



# Workers Compensation



## Legislative Research

*Impact on Impairment Ratings From Switching to the  
American Medical Association's Sixth Edition of the  
Guides to the Evaluation of Permanent Impairment*

**By Robert Moss, David McFarland, CJ Mohin, and Ben Haynes**

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**Impact on Impairment Ratings from the  
American Medical Association's Sixth Edition of the  
*Guides to the Evaluation of Permanent Impairment***

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# Impact on Impairment Ratings from the American Medical Association's Sixth Edition of the *Guides to the Evaluation of Permanent Impairment*

By Robert Moss, David McFarland, CJ Mohin, and Ben Haynes \*

## Abstract

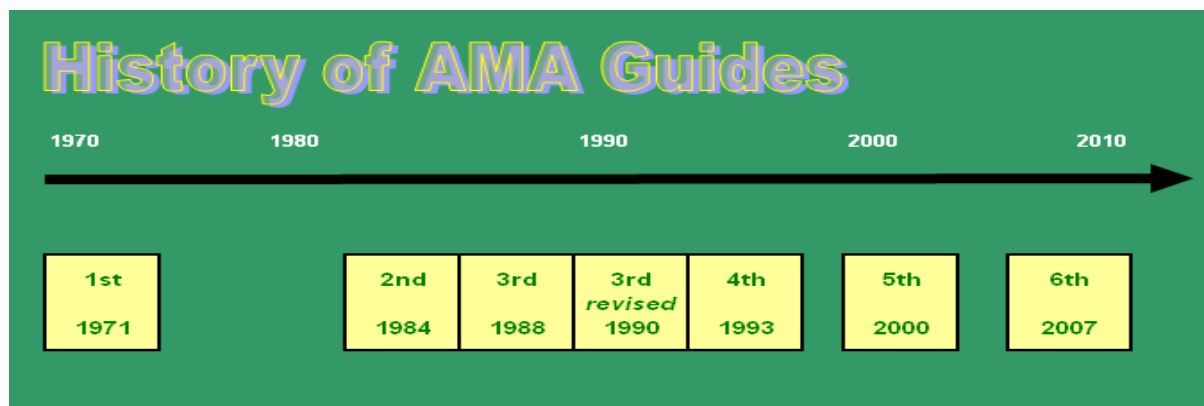
Rating the degree of permanent impairment has been a contentious process in many state workers compensation systems. With the December 2007 release of the sixth edition of the American Medical Association's *Guides to the Evaluation of Permanent Impairment* (AMA Guides), many stakeholders had concerns over the possible impact of this latest edition on claimant awards.

NCCI provides some background on the *AMA Guides* and analyzes impacts on impairment ratings due to the implementation of the sixth edition

**Key Findings:** For the states studied, a decrease in the average impairment rating is observed in the years immediately after the implementation of the sixth edition.

## BACKGROUND

The approach to impairment evaluation has evolved over the past 50 years, starting in 1958 with publication by the American Medical Association (AMA) of the article, "A Guide to the Evaluation of Permanent Impairment of the Extremities and Back." The *AMA Guides* was first published in 1971, and new editions were published throughout the subsequent years with the sixth edition appearing in December 2007.<sup>1</sup>



The *AMA Guides to the Evaluation of Permanent Impairment* is the most widely used basis for determining impairment ratings in state workers compensation systems. In

<sup>1</sup> "Clarifications and Corrections—Sixth edition" was made available in 2008.

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addition to workers compensation, they are used in federal systems, automobile casualty, and personal injury cases.<sup>2</sup>

Many states use the *AMA Guides* as a starting point in determining work disability, although statutes may differ as to which edition to use and how it is to be used. The following are some examples of how work disability may be determined:

- State-specific guidelines for certain diagnoses/injuries and use of the *AMA Guides* for others
- Use of a statutory schedule for amputations, hearing loss, visual loss, hernias, and disfigurement and use of the *AMA Guides* for
  - Nonscheduled injuries
  - Determining the extent a scheduled member injury bears to its total loss

Some states do not specify the use of any specific guidelines. Appendix B summarizes state rules regarding which *AMA Guides*, if any, are currently in effect.

### **AMA GUIDES—SIXTH EDITION**

The sixth edition of the *AMA Guides*, published in December 2007 (hereafter referred to as “the sixth edition”), introduced new approaches to rating impairment, including one based on a modification of the conceptual framework of the International Classification of Functioning, Disability, and Health (ICF). The ICF method is used as a common basis for description of human function and impairments.

According to its authors, the sixth edition was designed to provide rating percentages that consider (1) clinical and functional history, (2) examinations, and (3) clinical studies to help physicians determine a grade within an assigned impairment class. The reason for this new approach was to determine an impairment rating that is both transparent and reproducible.

Changes incorporated into the sixth edition include the following:

- Ratings that are largely diagnosis-based and diagnoses that are evidence-based when possible
- Standardized assessment of Activities of Daily Living (ADL) limitations associated with physical impairments
- Functional assessment tools to validate impairment rating scales
- Measures of functional loss in the impairment rating
- Improvement in overall intrarater and interrater reliability and internal consistency
- Five ICF impairment classes from Class 0 (normal) to Class 4 (very severe)

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<sup>2</sup> [www.impairment.com/Use of AMA Guides.htm](http://www.impairment.com/Use of AMA Guides.htm) (referenced in December 2011)

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### **COMPARING AVERAGE IMPAIRMENT RATINGS—FIFTH EDITION VS. SIXTH EDITION**

In this study, NCCI first looks at the change in the average impairment rating in states that did not switch editions. We then look at the change in the average impairment rating for several states in the time period before and after the switch from the fifth to the sixth edition. While we might consider simply looking at the change in the average impairment rating in states that switched editions to determine the impact of the switch, there are likely to be other factors impacting the average impairment ratings in those states. For example, it is expected that certain factors (e.g., variation in economic activity) will affect the types of claims observed in certain years. As such, by observing the changes in the average impairment ratings in states that did not switch editions, we can consider the impact on impairment ratings due to factors unrelated to the switch in editions.

The focus of this study is on the impact of moving from the fifth edition to the sixth edition. The use of several years of experience allows for observing variability in the average impairment rating from one year to the next, both pre- and post-sixth edition. The use of several years of post-sixth edition experience also allows for the possibility that it may take more than one year to realize the full impact on ratings from a change in editions.

### **STATES EXAMINED: KENTUCKY, GEORGIA, MONTANA, TENNESSEE, AND NEW MEXICO**

In NCCI's analysis, Montana, Tennessee, and New Mexico were identified as states that switched from the fifth edition of the *AMA Guides* to the sixth edition with no major changes (i.e., legislative reforms) to the workers compensation system in the years immediately prior or subsequent to the change in editions. The selection of a specific change, such as a switch in *AMA Guides*, during a time of no other major changes allows for the determination of its impact on impairment ratings by isolating the effect of the change from other potential influences in the workers compensation system.

To consider the impact on the average impairment ratings from other sources, we looked at the average impairment ratings in two different states, Georgia and Kentucky, which maintained the use of the fifth edition.

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### **THE UNDERLYING DATA**

For determining the impact on permanent partial impairment ratings based on a switch from the fifth edition to the sixth edition, claim records were supplied by the following data providers:

- Montana Department of Labor and Industry, Employment Relations Division
- New Mexico Workers' Compensation Administration
- Tennessee Department of Labor and Workforce Development, WC Division
- Kentucky Department of Workers' Claims
- Georgia State Board of Workers' Compensation

For Montana, New Mexico, and Tennessee, NCCI requested claims level detail for permanent partial disability (PPD) claims with injury dates or impairment ratings between January 1, 2004 and December 31, 2009.<sup>3</sup> The data fields that were requested included:

- Date of Injury
- Impairment and/or Disability Rating
- Maximum Medical Improvement (MMI) Date
- Part of Body
- Nature of Injury
- Preinjury Weekly Wage
- Class code
- Total Indemnity Benefits Paid by Injury Type (Temporary Total, Permanent Partial)
- Gender
- Birth Year
- Claim Status (Open, Closed, Other)
- Attorney Involvement Indicator

For Kentucky, NCCI requested an update to data that had been provided previously for a research study on permanent partial disability claims. For Georgia, sufficient claim level data was available from claims data provided to NCCI for a previous research study.

