, despite his statements to the contrary. His writings include statements that many, if not most, impairment ratings are erroneous. Dr. Brigham's company provides a service to evaluate impairment ratings, and charges $95 for correct ratings, and $195 for incorrect ratings. Therefore, it is in Dr. Brigham's own financial best interests to find incorrect impairment ratings. With this new paradigm, and for many years because of the new paradigm, there will be significant errors in impairment rating, which will work to Dr. Brigham's own financial benefit.

In addition, in *The AMA Guides' Newsletter* (of which Dr. Brigham is the Editor) from July-August 2006, Dr. Brigham published a table entitled "Red Flags to Erroneous *AMA Guides* Ratings". This table has since then been reproduced on his website, and in March 2006 in a Journal entitled "For the Defense". In this table, Dr. Brigham defines a number of potential red flags to erroneous impairment ratings such as not including the title of the book correctly. Among others, Dr. Brigham identifies the following as a Red Flag to Erroneous *AMA Guides* Ratings:

> "From a Defense perspective, the rating is 5% whole person impairment or greater. From a Plaintiff perspective, the rating is less than 5% whole person impairment".

This seems to imply that rather than being independent, the physician's rating should be influenced by the sponsor of the examination. This would seem to be inconsistent with the American Medical Association's philosophy, as the AMA is highly critical of pharmaceutical companies influencing research outcomes, but in an AMA-sponsored publication, Dr. Brigham seems to state that it is appropriate for either an insurance company or claimant attorney to influence the outcome of an impairment rating. When Dr. Brigham spoke by phone with the Task Force, he did not clearly answer whether this was used specifically in defining erroneous impairment ratings. However, as this table has been reproduced in three separate sites, it would appear that it is at least of some importance to Dr. Brigham.

Dr. Brigham provided the Task Force with an as yet unpublished article, which he relates is to be published. At the conclusion of this article, Dr. Brigham states:

> "In interpreting reactions by different stakeholders it is important to distinguish between the criticisms of the process and the perceived impact on the stakeholders. *The more significant problems do not lie with The Guides, but rather, with how impairment ratings are used by Worker's Compensation Systems or other systems.* (Italics not added.) The *AMA Guides* will continue to evolve and improve. The systems that make use of *The Guides* must also evolve".

His statement here appears to either be ignorant of how difficult it is to change a State Worker's Compensation System, or arrogant in the presumption that the American Medical Association, and its Editors, are wiser, in some as yet undefined fashion, than all of the stakeholders in Worker's Compensation Systems within the various states, and that the financial and social costs associated with such major changes borne by the states are not relevant to the wisdom of the physician driven paradigm shift. It also ignores issues identified by the Task Force as being significant problems with the Sixth Edition.

It is recommended that Iowa wait and watch to see whether these editorial issues are significant and whether they adversely impact other state's worker's compensation systems prior to considering implementation of The Guides Sixth Edition in Iowa.

## Errors in the Sixth Edition

When the Fifth Edition was published, an errata of 16 pages was published two years later, in March 2002. After the publication of the Sixth Edition of The Guides, an errata of 52 pages was published, approximately eight months after publication. Speakers indicated that there was a rush to publish the Sixth Edition, and that this may account in part for the large number of errors in the book. We have heard that there were issues of consistency, and we have also heard that there were issues of deadlines with the publisher

to avoid financial penalty, but that still doesn't explain the issues as to why so much had to be finished so quickly. With so many errors, and the possibility that further errata may be published in the future, it is recommended that the Sixth Edition not be used at least until either a revised version is published with *all* the errata in the Sixth Edition corrected, or until all errata have been published and the Editors or the AMA indicate that no further errors will be published, to again avoid errors in ratings, as discussed before in this paper.

In this errata wholesale changes have been made in Chapter 2 ("the Constitution" Chapter). One good note is that a second page of a physical examination form that was left out of the original publication is now present. Another correction includes the Pain Disability Questionnaire. In the original Guides, the PDQ measurement line was supposed to be 10 cm, but was actually 11 cm, which would overestimate impairment. This has now been corrected. There were wholesale corrections to the Conversion Table in the Upper Extremity Impairment Ratings (Table 15-11, page 420) to convert impairment from one unit to another, e.g., the original published table had errors in converting upper extremity to whole person impairment.

It appears that in the "rush to publish" as described by Dr. Rondinelli, not only in a presentation on February 1, 2008, but also before the Task Force, multiple errors were made, either from haste or inattention. This rush to publish has also produced a rush to correct the errors created by the original rush to publish. It is uncertain what other errors might not have been yet identified.

