

DISABILITY MEDICINE

The Official Periodical of the American Board
of Independent Medical Examiners

Editorial Board

ABIME
American Board of Independent Medical Examiners

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Disability Medicine - an Odyssey in Quest of Science and Quality

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There is great tradition in civilized societies to take care of their sick and disabled no matter what the cause. It is equally true that compensating injured parties and providing for disabled through monetary means is a tradition the history of which is rooted in the very origin of human society. Toward that end, medical training institutions prepare physicians well for taking care of sick and disabled; however, up until recently, there has not been any organized effort to provide training to health care providers in evaluating injuries for the purpose of compensation and future care.

In this regard, American Board of Independent Medical Examiners (ABIME) is the first organization in the United States, and perhaps in the world, that provides credentialing and certification by voluntary examination. The journey of ABIME began through the vision of several leaders in the field of *Disability Medicine* that nurtured the idea of credentialing by voluntary examination and hence in the early '90s ABIME was founded. A leading panel of preminent leaders in the field of *Disability Medicine* served on the standards committee and examination committee and developed standards and

the examination, which was further validated by independent psychometricians and statisticians who in their own right had several decades of experience conducting credentialing examinations for other prestigious boards of various professional specialties.

The journey of certification continued until a need for education and training was recognized by ABIME. The Board of Directors met the challenge by providing quality education and training in the field of *Disability Medicine* in the form of certification and review courses. This model of training and then credentialing by examination has been quite successful, as over 500 physicians attended and were certified by ABIME last year making a total thus far of over 2000 diplomats of the American Board of Independent Medical Examiners. The journey of ABIME continues toward quality training and credentialing process, and we are now at a junction where we need to have a periodical that would provide a forum for not only our diplomats but also others to exchange ideas and publish their work. With that in mind, the Board of Directors last summer approved the concept of a periodical. Hence this publication.

Currently we plan to publish four times a year and would very much like to invite original research articles and other articles of interest to the readers of *Disability Medicine*. The guidelines for the authors are provided in this publication elsewhere. *Disability Medicine* is intended to be an educational publication of the American Board of Independent Medical

Examiners (ABIME) and its pages will be open to the widest range of responsible scholarly opinions, research, and practice relevant to *Disability Medicine* and Independent Medical Examiners.

As the editor, I pledge that letters to the editor will be printed, irrespective of the opinions expressed, subject to their relevance to disability medicine and

suitable decorum. I welcome all to this inaugural edition of *Disability Medicine*. The odyssey continues and I believe that the best is yet to come.

Mohammed I. Ranavaya, MD, MS, FFOM, FRCPI, FAADEP, CIME, Professor, Marshall University School of Medicine
President-Elect, American Board of Independent Medical Examiners

ABIME President's Message — January–March 2001

As we look toward a new year, the American Board of Independent Medical Examiners continues to grow and move forward. We now have over 2000 physicians that have completed their educational requirements and passed the certifying examination.

ABIME has an expanded domestic educational program for 2001 each with an associated examination. To meet worldwide demand, we also will be providing international education and testing in the coming year. There continues to be great interest everywhere for physicians to learn about the AMA Guides, impairment rating, and related medical legal issues.

The new year will bring the 5th Edition of the *AMA Guides for Permanent Impairment*. To allow time for test revision and

increased physician familiarity with the new guides, the ABIME exams will cover the 4th Edition until 2002.

A new course to review the 5th Edition will be held in Chicago this May.

Our staff in Chicago, including program manager, Kathi Bennett and executive director, Brian Maddox, continue to work hard to make ABIME a successful professional organization.

Please feel free to contact me with any comments, questions or concerns you may have. Best wishes for a happy and prosperous new year.

Thomas A. Beller, MD, CIME
President, ABIME

AMA Guides to the Evaluation of Permanent Impairment: What's New in the 5th edition?

Mohammed I. Ranavaya, MD, MS, FFOM, FRCPI, CIME, FAADEP and James B. Talmage, MD, CIME, FAADEP

Nearly twice the size of its predecessor, the most recent edition of the *AMA Guides to the Evaluation of Permanent Impairment (Guides)* has been available since November 2000. There are many substantial changes that will significantly affect all the users of the *Guides*. For starters, the 5th Edition has almost double the number of pages (613 pages versus 339 pages in the 4th edition), and it also contains three additional chapters (18 chapters versus 15 in the 4th edition). The Musculoskeletal System, Chapter 3 of the 4th edition, has now been split into three chapters in the 5th edition. Now the Spine, Upper Extremity, and Lower Extremity each has its own separate chapter (Chapters 15, 16 and 17 respectively). The Cardiovascular Chapter 6 of the 4th edition is now split into two chapters in the 5th edition. This article will review some key changes in the 5th edition of the *Guides*.

One of the major changes in the 5th edition is that, when possible, chapters have been organized to follow a consistent format. An outline of main chapter headings precedes each chapter for quick reference. Key impairment terms that are defined in the glossary are boldface on first significant text

occurrence. An overview of impairment assessment for each body system is given, when possible, in the beginning of each chapter. A description and interpretation of common signs and symptoms present for body system disorders, along with a summary of common clinical procedures used to investigate system-specific impairment is provided. Clinical criteria used to determine impairment ratings along with an impairment Evaluation Summary of key conditions and their clinical assessment, with references to the main tables in the chapter, are also part of this consistent format. Thus, the *Guides* have become more user friendly.

The "Philosophy, Purpose, and Appropriate Use of the Guides" are presented in Chapter 1, which is about three times the size of its predecessor (16 pages versus 6 pages). The stated purpose of the new edition is to "update the diagnostic criteria and evaluation process used in impairment assessment, incorporating available scientific evidence and prevailing medical opinion" (5th, 1).

The various Organizational (World Health Organization, 1999), Federal (US Social Security Administration)

and State (typical state workers' compensation law) definitions and interpretations of "impairment" and "disability" are compared and contrasted in Chapter 1, Table 1-1 (5th, 3). However, the definition of impairment is retained from previous editions as "the loss of, loss of use of, or derangement of any body part, system or function" It is also stated (5th, 2) that the term impairment in the *Guides* refers to permanent impairment. An impairment becomes permanent when it has reached maximum medical improvement (MMI), meaning it is well stabilized and unlikely to change substantially in the next year, with or without medical treatment. Previous Editions, considered an impairment permanent if it was unlikely to change by more than 3 percent in the next year. The 5th edition has dropped this requirement of predicting a 3 percent change. Another significant departure from previous editions is the statement that while fatigue and pain are burdens, "... the *Guides* has not yet identified an accepted method within the scientific literature to ascertain how these concerns consistently affect organ or body system functioning" (5th, 10). The *Guides* also strongly recommends

that physicians use this latest edition, the 5th edition, when rating impairment (5th, 2).

Chapter 1 also outlines the need for objective assessment by physicians. According to the *Guides*, an impairment may lead to functional limitations or the inability to perform activities of daily living (ADLs). Tables 1 to 3 on page 6 provide various scales for the measurement of instrumental activities of daily living (IADL). The *Guides* further state that an impairment being a loss, or loss of use or derangement implies a change from normal or “pre-existing” status, and “normal” can be defined from an individual or population perspective. The *Guides* recommends where population values are not available, that the physician should use clinical judgment regarding normal structure and function and, based on the individual’s pre-injury condition, estimate what was normal for the individual.

The *Guides* state that the criteria to evaluate impairment as outlined in the 5th edition include diagnostic criteria, anatomical, and functional measures, and provide a standardized method for physicians to use to determine medical impairment. The *Guides* further advise that these impairment criteria and the resulting impairment percentages or ratings were developed from scientific evidence as well as the consensus of

chapter authors and medical specialty societies. According to the *Guides*, the impairment ratings reflect the severity of the medical condition and the degree to which impairment decreases an individual’s ability to perform common activities of daily living **excluding work**.

In this regard it should be emphasized that the *Guides* clearly state “Impairment ratings were designed to reflect functional limitations and not disability.” Further the *Guides* relate that the whole person impairment percentages estimate the impact of the impairment on the individual’s overall ability to perform activities of daily living excluding work. It is of further interest to note that the previous edition of the *Guides* had included work activities as part of the activities of daily living in Section 1.1 of Chapter 1. This had led to some confusion with regard to interpreting impairment percentages, with some jurisdictions interpreting the *Guides* impairment percentages as disability percentages. The 5th edition clears up this confusion by explicitly excluding work from the definition of an impairment percentage or rating.

The 5th edition provides the reasoning for work being excluded from the clinical judgment of impairment percentage evaluation including: (1) work being a spectrum of activities from simple to complex, (2) being a highly individualized activity making

generalizations inaccurate, (3) work and occupation may change, but the impairment percentages are unchanged for stable conditions, and finally (4) the impairments interact with such other factors as the worker’s age, education and prior work experience to determine the extent of work disability. The new edition of the *Guides* goes on to conclude “Impairment ratings are not intended for use as direct determinants of work disability.” The *Guides* do, however, recommend that physicians who are knowledgeable about the work activities of a claimant may comment about the ability or inability of a worker with regard to a specific activity, given the permanent impairment.

The new edition of the *Guides* states that most of the impairment percentages have remained unchanged from the previous edition because of lack of scientific evidence to support a specific change. However, some changes with regard to the percentages have been made for greater scientific accuracy and to bring consistency throughout the new edition.

Another key change in Chapter 1 is the broad discussion of the term *disability* including the World Health Organization’s (WHO) recently released document on the international classification of impairments, activities and participation (ICIDH-2). The new edition retains the previous definition

of *disability* as an alteration of an individual's capacity to meet personal, social, or occupational demands or statutory or regulatory requirements because of an impairment. However, Section 1.2b, page 8 of Chapter 1 also discusses the recent approach of WHO to replace the term *disability* by a neutral term *activity limitations*. The *Guides* do not *per se* change the term *disability* to *activity limitation*, but describe the need for this change due to the stigma associated with disability and to avoid "labeling." The new term *activity limitation* also emphasizes the person's residual ability.