In addition to validating the data, distributions of certain claim characteristics were reviewed to determine the reasonability and usability of the claims data. These criteria included reviewing the distributions of claims by:

- Gender
- Body part
- Nature of injury
- Industry group

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<sup>3</sup> Montana and New Mexico both base the impairment rating on the AMA edition in use on the date the rating is made. Tennessee bases the rating on the edition in use on the date of injury.

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- Preinjury wage amounts
- Age

Based on the observed distributions for all accident years examined, specifically with respect to the relatively stable distributions based on gender, age, and number of claims by accident year, the data for each state was determined to be suitable for this analysis. The individual state analyses were not adjusted for changes in the distributional mix by accident year. Please see Appendix A for distributions of several of these claim characteristics by state.

For all states in this analysis, the average impairment ratings were calculated by taking an average of nonzero impairment ratings.<sup>4</sup>

### **RESULTS AND OBSERVATIONS**

Before we can evaluate the impact of a change in the average impairment rating due to switching from the fifth edition to the sixth edition, we must consider what changes may have occurred during this same time period from other sources. To consider this, we looked at the average impairment ratings in two different states, Georgia and Kentucky, which maintained use of the fifth edition.

#### **KENTUCKY**

Claims data was provided by the Kentucky Department of Workers' Claims. The claims records comprised 15,633 permanent partial disability (PPD) lost-time claims<sup>5</sup> with injury dates between (and inclusive of) January 1, 2005 and December 31, 2008, evaluated as of April 2012. The detailed claim records represented a rich collection of data elements, including claim characteristics such as age, gender, preinjury weekly wage, injury date, part of body, and nature of injury.

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<sup>4</sup> Claims where the impairment rating field was blank were removed from the data set during the validation process.

<sup>5</sup> Validation of the data set was performed in order to remove claims with questionable or invalid data; claims were excluded where the impairment rating field was blank.

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One key data element that was not available in the Kentucky data was maximum medical improvement (MMI) date.<sup>6</sup> MMI date is used in our analysis of other states to compare claims at common maturity levels. Because this data element was not available in the Kentucky data, the results shown in Table 1 do not control for claim maturity.

**TABLE 1 [KENTUCKY]:**

<b>Accident Year</b>	<b># of PPD Claims</b>	<b>Average Rating*</b>	<b>Percent Change in Avg. Rating</b>
2005	3,956	7.7%	—
2006	3,915	7.5%	–3.0%
2007	4,076	7.5%	0.2%
2008	3,716	7.1%	–5.3%

*\* As a percentage of whole person*

The claims underlying Table 1 are for Accident Years 2005–2008, evaluated as of April 2012. Since we were unable to control for claim maturity, the distribution of claims for Accident Year 2005 is not the same as that for Accident Year 2008. For example, a claim from Accident Year 2005 may have received an impairment rating in 2009 (i.e., four years later), whereas a claim of a similar nature from Accident Year 2008 may not have been evaluated as of the date the data was provided in early 2012. The figures above may, therefore, not offer an equivalent comparison of claims and ratings across all accident years.

However, given the volume of claims underlying Table 1, as well as the likelihood that any additional claims would not have a material impact on the average ratings by accident year, the moderately lower average impairment rating for Accident Year 2008 does indicate a change in the average impairment rating compared to Accident Year 2007.

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<sup>6</sup> MMI date is generally defined as the date after which further recovery from or lasting improvement to an injury can no longer be reasonably anticipated based upon reasonable medical probability as determined by a health care provider.



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NCCI considered that this change may have resulted in some part from the structural changes in the economy due to the recession during this time; the percentage of claims from certain industries, as shown in Table 2 below, suggests little change in the proportion of claims represented by these groups over this time period. Specific occupations were selected based on their description and likelihood of being affected by the 2007 recession.

**TABLE 2 [KENTUCKY]:**

Accident Year	Construction Laborers				Laborers Except Construction <sup>7</sup>			
	# of Claims	% of Total Claims	Average Rating	Percent Change in Avg. Rating	# of Claims	% of Total Claims	Average Rating	Percent Change in Avg. Rating
2005	68	2.0%	9.1%	—	326	9.5%	7.5%	—
2006	64	1.9%	7.8%	-15.7%	278	8.1%	7.6%	+1.8%
2007	79	2.2%	9.3%	+18.8%	329	9.0%	7.1%	-7.4%
2008	71	2.1%	8.5%	-4.8%	282	8.5%	6.9%	-2.5%

Given the relatively small volume of claims for both groups, there is some expected variability in the average impairment ratings over the observed time period. However, note that the decrease in the average impairment ratings from 2007 to 2008 for both of these groups is similar to the change in the average impairment for all claims (see Table 1). Table 3 compares the results for all other occupations.

**TABLE 3 [KENTUCKY]:**

Accident Year	All Other Occupations (Excluding Construction Laborers and Laborers Except Construction)			
	# of Claims	% of Total Claims	Average Rating	Percent Change in Average Rating
2005	3,049	88.6%	7.8%	—
2006	3,074	90.0%	7.5%	-3.6%
2007	3,255	88.9%	7.5%	+0.3%
2008	2,979	89.4%	7.2%	-4.4%

Note that the percentage of claims for all other occupations represents approximately 90% of claims for each year, indicating little to no impact on the distribution of claims

<sup>7</sup> "Construction Laborers" and "Laborers Except Construction" were judgmentally selected as occupations that may have been impacted by the recent recession. Detailed class code information was not included with which to more specifically identify type of work involved.

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from the 2007 recession. We recognize, however, that there may be a lag with respect to the impact of the recession on the claim distribution by occupation, with Accident Year 2008 not fully reflecting recession-related changes in the industrial structure in Kentucky.

Nevertheless, the decrease in the average impairment rating from 2007 to 2008 in Kentucky does not appear to be due to structural changes in the workforce from the recession that began in late 2007.

### **GEORGIA**

Georgia also has continued using the fifth edition of the *AMA Guides* when evaluating impairment. The claims records for Georgia, which were provided to NCCI by the Georgia State Board of Workers' Compensation for an unrelated research project, comprised 9,559 permanent partial disability (PPD) lost-time claims with injury dates between (and inclusive of) January 1, 2006 and December 31, 2008, evaluated as of November 2009. The claim records included claim characteristics such as preinjury weekly wage, injury date, part of body, and nature of injury.

While Kentucky bases all impairment ratings as a percentage of whole body, Georgia impairment ratings can be determined either as a percentage of whole body or part of body. For example, a back injury may result in a 50% whole body impairment while a partial finger amputation may result in a 50% part of body (i.e., finger) impairment. While both injuries have the same impairment percentage, the injuries and impairment bases are quite different and are, therefore, viewed separately for purposes of our analysis.

The results from Georgia also show a change in the average impairment rating from Accident Year 2007 to 2008:

**TABLE 4 [GEORGIA]:**

<b>Accident Year</b>	<b>Whole Body<sup>8</sup></b>			<b>All Others</b>		
	<b># of Claims</b>	<b>Average Rating</b>	<b>Percent Change</b>	<b># of Claims</b>	<b>Average Rating</b>	<b>Percent Change</b>
2006	906	9.4%	—	2,352	11.1%	—
2007	922	8.3%	–12.2%	2,608	10.7%	–3.5%
2008	660	7.2%	–12.7%	2,111	10.0%	–6.0%

As was the case with Kentucky, the data underlying Table 4 was a snapshot taken at a particular point in time. As such, impairment ratings for claims from each accident year have not been evaluated at the same relative time frame after the accident date.