The Sixth Edition may represent a defective product because of all the issues outlined herein. If an auto manufacturer produced a product with so many wholesale and significant errors, there might be product liability litigation based on the poor design and craftsmanship of the vehicles, a la the Ford Pinto. The AMA and the editors have produced a product here for public consumption with so many identified errors that it required 52 pages to publish them all, and Dr. Rondinelli has indicated during his second discussion with the Task Force that other errata may be forthcoming.

Physicians who are unaware of the errata, or who use this book only intermittently, may make significant errors, which would create problems for the Deputies in trying to determine if the rating has been done correctly. Because of the errors, both recognized and potentially unrecognized, Iowa should wait and watch the experience of other states prior to even considering implementation of the Sixth Edition of *The Guides*. There are too many errors in this book as it is now; the current 52 page errata and the original omissions are significant. There is a possibility that further errors may be forthcoming, which leads to the question as to how many other errors may be identified, and what impact this may have on impairments assigned before the errors were identified. This may already have occurred with the 11 cm PDQ line overestimating impairment. Impairments assigned prior to the identification of this error would be too high, even if one ignores the possibility of the cultural issues.

## Interrater Reliability

The various speakers before the Task Force have stressed that the Sixth Edition of the Guides will produce greater interrater reliability – there is a greater probability of two ratings being statistically closer in the Sixth Edition than in previous editions of *The Guides to the Evaluation of Permanent Impairment*. This is an important issue to the Iowa Worker's Compensation System as wildly varying impairment ratings drive up case costs, and produce confusion as to how significant the injury may be.

However this concept of interrater reliability in the Sixth Edition is an artificial creation. With the grid system created by the Editors, interrater reliability is virtually guaranteed within the same diagnosis because the evaluating physician only has five numbers from which to choose. In essence, this concept of interrater reliability is a moot point as the methodology virtually guarantees it at the outset.

The real issue of importance is not one of interrater reliability; it is one of accuracy. How close is the assigned impairment to reality? If it is close there will be inherent interrater reliability because the impairment will reflect the reality of the injury as opposed to the artificial reliability imposed by the grid system used in the Sixth Edition.

The concept of interrater reliability, of having two physicians arrive at similar decisions, is of more value when there is no defined outcome. For example, interrater reliability is of importance when 3 pathologists review the same slide; they should come up with virtually the same diagnosis. This is a measure of their ability to recognize the same pathology, without prompting, based on their skill and training. Another example would be the presentation of a worker's compensation case to 3 Deputy Commissioners. Each case is presented without any expected outcome, i.e., no grid upon which decisions are imposed. If there is good interrater reliability, all 3 deputies will come to precisely (not exactly) the same conclusions regarding the case on its merits.

The concept with typical reliability is that the outcome is not defined before the analysis is performed. There are an infinite number of possible outcomes, and the evaluators come to the same conclusion out of the thousands of possibilities. In the Sixth Edition, there are only five potential outcomes within the same Diagnostic Class, so reliability is guaranteed to some degree; whether the values in and of themselves are accurate is not guaranteed.

The problematic issue in the Sixth Edition is not interrater reliability; as with previous editions it is the numbers in the grids, the quality of the numbers in the grids, and the biases of the doctors who provided the numbers in the grids. If the underlying numbers are incorrect, or biased inappropriately in one direction or the other by a biased consensus, then the grid will be wrong, and the resulting impairment will still be wrong, even though the values will be fairly close. *If the initial data is bad, and the grids are based on bad or biased data, it won't matter whether physicians reproducibly come up with the same number; it will still be the wrong number.*

Dr. Rondinelli reported to the Task Force that 90% of physicians who have taken training courses find the Sixth Edition to be superior. If the question was "do you think this is an easier method to provide impairment ratings?" the answer might be yes a great deal of the time, although several members of the Task Force felt that this process is more complicated, unless the physician takes a training course. However, if one asked the equally important question "do you think the Sixth Edition is fairer than the Fifth Edition?" the answers might be very different. There may be very high reliability between the responses, but the key issue with respect to the "90% question" is what question was asked, and how was it asked? We don't know what questions were asked that produced the 90% satisfaction response.