The *Guides* also state that impairment evaluation is only one aspect of disability determination, and that this process also includes information about the individual's skill, education, job history, adaptability, age, and environmental requirements and modifications. The *Guides* state that physicians have the education and training to evaluate a person's health status and determine the presence or absence of an impairment. Further, physicians with expertise, such as an Occupational Medicine Specialist who understands the job requirement in a particular work place, can express an opinion about the presence or absence of a specific disability by providing insight on how the impairment could contribute to activity limitation.

Another change is that in the 5th edition the previously used term *handicap* is being replaced with the preferred term *disability* in the Subsection 1.2b on page 8.

Chapter 2, which is now named "Practical Applications of the Guides" is a couple of pages longer than its predecessor, and it sets the rules for consistent and reliable acquisition, analysis, communication, and utilization of medical information through a single set of standards. The expectation therefore is that two physicians following the methods of the *Guides* to evaluate the same patient should report similar results and reach similar conclusions. The *Guides* also state that if clinical findings are fully described, any knowledgeable observer (which does not necessarily need to be a physician) may check the findings with the *Guides* criteria.

A key change is the explicit language used in Section 2.2 where the *Guides* state that a licensed physician performs impairment evaluations. This explicit language of a licensed physician is new.

Chapter 2 further defines the examiner's roles and responsibilities, including understanding the various applicable rules and regulations, and

the need to insure that the examinee understands that the evaluation's purpose is medical assessment and not medical treatment. In this regard it is interesting to note that the *Guides* do suggest a different role for the examiner by stating "the physician has a medical obligation to inform the requesting party and the individual about the condition and recommend further medical assessment if new diagnoses are discovered." While may lead to some confusion between the role of an Independent Medical Examiner and the role of a treating physician, this "duty" is recognized by many ethical codes and legal precedent in some jurisdictions.

In Chapter 2, the *Guides* also set down rules for evaluation, including stating that impairment assessment should not be done until a person has reached maximum medical improvement (MMI). There is also a new section on confidentiality, which suggests that a physician obtain an individual's consent prior to performing an impairment evaluation.

The directions for combining impairment ratings, interpolating, measuring and rounding off are restated from previous editions, with a few changes. Rounding off is to be done to the "...nearest whole number," whereas earlier editions permitted rounding to the nearest

number ending in 0 or 5 percent.

Another change is that the 5th Edition allows for an impairment percentage to be increased by up to 3 percent for pain by using the pain chapter.

The *Guides* has a new section on changes in impairment from a prior rating, and Section 2.5h provides a good discussion. If an individual received an impairment rating from an earlier edition, and now needs to be reevaluated because of a change in the medical condition, the individual is to be evaluated according the latest information pertaining to the condition in the current edition of the *Guides* (5th ed, 21).

In Section 2.6 the *Guides* provides a framework for preparing reports, suggesting the following three steps:

1. Clinical evaluation: A narrative history of the medical condition and a physical examination is conducted. The current clinical status is assessed. The impairment evaluator is required to discuss the medical basis for determining whether the person is at MMI, and then impairment rating criteria, prognosis, residual function and limitations need to be discussed.
2. Calculation of the impairment rating: In this step the medical findings are compared with the

impairment criteria listed within the *Guides* and an appropriate impairment rating is calculated.

3. Discussion of how the impairment rating was calculated: In this section the *Guides* suggest that the report should include an explanation of each impairment value, with reference to the applicable criteria of the *Guides*. Multiple impairments are combined for a final whole person impairment. Further the *Guides* suggest that a summary list of impairments, with impairment rating percentages, including the calculation of the whole person impairment, should be given. The *Guides* also provide on pages 23 and 24 a sample report for permanent medical impairment. To encourage physician evaluators to use this standard form regularly, the *Guides* state that this form may be reproduced without getting permission from the AMA. It is further stated that “most chapters include a summary form that identifies the salient, specific features to consider for each category of organ system impairment.” This feature of the *Guides* is consistent with the previous edition.

What’s New on the Spine? Chapter 15.

The terminology has changed.

The “models” for rating spinal

impairment are renamed “methods.”

The spinal region’s nomenclature has been changed from “Cervicothoracic” to “Cervical,” “Thoracolumbar” to “Thoracic,” and “Lumbosacral” to “Lumbar.”

The use of DRE and ROM methods has been modified.

The DRE (Diagnostic Related Estimate) method is retained as the primary method used to evaluate individuals, with an injury while the ROM (Range of Motion) method is used when the impairment is not caused by an injury or when an individual’s condition is not well represented by a DRE category.

The 5th edition provides clear instructions regarding when to use the Diagnosis-Related Estimate method (DRE) and when to use the Range-of-Motion Method. The Range of Motion method is recommended to rate individuals (1) with no verifiable injury, but rather medical disease, (2) when the physician cannot place the individual in a DRE category, (3) with multilevel fractures, multilevel radiculopathy or multilevel loss of motion segment integrity in the same spinal region, (4) when there is recurrent radiculopathy due to a new or recurrent disc herniation in the same spinal region, (5) when there is bilateral radiculopathy, (6) when there are multiple pathologic episodes producing alteration of

motion segment integrity or radiculopathy, or (7) when statutorily mandated in a jurisdiction. One exception is that individuals with corticospinal tract involvement, regardless of how they were treated, are rated via the DRE method because assessing Range of Motion with paralysis would not be feasible. These “spinal cord injuries” are now rated by a functional approach, which has been reprinted from the chapter on the Nervous System.

Spinal impairment is now rated only at MMI, so treatment outcomes are now considered in the DRE method. Impairment percentages within a DRE category have a range of values. The whole person impairment for each category may be adjusted within a range of 3 percent (the same ratings as in the 4th edition plus 3 percent). If residual symptoms or objective findings impact the ability to perform ADLs despite treatment, the higher percentage in each range may be assigned (not necessarily the highest percentage).

“Differentiators” have been replaced by “objective findings.” Alterations of motion segment integrity have been redefined to include reduced motion at a disc level. Unlike the 4th edition, in individuals with radiculopathy, an imaging test is useful to confirm the

diagnosis of radiculopathy, but an imaging result alone is insufficient to qualify for a DRE category (“herniations” on imaging studies in the absence of signs of radiculopathy are not considered).

The net result of these changes is that a few individuals will have lower ratings when the 5th edition is used to rate spinal impairment, compared to what the rating would have been using the 4th edition. However, many more individuals will have higher ratings when rated by the 5th edition.

**Changes in Lumbar Spine DRE
Category I — 0% impairment**

No change.

**Changes in Lumbar Spine DRE
Category II — 5% - 8% impairment**

A claimant may have had a radiculopathy at one time, and would have been in Category III under the 4th edition, but because he/she does not have signs of radiculopathy at MMI, he/she is now rated in Category II.

**Changes in Lumbar Spine DRE
Category III — 10% - 13% impairment**

No major changes. Radiculopathy now means signs of radiculopathy at MMI; or having had surgery, with or without signs of radiculopathy at MMI.

**Changes in Lumbar Spine DRE
Category IV — 20% - 23% impairment**

Loss of motion segment integrity has been redefined. Note that Figures 15-3a, 15-3b, and 15-3c (5th, 378-9) are correct, while the text on page 379 incorrectly describes the new criteria for loss of motion segment integrity. Loss of motion segment integrity now includes successful or attempted surgical fusion.

**Changes in Lumbar Spine DRE
Category V — 25% - 28% impairment**

No significant change. Meets criteria for Category III and Category IV.

**Changes in Lumbar Spine DRE
Categories VI, VII, and VIII**

These categories have been eliminated. Impairments due to corticospinal tract injury (spinal cord or cauda equina injury) are determined by the use of Table 15-6 (5th, 396). This table gives the same impairment ratings for upper and lower extremity function, and for bowel, bladder, respiratory, and sexual functioning as the ratings in the Nervous System chapter of the 4th edition and the 5th edition. The text recommends combining the rating from Table 15-6 with a rating from Categories I - V, but this appears to be “double rating” the extremity consequences, and this “double rating” is not done if the same condition is rated using Chapter 13, the Central and Peripheral Nervous System.

Range of Motion Method — 3 components (unchanged from the 4th edition)

1. Range of motion of the spine
2. Accompanying diagnoses (table 15-7)
3. Spinal nerve deficit

“Range of motion tests with inconsistent results should be repeated. Results that remain inconsistent should be disregarded.” The accompanying diagnoses (Table 15-7) for use with ROM model include (1) Fractures, (2) Intervertebral disk or other soft tissue lesion, (3) Spondylolysis and spondylolisthesis, not operated on, and (4) Spinal stenosis, segmental instability, spondylolisthesis, fracture, or dislocation, operated on.

Whenever the Range of Motion method is used, the physician must combine any and all whole-body impairments due to: (1) limited range of motion, (2) diagnosis, from Table 15-7, and (3) nerve root dysfunction, rated as a peripheral nerve injury.

What's New on the Upper Extremity? Chapter 16.

There is improved scientific information for evaluation of upper extremity impairments and clarity in explanation of assessment principles. For example, upper extremity ratings for shoulder instability and strength deficits about the elbow and shoulder

are new. These “strength deficit tables” permit rating weakness after rotator cuff surgical repair, and spontaneous rupture of the (long head) biceps tendon. Impairment rating for nerve entrapment syndromes has been clarified. Table 16, “Upper Extremity Impairment Due to Entrapment Neuropathy” from the 4th edition has been removed.

Better guidelines for entrapment neuropathy in general, and Carpal Tunnel Syndrome in particular, are provided. While recognizing that “... 5 percent of individuals with CTS may have normal electrophysiologic studies,” the text states that “Only individuals with an *objectively verifiable diagnosis* should qualify for an impairment rating. The diagnosis is made not only on believable symptoms but, more important, on the presence of *positive clinical findings and loss of function*. The diagnosis should be documented by electromyography as well as sensory and motor conduction studies” (5th, 493).

This would mean that “Clinical Carpal Tunnel Syndrome with normal Electrodiagnostic Studies” (very mild CTS) is **not** ratable.