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<sup>8</sup> Includes claims with injuries to multiple body systems, lower back, and whole body.

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Additionally, the number of claims for Accident Year 2008 is much lower than 2006 and 2007, due to the relative lack of maturity of Accident Year 2008 at the time the data was received. As such, the average impairment ratings for Accident Year 2008 would likely be impacted to a greater degree (compared to 2006 and 2007) when observed at a later evaluation. However, initial results do suggest a decrease in the average impairment rating over this time period, particularly for those ratings based on the whole body.

While the impact and direction of the changes in Kentucky and Georgia are worth noting, the mere presence of a change itself is an indication of the impact on the average impairment ratings from factors unrelated to which edition of the *AMA Guides* was used to determine impairment. As such, when we observe the changes in the average impairment ratings in states that switched editions, we must also consider the impact on the average impairment ratings from factors unrelated to the change in editions.

### **MONTANA**

Montana switched from the fifth edition of the *AMA Guides* to the sixth edition when evaluating impairment, as dictated by statute. According to Montana's statutes, the edition of the *AMA Guides* that is used to evaluate impairment is that edition which is in effect *when the impairment rating is made*.<sup>9</sup> It is also worth noting that the impairment rating percentage in Montana is based on the part of the body that is impaired, which is then translated to a percentage of the whole body.

Claims data was provided by the Montana Department of Labor and Industry. The claims records comprised 2,780 permanent partial disability (PPD) lost-time claims<sup>10</sup> with maximum medical improvement (MMI) dates between (and inclusive of) January 1, 2004 and December 31, 2009, evaluated as of June 2011. The detailed claim records represented a rich collection of data elements, including claim characteristics such as age, gender, preinjury weekly wage, accident date, part of body, and nature of injury.

Since a claim for a particular *accident year* can be reported and/or evaluated many years after the accident date, and claims for an *MMI year* can include claims from a multitude of accident years, we group claims by corresponding accident year maturities within each MMI year so that the claims being compared are similar in maturity. For example, we observe claims from Accident Years 2004, 2005, and 2006 where MMI was achieved in 2006; Accident Years 2005, 2006, and 2007 where MMI was achieved in 2007; and so on for MMI years 2008 and 2009.

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<sup>9</sup> Since rating date was not available, the date of maximum medical improvement (MMI) was used since it was assumed that the rating would soon follow a determination of MMI. Some sensitivity testing was performed in case actual ratings took place more than three months after MMI, but no material changes in impairment ratings were observed.

<sup>10</sup> Validation of the data set was performed in order to remove claims with questionable or invalid data; claims were excluded where the impairment rating field was blank.

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Based on this criteria, there is a noteworthy decrease in the average impairment rating of approximately 28%<sup>11</sup> when comparing the average rating for MMI years 2006 and 2007 (fifth edition) to the average rating for MMI years 2008 and 2009 (sixth edition) as shown in Table 5.

**TABLE 5 [MONTANA]:**

	Fifth Edition		Sixth Edition	
	MMI Year 2006 Accident Years 2004–2006	MMI Year 2007 Accident Years 2005–2007	MMI Year 2008 Accident Years 2006–2008	MMI Year 2009 Accident Years 2007–2009
<b>Average Impairment Rating</b>	7.1%	7.0%	5.0%	5.1%
<b># of Claims</b>	306	359	404	589

Note that the ratings for MMI Year 2006 and 2007 are based on the fifth edition, by statute, whereas the 2008 and 2009 ratings are based on the sixth edition.

For a more detailed breakdown of average impairment ratings by accident year within each MMI year, see Table 4 in Appendix A.

The number of claims by MMI year grows over the four MMI years shown in Table 5, with a noteworthy increase from 2008 to 2009. This was due to an initiative undertaken by the Montana Department of Labor and Industry in July 2009 to improve compliance for reporting of impairment ratings and MMI date.

Additionally, when we observe the average impairment rating for **all** accident years by MMI year, as shown in Table 6 below, we observe a similar change in the average impairment ratings.

<sup>11</sup>  $-28\% = [(5.0 * 404 + 5.1 * 589) / (404 + 589) / (7.1 * 306 + 7.0 * 359) / (306 + 359)] - 1$

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**TABLE 6 [MONTANA]:**

	<b>All Accident Years</b>			
	<b>Fifth Edition</b>		<b>Sixth Edition</b>	
	MMI Year 2006	MMI Year 2007	MMI Year 2008	MMI Year 2009
<b>Average Rating</b>	7.7%	7.5%	5.6%	5.5%
<b>Total PPD Claims</b>	358	408	481	698

The results from Table 6 indicate a decrease in the average impairment rating of 27%<sup>12</sup> over this time period. As a result, the average impairment rating for Montana appears to have declined from the years just preceding the change to the years subsequent to the change in editions.

In order to help understand the possible impact on the average impairment rating due to factors unrelated to the switch in editions, we reviewed year-to-year changes in the average impairment ratings under the fifth edition. As we see in Table 7, the year-to-year variability in the average rating is relatively small under the fifth edition. This suggests that the drop in the average rating between MMI years 2007 and 2008 resulted primarily from the switch in editions.

**TABLE 7 [MONTANA]:**

<b>Average Impairment Rating—Fifth Edition</b>			
MMI Year 2004 AYs 2003–2004	MMI Year 2005 AYs 2004–2005	MMI Year 2006 AYs 2005–2006	MMI Year 2007 AYs 2006–2007
6.5%	7.0%	6.7%	6.6%

The rating system in Montana, which modifies impairment ratings in certain cases to arrive at a final disability rating, also allows us to observe how wage replacement benefits may be impacted by legislative changes that affect underlying impairment ratings for PPD claims.

Disability modification factors adjust an impairment rating for individual claimant characteristics such as age, education, wage loss, and physical ability. These factors may also be impacted by a switch in editions, resulting in final disability ratings that are influenced by changes in the underlying impairment ratings. Any influence on disability ratings would affect the potential impact on overall system costs from a change in AMA editions in states where a disability rating is the basis for benefits compared to those where impairment ratings are used without modification.

<sup>12</sup> 27% =  $[(5.6 * 481 + 5.5 * 698) / (481 + 698) / (7.7 * 358 + 7.5 * 408) / (358 + 408)] - 1$

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To determine the final disability rating in Montana, the sum of the modification factors is added to the impairment rating. To the extent that there is an attempt by claimants to pursue a higher modification factor to counteract a decrease in their impairment rating, we may observe higher disability modifications for MMI years 2008 and 2009 compared to 2006 and 2007. The values in Table 8 show the average disability modification factor for MMI years 2006 through 2009 (for those claims with modification factors):

**TABLE 8 [MONTANA]:**

<b>Average Disability Modification Factor</b>			
<b>Fifth Edition</b>		<b>Sixth Edition</b>	
MMI Year 2006 Accident Years 2004–2006	MMI Year 2007 Accident Years 2005–2007	MMI Year 2008 Accident Years 2006–2008	MMI Year 2009 Accident Years 2007–2009
19.7	19.9	20.7	21.7

These values do suggest a small increase in the average disability modifications in Montana over the observed time period. While the switch to the sixth edition may have had an impact on the disability modification factors, the inclusion of wage loss in the disability rating formula along with higher amounts of wage loss from the recent recession may also be contributing to the higher disability mods for MMI years 2008 and 2009.