One example of the concept of bias influencing outcome related to reliability would be to question Iowa State fans if Iowa State should triumph over the University of Iowa in football every year. If you're a Cyclone fan, there will be very high interrater reliability with a "yes" answer. If you're a Hawkeye fan, there will be an equally very high interrater reliability with a "no" answer. The question in this case is one of bias. Both sides will think they are right, and will almost always uniformly answer according to their own biases. They will believe the other side is incorrect. In the case of The Guides, the editor's and author's biases, expressed as the values in the grids, will influence the outcome of impairment ratings for years to come.

One acknowledged problem with the 5th Edition is that there can be *too much* interrater variability. There have been cases where one physician assigned 0% impairment and another physician assigned 32% impairment in the same case by using various aspects of The Guides to their relative advantage. In such cases, physicians are not taking the time to use The Guides to the Evaluation of Permanent Impairment, Fifth Edition properly, or don't use the Guides at all and say they do, are using their biases, or lack of understanding of The Guides, or any number of other reasons, to assign wildly different ratings for the same case, often with no explanation as to how the impairment was derived. This has a significant impact on case costs across the system. Given the issues the Task Force identified with the Sixth Edition, these problems have a high probability of continuing into the future.

From this standpoint, the Sixth Edition is an attempt to reduce this problem; again, the problem is the accuracy of the values in the grid, and whether they are inherently fair to both the employers and the injured workers in the state of Iowa. As mentioned before in this report, the Task Force has been hindered in assessing the relative biases of the authors involved with the Guides, and so the Task Force has not been able to decide for itself whether these values represent bias.

The discussion should not be about whether different physicians come up with reasonably similar numbers by using the Sixth Edition. That's a given. The primary issue for discussion should be whether those numbers as determined by the editors of The Guides are accurate and/or reasonable representations of impairment, or whether they inappropriately represent the biases of the authors. Clearly, the 5th Edition has similar and significant issues with accuracy and reliability, but it is important to make sure that

Iowa wouldn't be trading one set of problems for another, perhaps bigger set of problems by using the Sixth Edition. Again it is recommended that the Sixth Edition should not be implemented at this time for these reasons.

## The Impairment Rating Process

There are concerns about the fairness of the overall rating process using the Grid method outlined by the Editors. Ratings are initially assigned using the median value in the grid (CDX) for most but not all conditions. This initial impairment is then modified using a Net Adjustment Formula, using modifiers for functional history, physical examination, and clinical studies.

However, there are occasions when certain of these modifiers are disregarded, which can be confusing. At times the physician is to discount values for clinical studies if they are used to make the diagnosis. At times the modifiers are to be disregarded if more than two points higher than the CDX. At times, and this is particularly concerning, the objective findings in the functional history and the objective abnormalities on physical examination produced by an injury may actually serve to *decrease* the assigned impairment. There are statistical reasons for this, but it is concerning, and potentially unfair, that a worker may have an objective injury, and have the impairment *decreased* because of their objective, documented physical findings. It seems as though the objective evidence of the injury is being used against the injured worker to reduce the impairment rating.

## Advantages/Disadvantages

There are a number of disadvantages to the Fifth Edition of The Guides. For example, as with all other editions of The Guides, there is no scientific support for the impairment values derived by any methodology in the Fifth Edition. The Fifth Edition can be difficult to use if it is not read thoroughly. Many physicians simply open the book, look at a few tables, and assign an impairment rating, without realizing that there are other methods of impairment that may be used. Many physicians currently report impairment without citing their sources within The Guides, and assign impairments that are not to be found within The Guides. There is a lack of internal consistency of impairment ratings across multiple organ systems. In many instances, there are no continuous impairment ratings. For example, in the Spine Chapter, there is a gap between 0% and 5% whole person impairments across all three areas of the spine, prohibiting the rater from assigning, for example, 3% whole person impairment. In the Lower Extremity Chapter, multiple nerves are left out of the appropriate tables; however, knowledgeable physicians can use The Guides to extrapolate values for nerves not specifically mentioned in The Guides.

The *AMA Guides to the Evaluation of Permanent Impairment, Fifth Edition*, when compared to the Sixth Edition, has certain advantages. The method, albeit flawed, is familiar to all parties and so the parties are arguing familiar methods in determining impairment. This methodology represents an impairment method based primarily upon physical examination, and not disability measures. There are issues with the use of DREs (Diagnosed Related Estimates) in impairment, as impairment is then based upon the diagnosis, rather than the actual physical findings.