To rate Carpal Tunnel Syndrome, the text states (5th, 495): “If, after an optimal recovery time following surgical decompression, an individual

continues to complain of pain, paresthesias, and/or difficulties in performing certain activities, three possible scenarios can be present:

1. Positive clinical findings of median nerve dysfunction and electrical conduction delay(s): the impairment due to residual CTS is rated according to the sensory and/or motor deficits as described earlier. (Author: *like any other peripheral nerve injury*.)
2. Normal sensibility and opposition strength with abnormal sensory and/or motor latencies or abnormal EMG testing of the thenar muscles: a residual CTS is still present, and an impairment rating not to exceed 5 percent of the upper extremity may be justified.
3. Normal sensibility (two-point discrimination and Semmes-Weinstein monofilament testing), opposition strength, and nerve conduction studies: there is no objective basis for an impairment rating.”

The net result of these changes will be to lower the ratings for CTS.

The criteria for diagnosis of Complex Regional Pain Syndrome (CRPS) are given. Before CRPS can be rated as CRPS, the diagnosis must be confirmed by the concurrent presence of at least

8 of 11 objective signs. A new method of rating CRPS is described, which differs from the recommendations found in the lower extremity chapter and in the nervous system chapter.

The criteria for diagnosing and rating carpal instability have been clarified and now include the radiographic findings of the radiolunate angle, the scapholunate angle, ulnar translation, etc., that hand surgeons currently use in clinical decision making.

The impairment rating for weakness not due to other ratable conditions has been better explained. “In compression neuropathies, additional impairment values are not given for decreased grip strength” (5th, 494). Since grip strength was frequently inappropriately utilized, the 5th edition has more specific instructions. “...the impairment due to loss of

strength could be combined with the other impairments, only if based on unrelated etiologic or pathomechanical causes. Otherwise, the impairment ratings based on objective anatomic findings take precedence. Decreased strength cannot be rated in the presence of decreased motion, painful conditions, deformities, or absence of parts (e.g., thumb amputation) that prevent effective applications of maximal force in the region being evaluated” (5th, 508).

What's New in the Lower Extremity? Chapter 17.

There is improved clarity in explanation of assessment principles for evaluation of lower extremity impairments. Similar to the worksheet in the previous edition for recording upper extremity impairments (Fig. 1, pg. 16, 4th edition) a lower extremity

worksheet is provided. This is a new and welcome addition and serves as a template to simplify recording the evaluation and assessment of the lower extremity.

A new table for “Guide to the Appropriate Combination of Evaluation Methods” has been added. The evaluation of causalgia and CRPS is now consistent with the same principles used to evaluate central nervous system lesions, but differs from the recommendations in the upper extremity chapter.

In summary, the 5th edition represents a substantial improvement over the previous edition. Admittedly it is not a perfect document, but it is the best tool we currently have to quantify human impairment to any scientific degree. The global adoption and use of this document is a testimony to it.

The Independent Medical Examinations: Are They Really Needed?

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Clara Ambroz, MD, MPH

The doctor, being an advocate for the patient, inherently characterizes the physician-patient relationship. Many reasons can be cited for this patient advocacy. One would like to think that it is based on purely altruistic reasons. For example, a physician will sign papers excusing the patient from work because of the subjective complaints of chronic pain. On the other hand, some would suggest that economic gain on the part of the physician also certainly occurs. For instance in patients with chronic low back, it has been stated that some practitioners would prolong the care by continuing to see patients twice a week for years. As such, there is a need for an independent medical examination (IME) by a physician not involved in the patient's care in cases where causality, treatment, prognosis, and return to work are in question. There is often conflict on specific matters especially regarding causality and employability.

It has recently been pointed out that keeping a worker off the job on average costs about \$200 a day.¹ It is well known that the longer a person is out of work, the more unlikely it is that they will return to the work force. The

sooner the worker can be returned to the job, the better for everyone concerned. Derebery et al.² observed that individuals with delayed recoveries had a tendency to acquire the learned behavior of being disabled.

In the United States, federal and state agencies routinely use independent medical examinations. Millions of Americans apply for disability benefits under the Social Security Administration each year.³ The disability benefits may be granted if a person is unable to engage in a gainful employment because of "a physical or mental impairment that results from anatomical, physiological, or psychological abnormalities which are demonstrable by medically acceptable clinical and laboratory diagnostic techniques." The criteria the Social Security Administration uses for deciding if someone is disabled are not necessarily the same as the criteria applied by other government and private disability programs. The Social Security Administration purchases over 250,000 independent examinations (consultative medical examinations) annually. In addition, physicians also work as consultants in Social Security

regional offices or in the central office. They may also appear as medical experts who testify in administrative law judges hearings.

Medical reports done for Social Security should include a medical history, clinical findings such as the results of physical or mental status examinations, laboratory findings including x-rays, diagnosis, and a statement providing opinion about what the claimant can still do despite his or impairments based on the medical sources findings on the above factors. The statement should describe the individual's ability to perform well in activities such as sitting, standing, walking, lifting, carrying, handling objects, healing, speaking, and traveling (Social Security Administration, 1999).

The examinations done for musculoskeletal problems should include descriptions of muscle spasms, abnormalities in ranges of motion of any affected joint and an evaluation of strength loss. For example, it is important to determine if the claimant really needs an assistive device to ambulate or has just brought one in to the examination to demonstrate how serious the problems

are. Experienced independent medical examiners have anecdotal accounts of often just looking at the cane and realizing that it had probably been purchased a few hours ago.

In addition to musculoskeletal disorders, the most common debilitating disorders apart from psychiatric problems are cardiovascular and pulmonary diseases. In the consultative medical examination done for Social Security, there is a need for a very careful description of the claimant's chest pains. This is to determine if the pains are of cardiac origin or due to other causes. EKGs are routinely done during the consultative medical examination and, if needed, stress tests are also ordered. The Social Security Administration does not pay for cardiac catheterization studies or other diagnostic testing. For pulmonary disorders, there needs to be a careful description of the symptoms. Pulmonary function tests are ordered routinely. It is not uncommon for claimants to declare that they are short of breath just dressing or undressing, and therefore there is a need to document the reduced aerobic capacity by objective testing such as pulmonary function tests.

The guidelines for determining disability under Social Security administration rules are based on objective data and most applicants

are denied benefits at the initial administrative level. The claimant may then appeal for a hearing before an administrative law judge. Interestingly, the opinion of the treating physician is granted more weight at this level than that of the consultative medical examiner.

With regard to other disability systems, independent medical exams (IMEs) are important components of almost all workers' compensation statutes and are routinely used to clarify causality, maximum degree of medical improvement and permanent impairment estimates leading to adjudication of disability. It has been reported that all workers' compensation carriers in the US routinely use IMEs to determine whether the claimant has reached maximum medical improvement or not, whether additional diagnostic or treatment measures need to be done, and whether or not there is any permanent partial Impairment and may be resulting disability.⁴

Back injuries account for 30 to 40 percent of all workers' compensation costs even though they account for only 15 to 25 percent of claims.^{5,6} It is believed that up to 80 percent of all adults in the United States will have low back pain, which interferes with their normal daily activities at some point in their lives.⁷ The human and financial costs associated with disability are enormous.

An average company's payroll includes significant direct disability costs. It is possible that a portion of these costs can probably be attributed to erroneous medical evaluations. In North America approximately 1 to 2 percent of all workers will file a workers' compensation claim for low back pain disability during their working life.^{8,9} Workers' Compensation statistics suggest that disability for back pain is increasing at 14 times the population growth.¹⁰ A similar trend has been noted in Social Security disability benefits.

When the physician is faced with an injured worker who alleges low back pain, there are two main questions. How does a physician know when a worker is disabled either temporarily or permanently? Secondly, when should the injured worker be sent back to work?

At the present time there is no real gold standard to make a return to work decision. The customary evaluation of the low back patient usually consists of a physical examination emphasizing the ranges of motion of the back, Neurological deficits, i.e., deep tendon reflexes, muscle strengths in the lower extremities (not the back itself), atrophy, leg length discrepancy, pain on straight leg raising while sitting or supine. Based on these findings the physician may be asked to draw conclusions regarding whether or not

the patient has reached maximum medical improvement, is disabled, and/or is in need of vocational rehabilitation.

When does the physician decide it is safe to send the worker back to work? This often depends on when the worker says that he is ready and not.¹¹ There is always the concern that a premature return to work will cause a worsening of the problem for which the physician may be held liable. As such, faced with this real or perceived threat of liability, some physicians, in the case of chronic neck or back pain patients, will state that the person cannot lift more than 10 lbs. ever again. Such conclusions are rarely evidence based and often are very detrimental in getting the worker back to work and thereby causing iatrogenic disability.

Independent medical examiners must also determine if there is any permanent partial impairment. The AMA guides to the evaluation of permanent impairment (5th edition) provide the most current basis for making this determination. One of the purposes of the AMA guides is to

provide a single set of standards so the physicians gathering the same information will reach the same conclusion. A knowledgeable reader will be able to review the clinical findings described in the IME report and also apply the AMA guides. Often there are conflicting IME examinations. Thus the importance of detailed IME report that can be substantiated, analyzed, and compared to the pertinent guidelines will be helpful to the reviewer who must decide what reports should be given the most weight. According to the AMA guides, the percentage impairments determined are not desired to be used for quantifying economic benefits; however, this is what they are often used for.¹²

One of the major problems with the IMEs at the present is a wide variation in the determination of permanent impairment even though apparently equally qualified doctors use the same the AMA guides. It has been estimated that there are significant errors in the application of the 4th edition of the AMA guides in 80 percent of independent medical examinations.

The undesirable result of this is wide variation in the report of impairment rating depending on which physician was employed. Clearly there is a need for more intensive educational efforts.

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Fibromyalgia and Chronic Fatigue Syndrome

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Many people complain about widespread pain, sleep disturbances, and persistent fatigue. If they go to their physician, they may get the diagnosis of fibromyalgia or chronic fatigue syndrome. What is the essence of these two diagnoses and what is the difference between them? Physicians have different opinions on whether fibromyalgia and chronic fatigue syndrome do really exist as pathological or pathophysiological entities. For many physicians, these concepts lack substance. In this paper, the grounds for these diagnoses will be examined.