Note that not all claims receive a disability modification, thereby resulting in fewer claims available with which to evaluate changes to the average modification factor.

The switch in editions appears to have had a more noteworthy impact on certain types of injuries compared to others. The results from Montana in Table 9 below show a decrease in the average impairment rating for shoulder and lower back injuries.

**TABLE 9 [MONTANA]:**

	<b>Average Impairment Rating</b>			
	<b>Fifth Edition</b>		<b>Sixth Edition</b>	
<b>Part of Body</b>	MMI Year 2006 AYs 2004–2006	MMI Year 2007 AYs 2005–2007	MMI Year 2008 AYs 2006–2008	MMI Year 2009 AYs 2007–2009
Shoulder	6.1%	5.7%	5.0%	4.6%
Knee	4.0%	3.5%	3.5%	3.8%
Lower Back	10.5%	10.1%	5.8%	7.0%

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The change in ratings for low back injuries is also supported by Table 10, which indicate a significant change in the average impairment ratings for claims where strain is the nature of injury.

**TABLE 10 [MONTANA]:**

<b>Nature of Injury</b>	<b>Average Impairment Rating</b>			
	<b>Fifth Edition</b>		<b>Sixth Edition</b>	
	MMI Year 2006 AYs 2004–2006	MMI Year 2007 AYs 2005–2007	MMI Year 2008 AYs 2006–2008	MMI Year 2009 AYs 2007–2009
Contusion	7.4%	6.6%	4.3%	4.5%
Fracture	6.7%	5.6%	4.9%	6.0%
Sprain	5.4%	4.7%	5.2%	6.2%
Strain	7.4%	7.6%	4.8%	4.3%

The differences in the average impairment ratings for fractures and sprains do not allow us to form any definitive conclusions regarding the impact from the sixth edition on those types of injuries. However, there do appear to be significant declines in the average impairment ratings for contusions and strains (which represent approximately 6% and 38% of PPD claims, respectively, for this time frame).

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With respect to possible changes in the average impairment rating due to changes in the mix of claims and/or injuries from the recession, the information in Table 11 shows the average impairment rating and number of claims by NCCI industry group by MMI year:

**TABLE 11 [MONTANA]:**

	<b>Fifth Edition</b>					
	<b>MMI Year 2006 AYs 2005–2006</b>			<b>MMI Year 2007 AYs 2006–2007</b>		
	<b># of Claims</b>	<b>% of Claims</b>	<b>Avg. Rating</b>	<b># of Claims</b>	<b>% of Claims</b>	<b>Avg. Rating</b>
Manufacturing	16	6.8%	5.1%	16	5.6%	9.4%
Contracting	42	17.9%	8.3%	43	15.1%	9.0%
Office & Clerical	46	19.6%	5.6%	71	25.0%	4.8%
Goods & Services	83	35.3%	7.0%	94	33.1%	7.0%
Miscellaneous	40	17.0%	5.9%	37	13.0%	5.8%
Not Classified	8	3.4%	9.5%	23	8.1%	5.3%

	<b>Sixth Edition</b>					
	<b>MMI Year 2008 AYs 2007–2008</b>			<b>MMI Year 2009 AYs 2008–2009</b>		
	<b># of Claims</b>	<b>% of Claims</b>	<b>Avg. Rating</b>	<b># of Claims</b>	<b>% of Claims</b>	<b>Avg. Rating</b>
Manufacturing	24	7.5%	7.3%	37	8.3%	4.5%
Contracting	43	13.4%	5.5%	71	15.9%	6.6%
Office & Clerical	79	24.5%	3.6%	97	21.7%	3.5%
Goods & Services	115	35.7%	4.2%	166	37.2%	4.5%
Miscellaneous	47	14.6%	4.2%	51	11.4%	4.9%
Not Classified	14	4.3%	5.3%	24	5.4%	6.7%

The average rating for MMI year 2006, based on claims from AYs 2005–2006, is 6.7%, and the average rating for MMI year 2009, based on claims from AYs 2008–2009, is 4.8%. From Table 11 we can see that the percentage of claims for each industry group fluctuated over this time period. In order to estimate what impact, if any, the shift in the distribution of claims had on the average impairment rating, we recalculated the average impairment rating for MMI year 2006 using the distribution of claims from MMI year 2009 as weights. This results in an “adjusted” average rating of 6.8% for MMI year 2006. Given the minimal change in the average rating under this scenario, a change in the distribution of claims would not appear to have had a significant impact on a change in the average impairment rating, all other things being equal.



## **Impact on Impairment Ratings from the American Medical Association's Sixth Edition of the *Guides to the Evaluation of Permanent Impairment***

Based on the information presented above, the results from our analysis of Montana indicate a decrease in the average impairment rating that is likely attributable to a switch from the fifth edition to the sixth edition.

We will now observe another state that switched from the fifth edition to the sixth edition to determine if similar changes in the average impairment ratings are observed.

### **TENNESSEE**

In Tennessee, PPD benefits are based on a disability rating, which is determined by applying a disability multiplier to an impairment rating. In making a determination of the final PPD award, the following factors are taken into consideration in Tennessee:

- Employee's age
- Educational background
- Skills and training
- Local job opportunities
- Capacity to work at types of employment available in claimant's disabled condition

For the Tennessee analysis, claims records were supplied by the Workers' Compensation Division within the Department of Labor and Workforce Development. After data cleansing, the data set comprised 39,690 PPD lost-time claims with dates of injury between (and inclusive of) January 1, 2004 and December 31, 2009, evaluated as of June 2011. The detailed claim records represented a rich collection of data elements, including claim characteristics such as age, gender, preinjury wage, accident date, part of body, and nature of injury.

Please note that all claims in the study period are subsequent to the 2004 reform enacted in the state. The first phase of the 2004 reform, which was estimated by NCCI to reduce overall system costs by approximately 5.5%, reduced the maximum permanent partial disability multiplier for claimants with certain injuries who return to work with their previous employer from 2.5 to 1.5. Among some of the other changes, the maximum weekly benefit for temporary total disability increased from 100% to 105% of the state average weekly wage (SAWW). The second phase of the 2004 reform, which became effective January 1, 2005, increased the maximum weekly benefit for temporary total disability from 105% to 110% of the SAWW.

## Impact on Impairment Ratings from the American Medical Association's Sixth Edition of the *Guides to the Evaluation of Permanent Impairment*

In Tennessee, the sixth edition of the *AMA Guides* became effective for injuries occurring on or after January 1, 2008 (TN code annotated, Section 50-6-204). In other words, the edition of the *AMA Guides* in effect *on the date the employee is injured* is applicable to the claim (TN code annotated, Section 50-6-102).

Consequently, we take a similar approach as with Montana, but instead compare the average impairment ratings for Accident Years 2006–2009 at similar MMI maturities, which yields the results shown in the table below. Since Tennessee differentiates between impairments based on part of body and whole person<sup>13</sup> for purposes of determining the disability rating, we also make that distinction.

**TABLE 12 [TENNESSEE]:**

		Fifth Edition		Sixth Edition	
	Rating Type	AY 2006 MMI Years 2006–2007	AY 2007 MMI Years 2007–2008	AY 2008 MMI Years 2008–2009	AY 2009 MMI Years 2009–2010
<b>Average Impairment Rating</b>	Part of Body	10.7%	10.6%	9.2%	8.6%
	Whole Person	9.0%	8.6%	6.8%	6.2%
<b># of Claims</b>	Part of Body	3,344	3,290	3,173	2,649
	Whole Person	2,744	2,810	2,730	2,140

The impairment ratings for part of body and whole person decreased by 16%<sup>14</sup> and 25%,<sup>15</sup> respectively, over this time frame.

For a more detailed breakdown of average impairment ratings by MMI year within each accident year, see Table 5 in Appendix A.