The Editors of The Guides believe that the Sixth Edition is more physician friendly, and easier to learn and use. The Editors believe that the *AMA Guides to the Evaluation of Permanent Impairment, Sixth Edition* is more internally consistent (although one may argue that 6% whole person impairment for distal clavicle excision and cervical fusion is by no means internally consistent) and easy to apply across multiple organ systems. The Editors believe the Sixth Edition to be more functionally based, helping to capture the impact of impairment upon activities of daily living, although this has been mentioned in previous editions of The Guides as well. The Editors believe that the Sixth Edition is "transparent" and promotes greater interrater reliability and agreement. The Sixth Edition fills in the gaps in numbers not present in the Fifth Edition, for example, rating values between 0% and 5% in the spine. The Sixth Edition of The Guides addresses mental health issues and issues of tendinitis, which the Fifth Edition did not. Nerves are addressed in the Sixth Edition that were not in the Fifth Edition, although again such impairment values could be extrapolated.

At the core, the issue in part is whether the diagnosis based model for impairment rating incorporated into the Sixth Edition is more objective and accurate in determining impairment ratings for injury, as opposed to the previous methodology that depended upon the physical findings associated with the injury. In many cases there may be very different physical outcomes given the same diagnosis based on treatment that an injured worker receives, and the physician's treatment plan and skills, among other variables. It may be that the actual physical examination may translate more effectively into physical impairment ratings. The Fifth Edition is not perfect, but perhaps a more evolutionary process to refine the process would more accurately represent the impairment as opposed to such a radical paradigm shift.

## Should Iowa implement its own set of Iowa Guides for impairment rating?

It is my belief that Iowa should divorce itself from using *The American Medical Association's Guides to the Evaluation of Permanent Impairment* Series unless there is further consideration from the American Medical Association toward the end users, based on issues that have been seen before the Task Force. The American Medical Association holds that the Guides is a book written by physicians, for physicians, and on its simplest level, that is true. However, the Guides are, and have always been, used as a tool of public policy. It is naïve to assert otherwise.

Throughout the most recent editions of the Guides, including the *AMA Guides to the Evaluation of Permanent Impairment, Sixth Edition*, physicians have been involved who are clearly aware of this book's use as a tool of public policy; in our particular instance, the Iowa Worker's Compensation System. The American Medical Association and its physicians are aware of the concept of public policy, both at the State level and at a National level through various lobbying efforts to influence healthcare policy, and so it does seem to be incongruous that, on the one hand, The American Medical Association would be an active player at the table in trying to influence public healthcare policy, while at the opposite end, they produce a book "by physicians, for physicians",

apparently choosing not to consider its use in the public eye, in this case, Iowa's Worker's Compensation System.

In the end, public institutions - Worker's Compensation Systems, the court systems in personal injury, insurance systems - use the Guides as a means for adjudicating settlements. The assertion that this book will only be used by physicians for physicians is fundamentally incorrect. When the editors of *The AMA Guides to the Evaluation of Permanent Impairment, Sixth Edition*, assert that they are trying to move the concept of impairment rating forward into the 21st Century, and Worker's Compensation Systems should move forward in response to them, they seem to show an almost arrogant lack of understanding how difficult it is to change Government systems that respond to multiple and often opposed stakeholders. This idealistic concept seems to be a disconnection between the American Medical Association's academic approach, and actual real world implementation.

Suppose that all manufacturers of total hip joint replacements came together and decided that they would not produce the femoral component for artificial hip joints - the "ball" of the joint. By consensus, the companies decided that this component was no longer necessary in hip joints; only the acetabular component ("the socket") is really necessary for effective hip joint replacement. Without asking surgeons, the companies begin manufacturing hip joint replacements without femoral components.

The outcome would probably be uproar by the real end users - the orthopedic surgeons. They would then be faced with patients who had real need for total hip joint replacement with only half a solution to offer them. In response to the surgeons' complaints, the companies' reply that the previous methodology is outdated, and that they are moving forward into the future with a new solution. The surgeons' reply would be that, while this may be a future solution, it does not help solve problems in the here and now.

Apply this to the process followed by the American Medical Association in producing this edition of The Guides. The American Medical Association has produced a product that is radically different than its predecessors; the editors have said both in conversation with the Task Force and, in Dr. Brigham's case in an article soon to be published, that their purpose was to move impairment rating into the 21st Century. However, while this assertion may be true (it is unproven at this point), it does not solve the very real practical problems that this new paradigm shift produces in real day-to-day use. This paradigm shift, while perhaps moving their aspect of the process forward, does not address how to practically implement such change in a system that did not expect or perhaps want such a paradigm shift, and may not believe that such a change was necessary. Why make a new hip joint that serves no one's real practical needs?