Fibromyalgia

Previously pain conditions were regularly characterized as myalgia or fibrositis and assigned to mental or physical strain. In recent years it has become popular to label widespread pain and muscular tenderness as fibromyalgia.^{1,2} Other symptoms commonly associated with fibromyalgia include sleep disturbances, abnormal fatigue, anxiety, depressed mood, impaired concentration and memory, numbness and tingling sensations in hands and legs, irritable bowel, and frequent urination. The diagnosis is based on subjective symptoms and vague semi-objective signs (tender points in muscles). Muscles of patients

with fibromyalgia are, however, normal³ and neuromuscular function normal.⁴ Various neuroendocrine, biochemical, and immunological abnormalities have been detected in fibromyalgia, but there is little that links these findings and it remains unclear if these are reflections of one common



Figure 1: Muscular tender points in fibromyalgia.

underlying organic pathology or non-specific findings in a subgroup of psychologically distressed individuals.⁴ There are no objective tests to confirm the diagnosis (which is usually the case for proper rheumatological diseases).

In 1986 The American College of Rheumatology started a multicenter study in the USA and Canada of patients considered having fibromyalgia and a control group. On the basis of the results of the study, diagnostic criteria were established in 1990⁵ (see Table 1). These criteria have generally been accepted by

those who diagnose and treat fibromyalgia. Figure 1 shows the location of tender points in fibromyalgia.

Previously fibromyalgia was classified as primary or secondary, but in the above-mentioned study (of The American College of Rheumatology) this distinction was not supported and was therefore abandoned. Thus, the diagnosis of other diseases with similar symptoms does not exclude fibromyalgia, as long as the diagnostic criteria for fibromyalgia are fulfilled.

Chronic Fatigue Syndrome

The etiology of the chronic fatigue syndrome (CFS) is unknown. Commonly proposed theories of origin include persistent viral infections, chronic immunological, endocrinological and metabolic disturbances, sleep disturbances and neuropsychiatric dysfunction.^{6,7} Diagnostic tests have not shown any significant, reliable abnormalities in CFS.⁸ Therefore the diagnosis is based on the patient's subjective description of symptoms.

Symptoms commonly associated with CFS include pronounced and persistent muscular fatigue out of proportion to exertion, widespread pain, cognitive dysfunction (impaired concentration and memory), emotional

lability, depressive moods, sleep disturbances, symptoms indicating hyperactivity in the sympathetic nervous system such as palpitations and frequent urination, irritable bowel, and numbness and tingling sensations in the extremities. The symptoms appear suddenly, often in the wake of an upper respiratory or gastrointestinal infection and can be very variable, even during the same day.

For the diagnosis of CFS the revised criteria from the Centers for Disease Control are most commonly used⁸ (see Table 2).

Disability Claims due to Fibromyalgia in Iceland

Fibromyalgia is now a commonly used diagnosis in Iceland, especially among rheumatologists. When fibromyalgia gained weight in this country in the beginning of the nineties, physicians often stated in medical certificates to the State Social Security Institute that claimants of disability pension were unfit for work due to fibromyalgia. When it became evident that the physicians at the State Social Security

Table 1:
The American College of Rheumatology 1990 criteria for the classification of fibromyalgia

- A. Widespread pain in all four quadrants of the body for a minimum of three months
and
- B. At least 11 of the 18 specified tender points (in the neck, shoulder, chest, hip, knee, and elbow regions) (see Figure 1).

Table 2:
The 1994 revised criteria for diagnosis of chronic fatigue syndrome from the Centers for Disease Control

To meet the criteria, patients must have:

A. Fatigue:

- clinically evaluated
- unexplained
- persistent or relapsing
- of new or definite onset (has not been lifelong)
- not the result of ongoing exertion
- not substantially alleviated by rest
- results in substantial reduction in previous level of occupational, educational, social or personal activities

B. Concurrent occurrence of four or more of the following symptoms, all of which must have persisted or recurred during 6 or more consecutive months of illness and must not have predated the fatigue:

- self-reported impairment in short-term memory or concentration severe enough to cause substantial reduction in previous level of occupational, educational, social or personal activities
- sore throat
- tender cervical or axillary lymph nodes
- muscle pain
- multijoint pain without joint swelling or redness
- headaches of a new type, pattern, and severity
- unrefreshing sleep
- postexertional malaise lasting more than 24 hours

Institute would not allow full disability pension on this ground, the treating physicians in some cases sent renewed certificates with psychiatric diagnoses, i.e., anxiety disorders or depression. Today we rarely see fibromyalgia as the only diagnosis on disability certificates. Usually it is accompanied by some psychiatric diagnoses.

Conclusions

The symptoms of fibromyalgia and chronic fatigue syndrome are more or less identical, i.e., widespread pain,

persistent fatigue, sleep disturbances, anxiety, depressed mood, impaired concentration and memory, numbness and tingling sensations in hands and legs, irritable bowel, and frequent urination. Neither "disease" can be confirmed with any reliable objective tests. The symptoms can easily be attributed to an anxiety or mood disorder.^{9, 10} However, due to prejudices against psychiatric diagnoses, this is not as feasible for many patients as receiving a more "respectable" diagnosis of fibromyalgia or chronic fatigue syndrome. The result is that the root of the problem is not addressed and the patient does not receive optimal treatment.

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Impairment Ratings In Utah, Reduction of Variability and Litigation within Workers' Compensation

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Executive Summary

Impairment ratings are often required of physicians by employers, patients, governmental agencies, and insurance companies. These ratings carry significant social, legal, and financial ramifications. Physicians providing impairment ratings are required to carefully justify their impairment calculations. However, the methodology and criteria that physicians are mandated to use are often confusing and arbitrary, leading to a high degree of outcome variability, unnecessary administrative and patient frustration, increased litigation and higher costs. This article will review current impairment methodologies and describe the state of Utah's impairment rating system and how it has significantly reduced impairment rating variability and litigation within the workers' compensation system. This has contributed to Utah now being the least costly state for an employer to obtain

workers' compensation coverage, while maintaining its medical fee schedule and wage replacement at approximately the national average. As other states review their impairment and disability programs, the Utah Labor Commission's impairment methodology provides an improved model for serious consideration.

Introduction

The concept of compensating people for injuries received "on the job" has been around for a long time. Even pirates who roamed and plundered in the Seventh Century had their own elaborate code of "compensation."¹ It wasn't until the early Twentieth Century that "workers' compensation" became a legislated right in the United States. Each system has been designed to ensure the worker prompt, but limited benefits, and to assign to the employer sure and predictable compulsory liability insurance with established parameters. The principal components that have received legislative expression in all systems include: (1) A statutorily program. (2) Expeditious resolution of disputed issues. (3) Limited liability without fault: Because workers' compensation is a no-fault insurance program, determining negligence or blame is often irrelevant. (4) Automatic benefits which include: (a) Medical

treatment coverage, including: the medical care, services, and supplies as necessary to cure or relieve the effects of an on-the-job injury. This means that the employee does not incur any deductible or out-of-pocket expense for the medical treatment of a work-related injury or illness. (b) Indemnity payments replacing wages while the injured employee recovers from an industrial injury and or reaches medical stability.² All states have varying formulas for the calculation of these indemnity payments, which are often tax-free. (c) Death benefits, providing weekly payments to the surviving spouse and dependent children of a worker whose work-related injury results in death. Burial and funeral expenses are also paid. (d) An impairment settlement giving compensation to an injured worker for permanent physical loss from a work-related injury (i.e., scars, disfigurement, amputation, etc.), according to a defined compensation schedule. As with the other benefits, there are significant differences between the states on the value of settlement amounts and the *methodology utilized* to calculate permanent partial and disability benefits.^{3,4,5}

By 1949, all 50 states had adopted some form of workers' compensation legislation⁶. The scope and amount of

payments for these agreed upon services are determined by the individual state, and in some cases by federal law. It is to be noted that these systems that are put in place to assist injured workers have become a significant cost for doing business and paradoxically and have been shown to adversely affect recovery,^{7,8,9,10} actually increase disability,^{11,12,13,14} and decrease the potential to return to work.^{15,16,17} 1960 to \$171 billion dollars in 1997.¹⁸ In some states, the cost of an average workers' compensation claim can be \$13,182, with lost-time claims costing \$20,000. Prevention of litigation along with safety programs is now essential for employers. A small company with 20 workers may pay an extra \$60,000 or more in annual premiums if it doesn't prevent accidents and avoid litigation.¹⁹ Of particular concern are common musculoskeletal injuries. Of all work-related injuries, 28 percent are for soft-tissue musculoskeletal strains, which account for approximately 40 percent of all lost-time injuries.²⁰ Models have now been developed to prevent costly, system-induced disability.²¹ The most severely injured workers are those who are left with some permanent loss, qualifying for an impairment rating. This loss has been shown to significantly impact future wage income. Texas reports that 83 percent of injured workers receiving impairment ratings in the range of 1 to 14 percent reported experiencing personal

hardships.²² Of those workers receiving an 8 percent rating, 11 percent never returned to work, whereas 22 percent of workers with a 14 percent rating did not return to work.²³ Likewise a study of California's vast workers' compensation system found that workers who suffer workplace injuries resulting in a permanent disability experience large and sustained wage losses.²⁴

The inconsistencies that can result from calculating the entitled settlement for an injured worker's residual loss or impairment can be frustrating for patients, physicians, risk managers, state administrators, and payers.²⁵ One major problem with impairment ratings, and therefore a significant patient and administrative burden, is the lack of consistency.^{26,27} This phenomenon was illustrated in California, where a single hypothetical case was sent out to 65 independent medical examiners with experience in rating under the California system. After being supplied full consultation reports on the specifics of the case, physicians were asked to estimate the level of disability. The resulting degree of disability awarded differed as much as 85 percentile points.²⁸ Unfortunately, this variability becomes a source of dispute, which is both costly to the employer and stressful to the employee. Currently California employers and insurers are requesting a more consistent and predictable rating system, arguing that the current system increases litigation and costs.²⁹

To calculate impairment ratings, 40 state workers' compensation systems require some utilization of the different editions of the *AMA Guides*.^{30,31} Originally published as a series of articles in *JAMA*, the *Guides* have been revised periodically.^{32,33,34,35} The *AMA Guides* are a tool that can be used to convert medical information about permanent impairments into numerical values. Each chapter focuses on a single organ system and provides a description of the diagnostic and evaluative methods for assessing specified impairments. Each impairment is assigned a rating, expressed as a percentage of loss of function for that system. Organ-based ratings are then translated into impairment ratings for the whole person.