As was the case with the analysis for Montana, since a claim for a particular *accident year* can be reported and/or evaluated many years after the accident date, and claims for an *MMI year* can include claims from a multitude of accident years, the approach above restricts the number of claims for each accident year/MMI year combination to those where the claims being compared are similar in maturity (i.e., age).

<sup>13</sup> For postsixth edition claims, the field indicating whole body impairment was coded incorrectly for some claims. Given the high percentage of certain body parts receiving whole body impairment ratings prior to the sixth edition, we used body part codes to determine those for which a whole body impairment rating would likely be assigned under the sixth edition. These body parts include whole body, shoulder, lower back, trunk, disc, lung, and multiple body parts, among others.

<sup>14</sup>  $-16\% = [(9.2 * 3173 + 8.6 * 2649) / (3173 + 2649) / (10.7 * 3344 + 10.6 * 3290) / (3344 + 3290)] - 1$

<sup>15</sup>  $-25\% = [(6.8 * 2730 + 6.2 * 2140) / (2730 + 2140) / (9.0 * 2744 + 8.6 * 2810) / (2744 + 2810)] - 1$

**Impact on Impairment Ratings from the  
American Medical Association's Sixth Edition of the  
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Additionally, when we observe the average impairment rating for **all** MMI years by accident year (AY), as shown in Table 13 below, we observe similar results.

**TABLE 13 [TENNESSEE]:**

		All MMI Years			
		Fifth Edition		Sixth Edition	
	Rating Type	AY 2006	AY 2007	AY 2008	AY 2009
<b>Average Rating</b>	Part of Body	10.9%	10.8%	9.3%	8.6%
	Whole Person	9.5%	9.1%	7.1%	6.3%
<b>Total PPD Claims</b>	Part of Body	3,730	3,673	3,422	2,668
	Whole Person	3,398	3,446	3,129	2,167

The higher average impairment ratings shown above, when compared with Table 12, are not unexpected since Table 13 includes claims reaching MMI more than two years after the accident date, with such claims likely being of a higher severity and higher impairment rating than claims evaluated earlier. However, when comparing the results from Table 12 with Table 13, the relative differences between the average ratings under the fifth and sixth editions are similar despite the different maturities for the claims being evaluated.

We are again interested in seeing what, if any, changes took place in the average impairment ratings while using the fifth edition. To the extent that year-to-year variability in the average rating is relatively small under the fifth edition, any variability in the average rating between Accident Years 2007 and 2008 may indicate that the switch in editions was the main reason for the change in the average rating.

**TABLE 14 [TENNESSEE]:**

	Average Impairment Rating—Fifth Edition			
Rating Type	AY 2004 MMI Years 2004–2005	AY 2005 MMI Years 2005–2006	AY 2006 MMI Years 2006–2007	AY 2007 MMI Years 2007–2008
Part of Body	10.0%	10.5%	10.7%	10.6%
Whole Person	8.6%	8.7%	9.0%	8.6%

Given the consistency in the average impairment ratings under the fifth edition, the results from Table 14 provide support that the switch to the sixth edition of the *AMA Guides* was likely the main reason for the decrease in the average impairment rating between AY 2007 and AY 2008 as shown in Tables 12 and 13.

## Impact on Impairment Ratings from the American Medical Association's Sixth Edition of the *Guides to the Evaluation of Permanent Impairment*

The rating system in Tennessee, which is similar to Montana with respect to the modification of impairment ratings in certain cases to arrive at a final disability rating, also allows us to observe how wage replacement benefits could be impacted by legislative changes that affect underlying impairment ratings for PPD claims.

**TABLE 15 [TENNESSEE]:**

	Rating Type	Fifth Edition		Sixth Edition	
		AY 2006 MMI Years 2006–2007	AY 2007 MMI Years 2007–2008	AY 2008 MMI Years 2008–2009	AY 2009 MMI Years 2009–2010
<b>Average Disability Rating</b>	Part of Body	20.7%	21.0%	18.2%	16.9%
	Whole Person	20.1%	19.5%	16.7%	14.2%
<b>Average Disability Multiplier<sup>16</sup></b>	Part of Body	2.5	2.5	2.5	2.4
	Whole Person	2.6	2.6	2.7	2.5

The minimal changes in the implied average disability multipliers, as shown in Table 15, suggest that the decreased disability ratings were largely the result of a decrease in the underlying impairment ratings.

The changes in the average impairment ratings are also apparent when we observe the average ratings for PPD injuries based on part of body. The following table displays the average impairment ratings by accident year for shoulder, knee, and lower back injuries:

**TABLE 16 [TENNESSEE]:**

	Part of Body	Fifth Edition		Sixth Edition	
		AY 2006 MMI Year 2006, 2007	AY 2007 MMI Year 2007, 2008	AY 2008 MMI Year 2008, 2009	AY 2009 MMI Year 2009, 2010
<b>Average Rating</b>	Shoulder	6.1%	6.1%	5.1%	4.9%
	Knee	7.5%	7.0%	6.9%	6.3%
	Lower Back	7.7%	8.3%	7.2%	6.2%
<b># of claims</b>	Shoulder	995	1,077	1,145	1,003
	Knee	915	905	848	721
	Lower Back	344	388	426	347

Here, no distinction is made between whole person and part of body ratings since the basis for the vast majority of ratings for these body parts is the same. For example, almost all knee injury claims are rated based on part of body, whereas almost all lower back injuries are rated based on the whole person. While there was a moderate decline

<sup>16</sup> These are implied multipliers which are calculated by dividing final disability ratings by impairment ratings.

## Impact on Impairment Ratings from the American Medical Association's Sixth Edition of the *Guides to the Evaluation of Permanent Impairment*

of 9%<sup>17</sup> in the average impairment rating for knee injuries, shoulder and lower back injuries experienced more dramatic declines of 18%<sup>18</sup> and 16%,<sup>19</sup> respectively.

In Table 17, we observe changes in the average impairment rating for claims based on nature of injury, with the focus on contusions, fractures, sprains, and strains:

**TABLE 17 [TENNESSEE]:**

Nature of Injury	Average Impairment Rating			
	Fifth Edition		Sixth Edition	
	AY 2006 MMI Year 2006, 2007	AY 2007 MMI Year 2007, 2008	AY 2008 MMI Year 2008, 2009	AY 2009 MMI Year 2009, 2010
Contusion	8.7%	8.7%	7.4%	5.3%
Fracture	11.9%	11.3%	9.3%	9.1%
Sprain	7.9%	7.9%	6.4%	5.1%
Strain	7.4%	7.4%	6.2%	5.7%

Again, we make no distinction between whole person and part of body ratings. Based on the results in Table 17, the average impairment rating decreased for each of these types of nature of injury claims between those rated under the fifth edition (Accident Years 2006 and 2007) and the sixth edition (Accident Years 2008 and 2009).

The results from the analysis above for Tennessee do indicate a decrease in the average impairment rating due to a switch from the fifth edition to the sixth edition.

### NEW MEXICO

New Mexico also switched from the fifth edition to the sixth edition of the *AMA Guides*. In New Mexico, PPD benefits are based on a disability rating, which is determined by modifying the impairment rating. In making a determination of the final PPD award, the following factors are taken into consideration:

- Employee's age
- Educational background
- Physical capacity modification

If a worker returns to work at a wage equal to or greater than the pre-injury wage after reaching MMI, the impairment rating is not subject to these modifications.