While The American Medical Association should be applauded for trying to move the impairment rating process forward, the lack of involvement of the real end users, not the physicians, is something I find very troubling. Will there need to be another significant paradigm shift in the Seventh Edition? If future editors view the impairment rating process differently than the current editors, will Iowa see new paradigm shifts

approximately every eight to ten years, to which the Iowa worker's compensation system is asked to continually adapt simply because the American Medical Association wishes to move forward in yet another new direction without consulting anyone? Iowa has had verbal assurance by current editors that the current paradigm shift will be continued forward into other editions of the Guides, but if the editors change, who is to then say that the paradigm will not also change yet again? And at what cost to the employers, the insurance companies, the physicians, the injured workers and the Iowa worker's compensation system itself?

I believe that it is in Iowa's best long term interests to divorce itself from The American Medical Association's Guides, unless future editors involve the real end users to find what is necessary and unnecessary.

There are significant political difficulties associated with this approach. It is uncertain that Iowa's physicians would be willing to come together to produce such a document. It is uncertain if Iowa's major end stakeholders (employers, insurance companies, defense and claimant attorneys, unions, Iowa Work Force Development) would find such a document any more useable than The AMA Guides themselves, or that they could find common ground upon which to agree to *any* change. However, other states have produced systems outside *the AMA Guides to the Evaluation of Permanent Impairment*. For example, both Minnesota and Utah have developed and use their own set of Guides, which may be adapted to Iowa's use.

Given the approach by The American Medical Association, long-term concerns should lead the commissioner to consider developing an Iowa specific set of Guides for Impairment Rating. I believe that a document could be produced that would be more functional, simpler, and at its end would have been reviewed by all major stakeholders. They may not agree with everything within the document, but they at least would have had the opportunity to review it, which cannot be said about the current edition of the Guides.

## *Summary*

For all the reasons outlined specifically above, it is recommended that Iowa should wait and watch the impact that the *AMA Guides to the Evaluation of Permanent Impairment, Sixth Edition*, has on other State's Worker's Compensation Systems prior to considering implementation of the Sixth Edition in the State of Iowa. There are too many unanswered questions that have a reasonable probability of producing issues for Iowa's stakeholders in worker's compensation. The risk for discrimination, the risk to Iowa's physicians, the concerns about the rating methodology, the multiple errors identified so far, the possibility that these may not be the only errors in the Sixth Edition and the question of whether such a paradigm shift was even necessary in the first place mean that the risk to Iowa's employers, insurance companies, employees, and the Iowa Worker's Compensation System itself, is too great at this time to allow what may be a biased text to be used in Iowa, when there may be significant adverse impacts on Iowa's workforce and employers.

This document contains opinions and conclusions which are solely those of the author, based on the Task Force's investigation and information studied and received to date, and should not be taken to represent the opinions of any other member of the Task Force, except as noted in other documents submitted to the Task Force or those of any member of Iowa's Workers' Compensation Commission. It is not exhaustive, and is not intended to be so. Where references are made, they are to the best of the author's recall from notes taken during the statements made by those who have spoken to the Task Force.

## Chapter 14 resolution

In the Sixth Edition, there are ordinal values for mental health impairment. However, when reviewing one of the questionnaires, a single answer beyond the minimum produces impairment ratings. This will significantly increase impairment ratings for mental health impairment, which is inappropriate. After review, the Task Force decided that it would be inappropriate to use Chapter 14 of the *AMA Guides to the Evaluation of Permanent Impairment, Sixth Edition*, in Iowa in a piecemeal fashion because it would inappropriately inflate impairment ratings. The Editors have addressed this issue in the recently published errata (see Table 14-9, page 357, page 15 of the errata), but it still remains uncertain whether other potential errors have been missed in not only the "rush to publish", but also the "rush to publish corrections to errors from the rush to publish". As with other issues regarding the Sixth Edition, Iowa should wait and watch the impact that this has in other states before even considering the implementation of the *AMA Guides to the Evaluation of Permanent Impairment, Sixth Edition*.

## *ADDENDUM*

A review of www.impairment.com after this report was originally prepared and submitted, and based on data from the website current at that time indicated that Dr. Brigham's fee schedules changed from that discussed in this text to $150 for impairment screens whether they are correct or incorrect. For further information regarding this, the reader is referred to www.impairment.com.