Those states that utilize the *Guides* have noted difficulty and confusion in coming to a consistent rating between different raters for the same condition.³⁶ This lack of consistency has provoked calls for serious revisions of the *Guides* to address this issue.^{37,38} In 1995, Texas surveyed doctors as to their feelings about the state's required utilization of the *AMA Guides*. Of those responding, 32 percent felt the *Guides* provided accurate ratings with 30 percent reporting that they did not and 32 percent indicated they felt the *Guides* only provided an accurate impairment rating some of the time.³⁹ Some states have disallowed parts of the *4th Edition of the AMA Impairment Guides* in that it violated their state compensation

laws.⁴⁰ A number of studies have demonstrated poor reliability of the *American Medical Association Guides'* spinal range of motion model to estimate impairment in chronic low-back pain patients.^{41,42,43,44,45} Further studies have shown that spinal range of motion is nonreliable and dependent on the age and sex of the patient,^{46,47} osteoarthritis,⁴⁸ the time of the day the measurements were taken,⁴⁹ and have no relationship on disability.⁵⁰ Texas reported significant variation using the *Guides* for workers receiving more than one rating of impairment for the same condition, showing 25 percent of these ratings could differ more than 10 percent,⁵¹ with 65 percent of those who disputed their ratings, doing so on the methodology of how the rating was calculated.⁵² Other studies have demonstrated lack of relationship of an impairment rating and true residual physical function.^{53,54}

These state reported disparities demonstrate a lack of consensus on the criteria physician use, the objectivity of the criteria, and the understanding of how it is to be applied. They also suggest that calculated ratings often take into account factors other than just clinical findings. These factors may include the competency and experience of the examiner, the patient's personality, and even financial motives.

Some states, such as Minnesota and California, have adopted their own

methodology for calculating the residual impairment or disability loss. In recent years, California has confirmed a steady inflation for the average Disability Evaluation Unit rating, even though there was not an official change in rating guidelines. From 1992 to 1996, there was an overall 14 percent increase for the impairment rating of backs, 16 percent increase for upper-extremity ratings, with about a 3 percent difference noted in ratings for the same condition in northern California compared to southern California.⁵⁵

Litigation and increased expense is the natural consequence of poor reliability, with its associated costs. California found that 45 percent of all indemnity cases go to litigation.⁵⁶ Currently, California reports a lower-back claims litigation rate of 98 percent, costing an additional \$5,292 per case.⁵⁷

In 1994, Utah noted that, with the utilization of the *Third Edition of the AMA Impairment Guides*, there was a significant amount of variability in the impairment ratings being reported for what appeared to be the same physical loss. As with other states, this variability facilitated unnecessary patient anger, suspicion, hostility, litigation, and costs. This variability was attributed to several non-medical factors, such as the rating process, the individual examining physicians and examiner training, medical reports, and

apportionment processes. It was believed that improving the criteria that physicians were required to utilize could lessen variability for the impairment ratings. It was also noted that experience and a certain skill level was necessary to accurately and consistently calculate impairment ratings.

For these reasons, the Utah Labor Commission appointed a committee to review the rating process for the most common, costly, and litigated impairments and to make recommendations to reduce variability. The committee understood that before inconsistencies could be corrected, it was necessary to standardize the rating process, require uniform criteria for all raters, and provide training for physicians doing ratings of impairment. After reviewing different rating systems, utilizing examples and different unique models, the committee developed, and the state of Utah adopted the American Medical Association's *4th Edition of the Guides* with a completely new Utah impairment rating system to be used in place of the *AMA Guides* for spinal conditions, upper-extremity peripheral neuropathies, tempromandibular joint dysfunction, dental loss, and painful upper extremity conditions.⁵⁸

The new rating system more objectively describes the rating process, report writing, and defines standard

methodology to be used in apportioning impairments. To help facilitate report writing and consistency, the Labor Commission also published standardized worksheets for the spinal calculations and described 26 examples of impairment ratings a physician would most commonly encounter with descriptions of how these new rating guides were to be applied. Since adopting these impairment guides, it is estimated that litigation over impairment ratings has reduced to less than 1 percent.⁵⁹ This reduction of litigation has assisted in making Utah the least costly state in the nation for an employer to obtain workers' compensation insurance,⁶⁰ while maintaining the medical fee schedule above the national average,⁶¹ and a weekly wage replacement at \$529.00.

chart 1: Recovery Graph, No Impairment

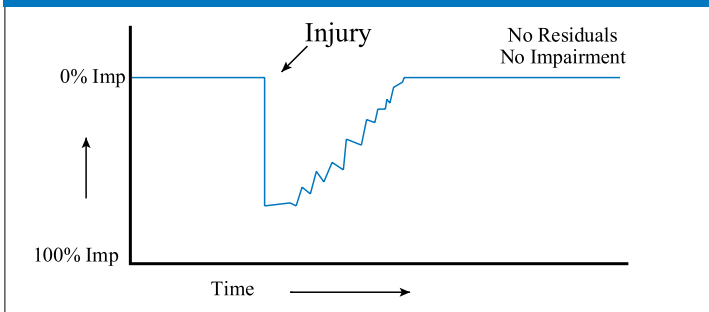
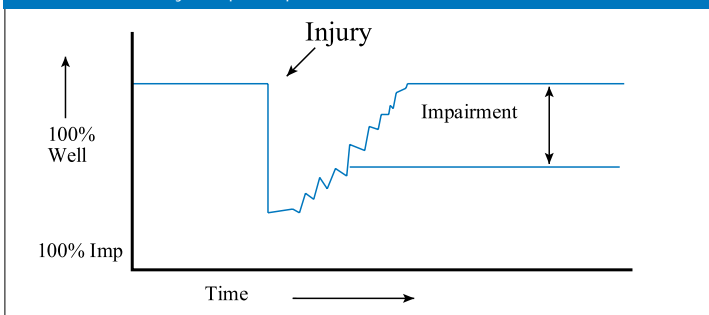


chart 2: Recovery Graph, Impairment



UTAH'S 1997 IMPAIRMENT GUIDES

The clarifying properties and methodology that has been developed and adopted by the Utah Labor Commission's impairment guidelines are listed:

Utah's Impairment Rating Overview, Clarifying Components

The Utah Guides state that the examining physician is responsible for the final rating. Reasons for deviations should be very unusual and supported by medical determination based on reasonable

medical probability and supported by objective considerations that either *Utah's 1997 Impairment Guides* or the *AMA Impairment Guides 4th Edition*, have failed to properly consider. In report writing, various assumptions are made, based on reasonable medical probability, generally considered as greater than 50 percent chance,⁶² rather than opinions based on surmise, speculation, or conjecture.

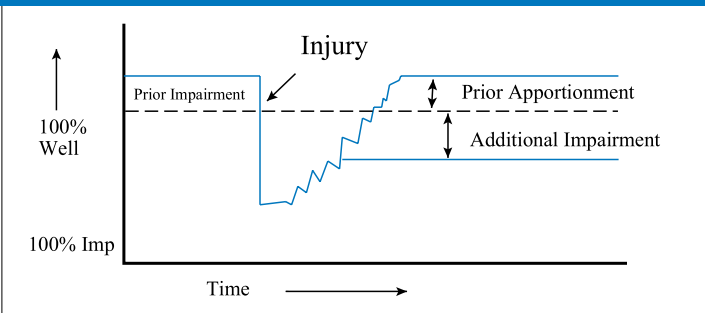
Utah Impairment Report Writing

The Utah impairment process standardizes what should be discussed

in the medical report at stability. This is a comprehensive report prepared after the injured worker is medically stable, or has reached maximum medical improvement (MMI). As this is an administrative document, the final report of the reporting physician should include the following information:

Diagnosis: The physician examiner needs to clearly state the diagnosis as substantiated from the medical record. The examiner should also define, as clearly as possible, the relationship of the diagnosis to the industrial event. In many cases, specific pathologic

chart 3: Recovery Graph, Apportioning prior ratable conditions



diagnoses are not clearly evident. The examiner has the responsibility to provide a diagnostic impression that is as closely correlated to the clinical findings as possible.

Stability: The physician must declare the patient medically stable, defined as having reached maximum medical improvement (MMI), stating that it is his/her medical opinion that the condition is well stabilized and unlikely to change substantially in the next year with or without medical treatment.⁶³ It is important to note that "medical stability" **may not be used** to terminate physician care.

Calculation of Impairment: Using valid, standardized-rating criteria, the examiner should calculate the residual impairment, based on clinical findings established during the medical examination, and information found in the medical records (See Charts 1 and 2).

Apportionment: The examiner must identify and list any factors—occupational and non-occupational—that caused or significantly contributed

to the injury or disease and existing impairment⁶⁴ (See Chart 3).

Capabilities Assessment: Effective accomplishment of returning impaired individuals to work often requires the combined efforts of the individual, health-care provider, and the employer, to carefully evaluate the patient's ability and then, if necessary, consider efforts to provide reasonable accommodations.^{65,66}

Determining who is at risk of future injury can be problematic and especially challenging if more than one system is involved.⁶⁷ Medical specialties differ in their approach and assessment of capability.⁶⁸ If requested, the physician should make a statement as to the current functional capacity of the patient. Not only does this clearly establish physical abilities, but also facilitates the patient/employer relationship for return to work. The *Workplace Functional Ability Medical Guidelines*, published by the Utah Medical Association⁶⁹ and reviewed in the *Journal of Occupational Medicine*,⁷⁰ provides an excellent, comprehensive system where severity of diagnosis has been standardized within each specialty and appropriate weights applied. A more comprehensive publication on determining comprehensive capability

Chart 4: What Schedule to Use When Apportioning Prior Ratable Conditions

Patient has a prior ratable condition for the same body area being rated	What schedule to apply
Prior impairment was calculated from: a. The AMA's 4th Edition Guides, or b. The "1994 Utah Modifications to the AMA's 4th Edition," or c. This 1997 schedule, "Utah's Impairment Guides"	Subtract prior impairment directly for the new calculated impairment.
Prior impairment was calculated from: Any schedule other than the above:	Establish what the rating would have been under the schedule, "Utah's 1997 Impairment Guides." If the condition to be rated is not included there, use the AMA's 4th Edition. Subtract this % impairment from the total impairment %.
A prior condition existed that was never rated, but contributes to the final rating.	Establish what the rating would have been under this schedule, "Utah's 1997 Impairment Guides." If the condition to be rated is not included here, use the AMA's 4th Edition. Subtract this figure from the new calculated total impairment.

and risk statements has recently been published.⁷¹

Future Medical Treatment: If requested, the examiner should be specific in identifying what medical treatment may be required in the future as a direct result of the industrial accident.