<sup>17</sup>  $-9\% = [(6.9 * 848 + 6.3 * 721) / (848 + 721) / (7.5 * 915 + 7.0 * 905) / (915 + 905)] - 1$

<sup>18</sup>  $-18\% = [(5.1 * 1145 + 4.9 * 1003) / (1145 + 1003) / (6.1 * 995 + 6.1 * 1077) / (995 + 1077)] - 1$

<sup>19</sup>  $-16\% = [(7.2 * 426 + 6.2 * 347) / (426 + 347) / (7.7 * 344 + 8.3 * 388) / (344 + 388)] - 1$

## Impact on Impairment Ratings from the American Medical Association's Sixth Edition of the *Guides to the Evaluation of Permanent Impairment*

For the New Mexico analysis, claims records were supplied by the New Mexico Workers' Compensation Administration. After data cleansing, the data set comprised 1,536 permanent partial disability (PPD) lost-time claims with dates of injury between (and inclusive of) January 1, 2003 and December 31, 2009, evaluated as of May 2011. While individual claim records were detailed, the New Mexico data set was the smallest of the three states included in our analysis. The detailed claim records included claim characteristics such as age, gender, preinjury weekly wage, accident date, maximum medical improvement date, part of body, and nature of injury.

According to New Mexico's statutes, the edition of the *AMA Guides* that is used to evaluate impairment is that edition which is in effect *when the impairment rating is made*<sup>20</sup> (NMSA 1978 Sec. 52-1-24).

As in the previous two analyses, we observe the average impairment/disability rating<sup>21</sup> for the same relative accident years when the claimant achieved MMI. Since New Mexico differentiates between impairments based on part of body and whole person, we also make that distinction:

**TABLE 18 [NEW MEXICO]:**

		Fifth Edition		Sixth Edition	
	Rating Type	MMI Year 2006 Accident Years 2004–2006	MMI Year 2007 Accident Years 2005–2007	MMI Year 2008 Accident Years 2006–2008	MMI Year 2009 Accident Years 2007–2009
<b>Average Rating</b>	Part of Body	15.8%	15.9%	16.5%	13.2%
	Whole Person	14.8%	15.7%	10.3%	10.4%
<b># of Claims</b>	Part of Body	179	130	92	81
	Whole Person	133	103	86	71

It is interesting to note that the average impairment rating based on whole person decreased by 32%<sup>22</sup> when comparing MMI years 2006 and 2007 (fifth edition) to MMI years 2008 and 2009 (sixth edition) whereas the decline based on part of body over the same time frame was a more modest 6.0%.<sup>23</sup>

<sup>20</sup> Since rating date was not available, the date of maximum medical improvement (MMI) was used (since it was assumed that the rating would soon follow after a determination of MMI).

<sup>21</sup> Data from New Mexico Workers' Compensation Administration did not distinguish between impairment ratings versus those that were modified (i.e., disability rating). For ease of reference, we use "impairment rating" in place of "impairment/disability rating." Since NCCI did not have the ability to separately identify the different impairment rating bases, changes in the average "impairment ratings" are likely impacted by distributional changes in the types of ratings (i.e. impairment versus disability).

<sup>22</sup>  $-32\% = [(10.3 * 86 + 10.4 * 71) / (86 + 71) / (14.8 * 133 + 15.7 * 103) / (133 + 103)] - 1$

<sup>23</sup>  $-6\% = [(16.5 * 92 + 13.2 * 81) / (92 + 81) / (15.8 * 179 + 15.9 * 130) / (179 + 130)] - 1$

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For a more detailed breakdown of average impairment ratings by accident year within each MMI year, see Table 6 in Appendix A.

When we observe the average rating for **all accident years** by MMI year, as shown in Table 19 below, we observe similar changes:

**TABLE 19 [NEW MEXICO]:**

		All Accident Years			
		Fifth Edition		Sixth Edition	
	Rating Type	MMI Year 2006	MMI Year 2007	MMI Year 2008	MMI Year 2009
<b>Average Rating</b>	Part of Body	15.9%	15.9%	17.3%	13.0%
	Whole Person	16.2%	16.1%	11.1%	11.8%
<b>Total PPD Claims</b>	Part of Body	188	141	102	87
	Whole Person	150	112	98	80

Given the magnitude of the changes in the average ratings in New Mexico over the time period studied, these values do appear to indicate an overall decrease in the average rating for claims rated under the sixth edition compared to the fifth edition. Note, however, that the average impairment rating based on part of body, as shown in Tables 18 and 19, increased from MMI year 2007 to MMI year 2008. When evaluating the year-to-year changes in the average impairment ratings, some consideration should be given to the relatively small number of claim records used in the New Mexico analysis and the potential variability of year-to-year results.

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We are again interested in seeing what, if any, changes took place in the average impairment ratings while using the fifth edition. To the extent that year-to-year variability in the average rating is relatively small under the fifth edition, any variability in the average rating from the fifth edition to the sixth edition may indicate that the switch in editions was the main reason for the variability. Given the variability of results in Table 20 below and comparing these results with the changes observed in Tables 18 and 19, there is less certainty that the change in the average ratings from the fifth edition to the sixth edition were due solely to the change in editions.

**TABLE 20 [NEW MEXICO]:**

<b>Rating Type</b>	<b>Average Impairment Rating—Fifth edition</b>			
	MMI Year 2004 AYs 2002–2004	MMI Year 2005 AYs 2003–2005	MMI Year 2006 AYs 2004–2006	MMI Year 2007 AYs 2005–2007
Part of Body	14.0	13.8	15.8	15.9
Whole Person	11.0	15.5	14.8	15.7

As we did previously, we isolated the changes in impairment ratings by part of body in order to determine if some types of injuries were impacted more than others.

**TABLE 21 [NEW MEXICO]:**

<b>Part of Body</b>	<b>Average Impairment Rating</b>			
	<b>Fifth Edition</b>		<b>Sixth Edition</b>	
	MMI Year 2006 AYs 2004–2006	MMI Year 2007 AYs 2005–2007	MMI Year 2008 AYs 2006–2008	MMI Year 2009 AYs 2007–2009
Shoulder	12.0	12.1	7.3	11.9
Knee	9.5	11.1	15.2	10.2
Lower Back	17.5	16.5	10.8	6.2

While the variability in the average ratings for shoulder and knee injuries does not allow us to draw a definitive conclusion regarding the impact of the switch to the sixth edition, the results do indicate a decrease in the average impairment rating for lower back injuries as a result of the switch to the sixth edition.



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This decrease in the average rating for lower back injuries is also supported by changes in the average whole person impairment rating where the nature of injury is “sprains, strains, tears,” as shown in Table 22:

**TABLE 22 [NEW MEXICO]:**

		Average Impairment Rating			
		Fifth Edition		Sixth Edition	
Nature of Injury	Type of Rating	MMI Year 2006 AYs 2004–2006	MMI Year 2007 AYs 2005–2007	MMI Year 2008 AYs 2007–2008	MMI Year 2009 AYs 2008–2009
Sprains, Strains, Tears	Part of Body	11.7	12.1	13.3	10.4
	Whole Person	13.5	16.2	8.8	7.4

Overall, the results from New Mexico appear to indicate a decrease in the average impairment rating due to a switch from the fifth edition to the sixth edition.

## CONCLUSION

The results of this study provide evidence that a decrease in the average impairment rating is realized when a state switches from the fifth edition to the sixth edition of the *AMA Guides*, all else being equal. After controlling for claim maturity, the three states studied show:

- In Montana, the average impairment decreased by approximately 28%
- In Tennessee, the average impairments decreased by approximately 25% and 16% for whole body and part of body, respectively
- In New Mexico, the average impairments decreased by approximately 32% and 6% for whole body and part of body, respectively

However, given the change in the average impairment ratings for states that did not switch editions, the overall impact from the switch to the sixth edition is likely less than the impacts noted above (since some of the impact is likely the result of factors unrelated to the switch in editions).

Additionally, a comparison of average impairment ratings may be made more difficult as a result of a different mix of ratable injuries under each edition. For example, injuries such as migraine headaches and mental injuries are ratable injuries under the sixth edition whereas they are not ratable under the fifth edition. To the extent that such

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ratings are captured in the data under the sixth edition, their presence may be impacting the average impairment rating and thus overstating the impact of the sixth edition.<sup>24</sup>

In terms of the impact on PPD indemnity costs, the impact on a state's workers compensation costs will vary based on changes in the average impairment and/or disability ratings, along with the percentage of statewide benefits attributable to PPD benefits.

To the extent that the impact from such a change can be quantified, as with other statutory benefit reforms, its impact can be properly reflected in the ratemaking process. However, given the wide variation among states in the benefit structure, impairment determinations, and delivery systems, a change in the use of the *AMA Guides* from the fifth to the sixth edition can result in significantly different results from the states studied.

NCCI is unable to provide a one-size-fits-all approach to quantifying the impact from a switch to the sixth edition of the *AMA Guides*. Going forward, NCCI will evaluate each state individually to determine whether quantification of an impact from a change in the *AMA Guides* is possible.

NCCI continues to look for ways to enhance the products and services available to workers compensation stakeholders. In the meantime, we hope this research provides some insight into the impact of switching from the fifth edition to the sixth edition of the *AMA Guides* on workers compensation benefits.

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<sup>24</sup> The overall impact on the average impairment rating from injuries that are ratable under the sixth edition that were not ratable under the fifth edition is not expected to be significant based on an analysis of Tennessee claims data. Specifically, when looking to identify possible migraine claims, there were very few claims that included "head" as the *part of body* under either the fifth or sixth editions. Similarly, for "mental injury" claims, there were few claims with "mental stress," "mental disorder," or "mental injury" as the *nature of injury* under either the fifth edition or sixth edition.

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**APPENDIX A**

**Table 1. Distribution of Claims by Accident Year \***

<b>Accident Year</b>	<b>Montana</b>	<b>Tennessee</b>	<b>New Mexico</b>
<b>2003</b>	348	n/a	339
<b>2004</b>	361	8125	402
<b>2005</b>	374	8017	358
<b>2006</b>	390	7128	261
<b>2007</b>	448	7119	176
<b>2008</b>	429	6551	134
<b>2009</b>	113	4835	44

\* Total claim counts may not match those from state-specific analyses since those claims were further restricted by MMI Year.

**Table 2. Distribution of Claims by Gender**

	<b>Montana</b>		<b>Tennessee</b>		<b>New Mexico</b>	
<b>Accident Year</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
<b>2003</b>	54.8%	45.2%	n/a	n/a	58.9%	41.1%
<b>2004</b>	64.5%	35.5%	64.9%	35.1%	61.4%	38.6%
<b>2005</b>	58.2%	41.8%	66.9%	33.1%	62.8%	37.2%
<b>2006</b>	54.8%	45.2%	65.7%	34.3%	67.0%	33.0%
<b>2007</b>	58.4%	41.6%	65.6%	34.4%	66.9%	33.1%
<b>2008</b>	59.8%	40.2%	65.9%	34.1%	64.2%	35.8%
<b>2009</b>	54.5%	45.5%	66.7%	33.3%	75.0%	25.0%

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**Table 3. Distribution of Claims by Age**

	<b>Montana</b>			
<b>Age Group</b>	<b>AY 2006</b>	<b>AY 2007</b>	<b>AY 2008</b>	<b>AY 2009</b>
<b>&lt;=19</b>	0.3%	0.4%	0.5%	—
<b>20-29</b>	5.4%	9.6%	8.4%	9.7%
<b>30-39</b>	12.6%	12.1%	17.2%	15.0%
<b>40-49</b>	29.5%	24.3%	23.1%	19.5%
<b>50-64</b>	43.8%	45.1%	45.2%	49.6%
<b>&gt;=65</b>	8.5%	8.5%	5.6%	6.2%

	<b>Tennessee</b>			
<b>Age Group</b>	<b>AY 2006</b>	<b>AY 2007</b>	<b>AY 2008</b>	<b>AY 2009</b>
<b>&lt;=19</b>	0.7%	0.6%	0.5%	0.4%
<b>20-29</b>	9.9%	9.8%	9.5%	9.0%
<b>30-39</b>	21.0%	20.8%	20.6%	20.3%
<b>40-49</b>	31.1%	31.9%	29.6%	29.9%
<b>50-64</b>	33.5%	33.4%	36.1%	36.5%
<b>&gt;=65</b>	3.8%	3.5%	3.8%	3.9%

	<b>New Mexico</b>			
<b>Age Group</b>	<b>AY 2006</b>	<b>AY 2007</b>	<b>AY 2008</b>	<b>AY 2009</b>
<b>&lt;=19</b>	1.5%	1.7%	—	4.5%
<b>20-29</b>	13.0%	15.9%	6.7%	15.9%
<b>30-39</b>	22.6%	10.2%	23.9%	20.5%
<b>40-49</b>	27.2%	29.5%	35.1%	36.4%
<b>50-64</b>	33.3%	38.1%	29.1%	20.5%
<b>&gt;=65</b>	2.3%	4.5%	5.2%	2.3%

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**Table 4. Average Impairment Rating by Accident Year Within MMI Year—  
Montana**  
*(as summarized in Table 5)*

	<b>Average Impairment Rating</b>			
	<b>Fifth Edition</b>		<b>Sixth Edition</b>	
	<b>MMI Year 2006</b>	<b>MMI Year 2007</b>	<b>MMI Year 2008</b>	<b>MMI Year 2009</b>
<b>Accident Year</b>				
2004	8.5%	—	—	—
2005	7.1%	8.7%	—	—
2006	5.8%	6.8%	7.0%	—
2007	—	6.1%	5.0%	6.2%
2008	—	—	3.5%	5.1%
2009	—	—	—	3.8%
<b>Total</b>	<b>7.1%</b>	<b>7.0%</b>	<b>5.0%</b>	<b>5.1%</b>

	<b>Claim Counts</b>			
	<b>Fifth Edition</b>		<b>Sixth Edition</b>	
	<b>MMI Year 2006</b>	<b>MMI Year 2007</b>	<b>MMI Year 2008</b>	<b>MMI Year 2009</b>
<b>Accident Year</b>				
2004	71	—	—	—
2005	174	75	—	—
2006	61	205	82	—
2007	—	79	226	143
2008	—	—	96	333
2009	—	—	—	113
<b>Total</b>	<b>306</b>	<b>359</b>	<b>404</b>	<b>589</b>

**Impact on Impairment Ratings from the  
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**Table 5. Average Impairment Rating by MMI Year Within Accident Year—  
Tennessee**

(as summarized in Table 12)

		<b>Average Impairment Rating</b>			
		<b>Fifth Edition</b>		<b>Sixth Edition</b>	
<b>MMI Year</b>	<b>Rating Type*</b>	<b>Accident Year 2006</b>	<b>Accident Year 2007</b>	<b>Accident Year 2008</b>	<b>Accident Year 2009</b>
2006	POB	11.0			
	WP	8.0			
2007	POB	10.5	10.7		
	WP	9.4	7.8		
2008	POB		10.5	9.4	
	WP		8.9	6.4	
2009	POB			9.1	8.7
	WP			7.0	5.2
2010	POB				8.6
	WP				6.7
<b>Total</b>	<b>POB</b>	<b>10.7%</b>	<b>10.6%</b>	<b>9.2%</b>	<b>8.6%</b>
	<b>WP</b>	<b>9.0%</b>	<b>8.6%</b>	<b>6.8%</b>	<b>6.2%</b>