Utah Impairment Rating for Pre-existing Conditions: The terminology "a prior impairment" was adopted by Utah and is to be used, replacing various other descriptors, such as: pre-existing conditions, pre-existing symptomatic conditions, previously existing conditions, and previously existing symptomatic conditions.

When and How Impairment Benefits are Apportioned: When a permanent impairment results from the addition or combination of a prior impairment with the existing impairment from the industrial accident, then the permanent impairment is apportioned (or distributed) between the current injury and the prior impairment condition(s). **Apportionment generally means that the employer is not required to pay for that portion of the total impairment that is due to a prior impairment.**

Within workers' compensation, physicians must understand that, generally, apportionment applies only to permanent impairments. It does not apply to medical care or to compensation for lost time. Before apportioning impairment ratings, the physician should identify the **prior**

**Chart 5:
Soft Tissue, Developmental and Degenerative Spine Conditions
(Whole Person)**

Schedule I should only be used if no surgery has been performed. Schedule I requires a minimum of six months' duration of symptoms from the time of the injury to the impairment rating. The rater is to use only one condition from 1A category through IE, one time.

<i>Placement of a patient within one of these categories is dependent primarily on the history and physical findings. The examiner should also consider any "pain behaviors" that may be present.¹</i>	CERVICAL	THORACIC
	THORACIC	LUMBAR
I-A. Medically documented injury and subjective symptoms persisting for a minimum of six months with a clinical history of a relative minor injury event. No evidence of acute changes on imaging and none to minimal activity modifications required.	0%	
I-B. Medically documented injury and subjective symptoms persisting for a minimum of six months with a clinical history of a moderate injury event. May have evidence of mild degenerative changes on imaging and may have permanent activity restrictions.	3%	
I-C. Medically documented injury and subjective symptoms persisting for a minimum of six months with a clinical history of a significant injury event. May have imaging evidence of moderate to severe degenerative changes, including spondylolysis. Should have permanent activity restrictions.	5%	
I-D. Medically documented injury and subjective symptoms persisting for a minimum of six months with a clinical history of a significant injury event. This would include imaging evidence of objectifiable, disc herniation (s) that displaced nervous tissue treated without surgery, spondylolisthesis and segmental instability. Should have permanent activity restrictions.	7%	
I-E. Medically documented injury and subjective symptoms persisting for a minimum of six months with a clinical history of a significant injury event and a spondylolisthesis, Grade III or IV.	8%	
ADD-ONS for above conditions in Schedule I. (Whole Person)		
I-F. Medically documented injury and subjective symptoms persisting for a minimum of six months with continued pain, rigidity and imaging evidence of objectifiable disc herniation that displaces nervous tissue and has occurred from a subsequent injury, at another level other than the first, and was treated without surgery.	3% per level	
I-G. Neurological: Radiculopathy * (If, after one year, the neurological deficits exceed 3% WP, then calculate the deficits as described from tables 11 and 12 and combine the new radiculopathy rating, in place of the 3% listed here. [See Radiculopathy Schedule, page 9] *)		

¹ Pain Behaviors: 1. embellishment of medical history, 2. exaggerated pain drawings, 3. providing responses on the physical examination inconsistent with known physiology. (>3/5 Waddells) Simulation-Tenderness-Overreaction-Regional vs. Dermatomal, Distraction

impairment that existed before the industrial injury and clearly show how the current permanent impairment is greater because of the prior impairment. This must be based on reasonable medical probability (i.e., greater than 50 percent) before it is subject to apportionment.

Apportionment of the final rating is necessary if there is objective medical documentation that a prior ratable impairment existed before the industrial event for the same anatomical area, structure or condition, and the two combines to a greater impairment than

Chart 6:

Schedule II. surgically treated Spine Conditions (Whole Person)

For conditions found in Schedules II and III, no amount of time is required from the injury and the calculation of an impairment.

Apportionment for conditions listed below is direct and Table V's methodology does not apply. (See Examples)

	CERVICAL-THORACIC-LUMBAR
II-A. First spinal surgery at one level in a given spinal region, including herniated discs, severe degenerative or post traumatic changes, foraminal stenosis, spondylolysis, spondylolisthesis, segmental instability, and spinal stenosis. (Assigned one time per patient)	10% (one time per patient)
ADD-ONS for Schedule II-A . (Whole Person)	
II-B. Medically documented injury, with continued pain and rigidity and imaging evidence of objectifiable, disc herniation that displaces nervous tissue and has occurred from <i>the same or subsequent injury, at another level other than the first</i> , and was treated either conservatively or surgically. This would also include <i>surgery</i> for severe degenerative or post traumatic changes, foraminal stenosis, spondylolysis, spondylolisthesis, segmental instability, and spinal stenosis. (This is applied only one time per level per patient and not to be applied to levels explored.)	Add 3% (one time per level per patient).
II-C. Second or subsequent spinal operation in a given spinal region, including herniated discs, severe degenerative or post traumatic changes, foraminal stenosis, spondylolysis, spondylolisthesis, segmental instability, and spinal stenosis.	Add 2% per operation.
II-D. Spinal Fusions (For the first level fused)	Add 3% for first level (use one time only)
II-E. Fusions: Additional level(s) (i.e. 3 segments = 2 levels)	Add 2% for each additional level. This is to be used only one time per level.
II-F. Neurological: Radiculopathy * If, after one year, the neurological deficits exceed 3% WP, then calculate the deficits as described from tables 11 and 12 and combine the new radiculopathy rating, in place of the 3% listed here. [See Schedule Below] *	Combine 3% for each involved nerve root.
II-G. Minor procedures or operations, such as hardware removal	0%

would be present from the industrial event alone. (In other words, in order to apportion any condition as a prior impairment, the condition would need to have been ratable by either the *AMA Guides* or *Utah's 1997 Impairment Guides* before the industrial event.) The total impairment is calculated and then the prior impairment is calculated and deducted. The remaining amount would then be due to the industrial accident.

Apportionment cannot be based solely on the existence of a disease, abnormality, or disorder. If a person has an occult disorder (spondylolysis, spondylolisthesis, or significant degenerative changes, etc.) that would not have qualified for a rating before an event, then the final rating is not subject to apportionment. (Such a

condition, while not clearly increasing the incidence of injury, does increase the morbidity, lessen the degree of recovery, and increases the likelihood of surgery.^{72,73,74,75,76,77} Those issues that cannot be measured in any reasonable way as to objectively qualify for an apportionment.)

What Schedule to Use When Apportioning Pre-existing Conditions: If an individual has received a prior rating from the *4th Edition of the AMA Guides* or *Utah's New 1997 Impairment Guides*, involving the same anatomical area as the industrial accident, then this prior rating would be subtracted from the new rating. If the person has received a prior rating for conditions from any other schedule than those listed above, the rater is to subtract the prior rating from the new rating, up to the amount they would have received for the same condition under this schedule. If the person has a preexisting condition that is listed in these guidelines and has not been rated for this problem, the raters should use these guidelines to document, as best they can, a rating for the preexisting conditions, which is then subtracted from the current rating. If the person has preexisting conditions that are not found in the Utah guidelines and has not been rated for these prior problems, the raters are to use the *Fourth Edition of the AMA Guidelines* to document, as best they can,

a rating for the preexisting conditions, which is then subtracted from the current rating. (See Chart 4– Apportioning Prior Ratable Conditions.)

Listing Derivations of the Ratings and Rounding Numbers: In addition to obtaining the necessary skills and experience, **examiners must be accountable for their rating decisions.** If ratings fall outside an acceptable range, the examiner should be required to credibly document the reason for the variance. Physicians should express a rating as a “whole” person impairment, stating the specific derivations used in calculating the rating, i.e., percent hand to percent of upper extremity to percent whole person. Physicians must report the impairment to the nearest whole number, rounding up or down, i.e., 12.3 percent = 12 percent; 12.5 percent = 13 percent.

Who Is Qualified to Perform Impairment Rating?

There is significant controversy as to who is qualified to do impairment ratings. Within the medical profession, physicians of various specialties argue that their field of medicine best qualifies them for the rating process. Added to this are impairment ratings given by alternative health-care providers, including chiropractors, physical therapists or physician extenders. In the state of Utah, only physicians are qualified to provide impairment ratings.

Chart 7:
Schedule V. Severity Indexing for Apportionment of Schedule I
(This applies only to the Impairment Process)

Schedule I requires a minimum of six months duration of symptoms, from the time of the injury and the impairment rating			
Score	0	1pt.	2pts.
V-A Time Lost from Work in the Last 12 Months Because of Symptoms in the Same Spinal Region.	0	1-3 days	>3 days
V- B Number of Prior Episodes in the Same Spinal Region	0	1-3	>3
V-C Duration since Last Episode	0	1-3 Years	<1year
V-D Prior Permanent Work Restrictions Because of Problems in the Same Spinal Region	No=0	Temporary	Permanent
V-E Prior Objective Testing to the Same Spinal Region: EMG-NCV, X-ray, MRI-CT, Bone Scan	0	If taken prior to 2 years	If taken within last 2 years
V-F Prior to latest claim, what ongoing Medical, Chiropractor, Physical Therapy Visits were received for an injury to the Same Spinal Region.	0-2 times in last 3 yrs	3-6 times in last 3 yrs	>6 times in last 3 yrs
V-G Spondylolysis with Spondylolisthesis		<25% slip	>25% Slip
V-H Radiculopathy (As objectified by Radiculopathy Schedule)			Prior History

1-2 pts.=no Apportionment
3pts.=10% may be apportioned off as prior ratable condition
4pts.=20% may be apportioned off as prior ratable condition
5pts.=30% may be apportioned off as prior ratable condition
6pts.=40% may be apportioned off as prior ratable condition

7pts.=50% may be apportioned off as prior ratable condition
8pts.=70% may be apportioned off as prior ratable condition
9pts.=90% may be apportioned off as prior ratable condition
>10 pts.=100% may be apportioned off as a prior ratable condition

Soft Tissue Spine and Pelvis Conditions

The Utah guidelines divide spine and pelvis conditions into three categories:

- 1) Soft Tissue, Developmental, and Degenerative Spine Conditions;
- 2) Surgically Treated Spine Conditions;
- and 3) Vertebral Fractures. Physicians are to use these charts to rate patients with residual spinal problems from an industrial accident.

Regardless of the cause of back pain, approximately 70 percent of affected people recover in 2 to 3 weeks and 90 percent in 6 weeks.^{78,79,80,81} Therefore,

before considering any patient with residual soft tissue, developmental and degenerative spine complaints for a rating of impairment, their symptoms must have been present for a minimum of **six months**. (See Chart 5– “Soft Tissue, Developmental and Degenerative Spine Conditions,” Schedule One.) (See Chart 6– Surgically Treated Spine Conditions, Schedule 2.) (See Chart 7– Surgically Treated Spine Conditions, Schedule 2.)

Apportionment of Soft Tissue Schedule 5

Arriving at apportionment in the soft-tissue spine impairments has been extremely variable and unreliable. For

Chart 8: Radiculopathy Schedule (Must have a score greater than or equal to 3 to qualify as a radiculopathy)		
Objective Testing	Documented Objective Findings at the Time of Rating	Score
Imaging	Significant Disc Protrusions That Displace Nerve Tissue and the Imaging Findings Correlate Anatomically with the Findings on the Neurological Examination	2
Muscle Involvement	Objective Myotomal Weakness and/or Atrophy >2cm compared to uninvolved limb	2
EMG Changes	Findings of Fibrillation Potentials in the Distribution of Myotome	2
Sensory Involvement	Objective alteration of sensation (Sharp/Dull, Hot/Cold, Light Touch,) Consistent with specific dermatomal distribution	1
Reflex Changes	Loss of/or diminished Deep Tendon Reflexes,(biceps-triceps-brachioradialis-patellar-or ankle jerk) as compared to non-affected side.	1
Tension Signs	Spurling's or Straight Leg Raise	1

that reason, Schedule 5, Severity Indexing for Apportionment of Schedule I, has been developed to standardize the way apportioning is to be done. While the severity indexing of Schedule 5 may have some shortcomings, many variables have been considered, and it has been found to be a reasonable and logical approach to improve uniformity and reliability. (See Chart 7, Apportionment of Soft Tissue Injuries.)

Spine with Associated Neurological Injuries

For consistency in evaluating spinal impairments with associated neurological deficits, Schedule 5 is utilized to assess the severity of true radiculopathy (See Chart 8).

Temporomandibular Joint (Impairment in Whole Person)

The temporomandibular joint is unique in that it is a bilateral joint, but functions in relationship to only a single

bone, the mandible, which moves as a unit with complex motions. This joint is not comparable to the situation of bilateral joints of the extremities that are independent from each other. The following schedule should be used in

reporting impairment related to the temporomandibular joint.

Loss of Teeth Secondary to an Industrial Event (Impairment in Whole Person)

Upper incisors1 percent (each)

All other teeth. ½ percent (each)

Upper Extremity Neuron/Muscular Impairments

Upper Extremity Entrapment Neuropathies

To assist those doing impairment ratings of the upper extremities, it was the Impairment Committee's recommendation that objective criteria be established for the categories found on Table 16, page 57, of the *AMA Guides—4th Edition*. Due to significant differences in awards between those

Chart 9:
Schedule VI. Temporomandibular Joint Impairment (Whole Person)
Use either the Range of Motion or the Structural Change Model, whichever is greater*

Range of Motion Model	Structural Change Model
Range of Motion in Millimeters	Recurrent Subluxating or dislocating disc
	Unilateral1%
	Bilateral2%
	Recurrent Subluxating or dislocating joint
	Unilateral3%
	Bilateral4%
	Menisical Repair or Meniscectomy
	Unilateral3%
	Bilateral4%
	Meniscectomy and implant alloplastic or soft tissue
	Unilateral7%
	Bilateral10%
	Arthroplasty (Total Joint) reconstruction, resection
	Unilateral7%
	Bilateral10%
	Arthroscopic surgical debridement/synovectomy
	Unilateral2%
	Bilateral3%
0 -10 (Traumatic Microstomia) .10%	
11-208%	
21-306%	
31-40 ¹3%	

* In severe cases, the range of motion model or the structural change model may be combined with weight loss,² speech impediment,³ or disfigurement⁴ as defined in the *AMA Guides, 4th Edition*.

¹ Saunders, D, Krauss, S, Evaluation, Treatment and Prevention of Musculoskeletal Disorders, pg 181.

² AMA Guides, 4th Edition, p. 236.

³ AMA Guides, 4th Edition, p. 232.

⁴ AMA Guides, 4th Edition, p. 279.

Chart 10:
Table 16B. Guidelines for Placement of Patients Within Table 16

Signs-Symptoms	Minimum	Mild	Moderate	Severe
Nocturnal paresthesia	+	+	+	+
Paresthesia with Activity	+	+	+	+
2 pt discrimination	< 6mm	6mm	7-15mm	>15mm
Symptoms are within the anatomical distribution of the involved nerve	+	+	+	+
Atrophy	0	0	+/-	+
% of Strength loss Index 1	<10	10-30	31-60	>61
Phelan's test positive	+	+	+	N/A
Tinnet's test positive	+	+	+	+
Nerve Conduction Studies Positive 2	-	+	+	+
Electromyographic changes present	-	+/-	+	+

1. $\frac{\text{Normal Strength} - \text{Abnormal Strength}}{\text{Normal Strength}}$ = % of Strength loss Index

These tests should be done with validation of effort as described on page 65 of the *AMA Guides-4th Edition*.

2. For nerve conduction testing, the Impairment Committee recommends uniform adoption of the AAE M Criteria.

patients with no residual symptoms and those with "mild" symptoms, the Committee recommends a fourth category be established termed "minimum." Table 16B was developed to assist raters in the placement of patients within these four categories. It should be noted that healed entrapment neuropathies might have no impairment. (See Chart 10–Table 16b. Guidelines For Placement Of Patients Within Table 16.) (See Chart 11–Table 16. [Modified] Upper Extremity Impairments Due To Entrapment Neuropathy.)

Upper Extremity Strength Evaluations
Because of the controversy that continues to exist for strength

evaluations, the Utah Labor Commission adopted the provision that the measurements of upper extremity strength, (grip and pinch strength) should only be used as described in the listed Table 16B. Until further validation of grip and pinch testing is reported, the rater is not to award grip strength alone or in combination with other ratings.

Upper Extremity Painful Organic Syndromes That Are Not Otherwise Accounted for Within These Guides or the AMA Guides — 4th Edition

Musculoskeletal conditions characterized by pain (and weakness) with use of the affected member, attributed to a lesion in the soft tissue

(capsule, ligament, tendon, fascia, muscle) and documented by clinical findings that have been present for longer than six months. (See Chart 12–Upper Extremity Painful Organic Syndromes [Upper Extremity].)

Summary

Impairment is defined as "the loss, loss of use, or derangement of any body part, organ system or organ function."⁸² Although an impairment rating may have been derived from a well-structured set of observations, it does not convey any information about an individual's capacity to meet personal, social, or occupational demands,⁸³ referred to as a disability. Evaluation of disability requires nonmedical judgments that are generally outside the scope of physicians' expertise.^{84,85,86,87,88,89,90,91} Only until there is accepted impairment methodology that objectively and reliably measures physical loss, can the economic implications of the impairment ratings can be addressed effectively in the administrative, legislative, and political arenas⁹². Utah is now the least-costly state for an employer to obtain workers' compensation, while maintaining its medical fee schedule above the national average and wage replacement at \$529 per week. Contributing to this cost-effective outcome has been the support from the medical and professional community in developing, and the

Chart 11:

Table 16. (Modified) Upper Extremity Impairments Due to Entrapment Neuropathy

ENTRAPPED NERVE	ENTRAPMENT SITE	Minimum	Mild	Moderate	Severe	Complete Motor and Sensory Loss
Suprascapular		2	5	10	15	20
Axillary		5	10	20	30	38
Radial	Upper Arm	7	15	25	30	45
Posterior Interosseous	Forearm	5	10	20	28	38
Median	Elbow	7	15	35	50	65
Anterior Interosseous	Prox Forearm	2	5	10	12	15
Median	Wrist	5	10	20	30	44
Ulnar	Elbow	3	10	30	40	50
Ulnar	Wrist	3	10	30	35	40

Chart 12:

Upper Extremity Painful Organic Syndromes (Upper Extremity)

Residual Symptoms	Minimum	Mild	Moderate	Severe
Shoulder and/or Elbow and/or Wrist and/or Hand	0%	1%	3%	5%

Labor Commission adopting of the above impairment methodology. This paper is an example of the significant positive impact professionals involved in workers' compensation can make in improving a state compensation system. In that there appears no major clarifications or revisions in the new 5th edition of the *AMA Guides*,⁹³ the Utah Labor Commission's impairment methodology provides an improved impairment model for workers' compensation systems to give serious consideration.

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General Information – Disability Medicine, Volume 1, Number 1

Disability Medicine is an educational publication of the American Board of Independent Medical Examiners (ABIME) intended to provide a forum for dissemination of a wide range of responsible scholarly opinions, research, and practice relevant to Independent Medical Examiners and disability medicine. The editors and all contributors to *Disability Medicine* enjoy a full latitude in expressing opinions on the subjects presented to better inform the readers. The views expressed by contributors are not necessarily those of the American Board of Independent Medical Examiners. *Disability Medicine* does not endorse or sponsor any articles, but rather presents them for the information and education of its readers.

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Instructions to Authors (printed at the end of this issue, or may be obtained by writing to *Disability Medicine* for a copy) outlines requirements for acceptance of manuscripts.

Network Board

Position: Disability Income Senior Medical Director & 2nd VP

Job Location: MassMutual Financial Group
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www.massmutual.com

Job Description:

As the Disability Income Senior Medical Director, the incumbent has authority on all medical decisions involving the Disability Income underwriting and claim processes. This position is a key staff member of the DI risk management team and a key contributor to the development and implementation of the DI risk management strategy. The incumbent has an extremely wide degree of latitude relative to the day-to-day operations of the Disability Income Medical Department. Only those matters involving corporate policy are referred to the Vice President and Chief Medical Director for discussion and final approval.

Qualifications & Experience:

1. Medical degree from a recognized medical school, preferable in the United States or Canada.
2. Sufficient post-graduate training to be eligible for board certification in a specialty related to the tasks of a life insurance medical director, e.g., internal medicine, pediatrics, family medicine.
3. Board certification in a clinical specialty, although not a requirement, is very helpful.
4. Board certification in insurance medicine.
5. Five years' experience in insurance medicine supporting underwriting and/or claims functions.
6. Group or individual disability experience is strongly preferred but not required.
7. Demonstrated managerial skills such as interpersonal skills, communication skills, analytical skills and judgment.
8. Probably the element of having demonstrated sound judgment is the most significant factor for this position, followed closely by having demonstrated capacity to work with and through other people.

Contact Information:

Please send resume via email to: mfaughnan@massmutual.com

Phone number: (413) 744-3240.

Book Review

J. True Martin, MD

Brain Injury and Gender Role Strain: Rebuilding Adult Lifestyles After Injury By Sharon Gutman

Physicians' attention on the brain-injured patient is usually focused on the treatment of seizures, spasticity, shunt function, etc. In its acute stage, there is no need to consider the gender of a person when treating traumatic brain injury (TBI). A brain is a brain—neither male nor female.

However, as a patient enters into the post-acute treatment period, if the patient is to be engaged in a meaningful post-morbid lifestyle, psychologists, therapists, caregivers, and other treatment providers must employ comprehensive treatment protocols. Sharon Gutman's *Brain Injury and Gender Role Strain: Rebuilding Adult Lifestyles After Injury* is a well-written,

informative book that fills a void in the research and literature on TBI. It addresses individualized treatment protocols directed toward the psychosocial and emotional sequelae of TBI. Specifically, Sharon Gutman addresses gender role strain—feelings of uncertainty experienced by TBI patients regarding their ability to participate in adult roles that allow expression of their gender identity.

The book is a scholarly discussion of a complex subject predicated on a self-evident fact: brain-injured males are different from brain-injured females. TBI seems to result in more gender role strain in males than in females because of the difference in the ways males and

females use social roles to express their gender identities and because traditional socialization of males has taught them not to seek help in reconstructing their lives. Through a review of four case histories, with perspectives from both the patient and Dr. Gutman, this book explores the difficulty these males encounter in attempting to rebuild their lives.

This 147-page book is highly recommended for social workers, psychologists, therapists, and other professionals who provide care or make recommendations regarding care in the post-acute TBI setting.

AMA Guides to the Evaluation of Permanent Impairment

5th Edition Training Course

May 19-20, 2001, Chicago

Program Chairman:

Mohammed I. Ranavaya, MD, MS, FRCPI, FFOM, FAADEP

Co-chair:

Thomas A. Beller, MD, CIME, FAADEP

Day 1.

7:30 a.m. Registration and Continental Breakfast

8:30 a.m. Welcome & Introduction and Review of Course Objective
Mohammed I. Ranavaya, MD, MS, FAADEP

8:45 a.m. Transition from 4th to 5th Edition
Introduction to Key Revisions and Changes in the 5th Edition of the AMA
Guides to the Evaluation of Permanent Impairment
Mohammed I. Ranavaya, MD, MS, FAADEP

3:00 p.m. Break

3:30 p.m. Spine Impairment Rating, Chapter 15, with Case Presentation
Chris Brigham, MD, CIME, FAADEP

4:30 p.m. Question/Answers- Panel Discussion.
Drs. Beller, Brigham, Pro, Ranavaya

5:00 p.m. Adjourn

9:30 a.m. Key Concepts in Chapters 1 and 2
Philosophy, appropriate use and practical application of the AMA Guides
Mohammed I. Ranavaya, MD, MS, FAADEP

DAY 2.

8:00 a.m. Registration and Continental Breakfast

8:30 a.m. The Upper Extremities Impairment Rating, Using the 5th Ed. (Chapter 16)
Chris Brigham, MD, CIME, FAADEP

10:15 a.m. Morning Refreshment Break

9:45 a.m. Lower Extremities Impairment Rating, Using the 5th Ed. (Chapter 17)
Chris Brigham, MD, CIME, FAADEP

10:45 a.m. Beyond Musculoskeletal Systems
Key Revisions in the Impairment Evaluation of Other Systems
AMA Guides 5th Edition, Chapters 3-12
Thomas A. Beller, MD, CIME, FAADEP

10:30 a.m. Morning Refreshment Break

12:00 p.m. Lunch and Learn with faculty—
Case presentation

11:00 p.m. Impairment Rating for Pain, Using the 5th Ed. (Chapter 18)
John Pro, MD, CIME

1:30 p.m. The Nervous System, Chapter 13
John Pro, MD, CIME

12:00 p.m. Adjourn

2:15 p.m. Mental and Behavioral Disorder, Chapter 14,
John Pro, MD, CIME

Total CME hours: 11

Course Objectives

This course is specifically designed to educate and prepare physicians in the use of the AMA Guidelines to the Evaluation of Permanent Impairment.

Educational Objectives

At the conclusion of this learning activity, participants should be able to:

- Describe the knowledge content related to the AMA Guides 5th edition
- Discuss recent developments in the AMA Guides 5th edition
- Differentiate symptoms, pathology, impairment, function and disability
- Explain the fundamentals of quality disability evaluation services
- Relate clinical data to case issues
- Discuss skills needed to select and perform evaluations
- Perform musculoskeletal permanent impairment ratings according to the AMA Guides 5th edition to the Evaluation of Permanent Impairment
- Utilize skills to perform complex case evaluations of musculoskeletal pain disorders
- Explain the use of other chapters of the AMA Guides
- Define the steps needed in your practice to implement the use of the AMA Guides 5th edition

Practical Objectives

- Perform impairment evaluations according to the AMA Guides 5th edition
- Demonstrate skills in evaluating complex cases
- Evaluate and manage difficult impairment evaluations patients

- Perform excellent independent medical evaluations
- Provide IME services and serve as an expert medical witness
- Improve the quality of medical reports

AMA Guides 5th Course Faculty Profile

Mohammed I. Ranavaya, MD, MS, FACPM, FAADEP

Mohammed I. Ranavaya, MD, MS, FRCPI, FFOM, FACPM, FAADEP. CIME is a Professor of Occupational and Environmental Medicine at the Marshall University School of Medicine in West Virginia and is a Board Certified specialist in occupational and environmental medicine. Dr. Ranavaya also currently serves as the Director of the Appalachian Institute of Occupational & Environmental Medicine in West Virginia.

Dr. Ranavaya has performed several thousand independent medical evaluations and is an internationally recognized expert on AMA Guides and has taught globally over ten thousand physicians skills for performing independent medical evaluations and how to be more effective in the use of the AMA Guides to the Evaluation of Permanent Impairment.

Dr. Ranavaya has authored several chapters in various books on disability medicine and numerous articles regarding AMA Guides, disability guidelines and independent medical evaluations, etc. Dr. Ranavaya is the chair of the editorial board of the Medical Disability Advisor, a book on workplace disability duration guidelines for various injuries and diseases. He served on the senior editorial advisory committee of the AMA

Guides 5th edition and is a contributor to the AMA Guides 5th edition.

Dr. Ranavaya is the past President of the American Academy of Disability Evaluating Physicians. He is one of the founding fathers of the American Board of Independent Medical Examiners (ABIME) and has helped develop the certifying exam for physicians seeking credentials as certified independent medical examiners.

Dr. Ranavaya can be reached via e-mail: mranavayamd@newwave.net

Phone: (304) 855-8605 Fax: 304-855-9442

Thomas Beller, MD, FAADEP, Course Co-Director, is board certified in internal and pulmonary medicine and has served as a lead faculty for numerous prestigious continuing medical education programs. Dr. Beller is the chairman of the American Board of Independent Medical Examiners and is the past President of the American Academy of Disability Evaluating Physicians.

Christopher R. Brigham, MD, FAADEP is board certified in Occupational Medicine and has extensive experience in the field of Disability medicine. He has lectured extensively on issues of Independent Medical Examinations, disability management and rehabilitation of injured workers. Dr. Brigham has published extensively in the field of disability Medicine and has published numerous articles, book chapters and edited numerous books and is editor of the AMA Guides newsletter.

John Pro, MD is board certified in Psychiatry. Dr. Pro has lectured nationally on the issues of psychiatric impairment and disability evaluations.

A Distinction *that Sets You Apart*

Achieve certification through the American Board of Independent Medical Examiners (ABIME) and gain recognition from disability and compensation professionals. ABIME certification offers you added advantages:

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- Increased demand for your specialized services
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- Enhanced credibility and competency as a medical examiner
- Advanced knowledge and training in impairment and disability evaluation
- Added professionalism and career advancement

Be among the first in your area to earn this prestigious distinction. Fax us today to achieve the ABIME distinction that sets you apart.

2001 Education and Certification Examination Schedule

Orlando, FL [†]	February 3, 4	Chicago, IL [†]	July 14, 15
San Diego, CA	March 28, 29, 30	Hyannis, MA	July 24, 25, 26
Chicago, IL [†]	April 21, 22	Seattle, WA [†]	September 22, 23
San Francisco, CA	April 21, 22, 23	Halifax, NS [†]	October 2, 3, 4
Chicago, IL*	May 19, 20		

[†] 2-Day Certification Review Course and Examination

* NEW AMA Guides 5th Edition Course

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