		<b>Claim Counts</b>			
		<b>Fifth Edition</b>		<b>Sixth Edition</b>	
<b>MMI Year</b>	<b>Rating Type</b>	<b>Accident Year 2006</b>	<b>Accident Year 2007</b>	<b>Accident Year 2008</b>	<b>Accident Year 2009</b>
2006	POB	1,599			
	WP	938			
2007	POB	1,745	1,349		
	WP	1,806	814		
2008	POB		1,941	1,362	
	WP		1,996	806	
2009	POB			1,811	1,249
	WP			1,924	673
2010	POB				1,400
	WP				1,467
<b>Total</b>	<b>POB</b>	<b>3,344</b>	<b>3,290</b>	<b>3,173</b>	<b>2,649</b>
	<b>WP</b>	<b>2,744</b>	<b>2,810</b>	<b>2,730</b>	<b>2,140</b>

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**Table 6. Average Impairment Rating by Accident Year Within MMI Year—  
New Mexico**

*(as summarized in Table 18)*

Accident Year	Rating Type	Average Impairment Rating			
		Fifth Edition		Sixth Edition	
		MMI Year 2006	MMI Year 2007	MMI Year 2008	MMI Year 2009
2004	POB	20.1			
	WP	18.4			
2005	POB	13.8	21.0		
	WP	15.4	22.9		
2006	POB	17.7	15.6	24.6	
	WP	10.2	13.4	11.2	
2007	POB		13.4	17.0	17.1
	WP		13.1	8.3	13.2
2008	POB			13.3	13.2
	WP			16.0	9.6
2009	POB				12.0
	WP				10.3
<b>Total</b>	<b>POB</b>	<b>15.8%</b>	<b>15.9%</b>	<b>16.5%</b>	<b>13.2%</b>
	<b>WP</b>	<b>14.8%</b>	<b>15.7%</b>	<b>10.3%</b>	<b>10.4%</b>

Accident Year	Rating Type	Claim Counts			
		Fifth Edition		Sixth Edition	
		MMI Year 2006	MMI Year 2007	MMI Year 2008	MMI Year 2009
2004	POB	18			
	WP	26			
2005	POB	99	20		
	WP	76	25		
2006	POB	62	76	10	
	WP	31	65	13	
2007	POB		34	50	10
	WP		13	56	13
2008	POB			32	42
	WP			17	43
2009	POB				29
	WP				15
<b>Total</b>	<b>POB</b>	<b>179</b>	<b>130</b>	<b>92</b>	<b>81</b>
	<b>WP</b>	<b>133</b>	<b>103</b>	<b>86</b>	<b>71</b>

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**APPENDIX B—AMA Guides by State<sup>25</sup>**

<b>State</b>	<b>Edition Most Commonly Used</b>	<b>Statute/Code</b>	<b>Comments</b>
AK	6th	<a href="#">AK S. §. 23.30.190</a>	Statutes state new edition to be adopted by board within 90 days of the last day of the month when the new edition is published.
AL	4th	<a href="#">AL § 480-5-5-.35</a>	The 4th Edition is the "recommended guide" to be used by physicians.
AR	4th	Workers' Compensation Commission <a href="#">Rule 099.34 - Impairment Rating Guide</a>	Excludes any sections that refer to pain and exclusive of straight leg raising tests or range of motion tests when making physical or anatomical impairment ratings to the spine.
AZ	6th	AZ Rev. S. Ann. § <a href="#">23-1044</a> ; § <a href="#">23-1065</a> ; <a href="#">Rule R20-5-113(B)</a> of the Workers' Compensation Practice and Procedure	Use of most recent edition specified by administrative regulation. Guides are used to support medical opinion and in supplementing Arizona's statutory disability schedule.
CA	5th	<a href="#">CA Code of Reg. Title 8, Ch. 4.5 Sub Ch. 1 Art. 7</a>	Schedule for Rating Permanent Disability, an impairment-based rating system which is based on the 5th edition and modifies ratings based on adjustments for Future Earning Capacity, occupational demands and age. 5th adopted as of January 1, 2005.
CO	3rd revised	<a href="#">Colo. Rev. Stat. § 8-42-101</a>	Legislation maintains the use of the 3rd edition revised.
CT	6th	<a href="#">Public Meeting of the Workers' Compensation Commissioners</a>	The physician who is doing a rating must use an "objective" standard. The state recommends use of the <i>AMA Guides</i> but specifically does not require use of a specific edition.
DC		DC Code: 32-1508 (3)(U-i)	Not mandated: "... the most recent edition of the <i>American Medical Association's Guides to the Evaluation of Permanent Impairment</i> may be utilized..." Impairments are not based on whole body; spine is not rated (based on wage loss)—based on comments received from system stakeholders.
DE	5th	<a href="#">Title 19, Ch. 23</a>	Not required by statute but are strongly favored including in case law.
FL	State specific	1996 Florida Uniform Permanent Impairment Rating Schedule <a href="#">69L-7.604</a>	State specific guide, however incorporated some principles from the Fourth. Not anticipating use of <i>AMA Guides</i> .

<sup>25</sup> Based on information from [www.impairment.com](http://www.impairment.com), as accessed in December 2011.



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State	Edition Most Commonly Used	Statute/Code	Comments
GA	5th	<a href="#">GA Code Ann. § 34-9-263(d)</a> (Ch. 9 Art. 37)	5th edition adopted as of July 1, 2001.
HI	5th		Adopted the 5th edition in 2003. Also use a schedule and rules for rating nonscheduled disability.
IA	5th	<a href="#">IA Code, §876-2.4(85)</a>	Adopted for determining permanent partial disabilities under Iowa Code section 85.34(2) "a" to "s." "Nothing in this rule shall be construed to prevent the presentations of other medical opinions or guides or other material evidence for the purpose of establishing that the degree of permanent disability to which the claimant would be entitled would be more or less than the entitlement indicated in the <i>AMA Guides</i> ." Deferred going to the 6th edition.
ID	5th		Uses the 5th edition as medical evidence, neither regulation nor state require it.
IL	6th	<a href="#">820 ILCS § 305/1</a>	Moved to the 6th Edition for injuries suffered on 9/1/11 or thereafter.
IN	6th	<a href="#">Guide To Indiana Workers' Compensation</a>	The Guide to Indiana Workers' Compensation states: "Physicians use the <i>American Medical Association's Guides to the Evaluation of Permanent Impairment</i> in evaluating the employee's impairment rating."
KS	4th	<a href="#">KS Stat. § 44-510d</a> , <a href="#">KS Stat. § 44-510e</a>	Not known if later edition will be used in the future.
KY	5th	<a href="#">KY Rev. Stat. § 342.0011 (35)</a>	Specifies latest available edition, 5th edition as of March 1, 2001.
LA	6th	<a href="#">LA Rev. Stat. Ann. § 23:1221.(4)(g)</a>	Statute mandates that most recent version of the <i>Guides</i> should be utilized.
MA	6th	<a href="#">MA Gen. Law Title XXI Ch. 152, § 36</a>	Edition not specified. Incorporates <i>Guides</i> by statute, requiring its use when certain criteria are met for permanent conditions.
MD	4th	<a href="#">MD Title 14.09.04.01</a>	Changing to the 5th edition is not planned at this time.
ME	4th	WCB Rules & Regulations <a href="#">Rule 90-351</a> . ME Title 39-A, 153 § 8	4th edition specified. No plans to use 5th at this time.

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<b>State</b>	<b>Edition Most Commonly Used</b>	<b>Statute/Code</b>	<b>Comments</b>
MI	Not Specified	<a href="#">Worker's Disability Compensation Act of 1969, Section 418.361</a>	Scheduled amputations and total permanent disabilities are listed in law.
MN	State specific	<a href="#">Stat. Ch. 176.101</a>	State specific schedule of permanent partial disabilities used.
MO	Not Specified	<a href="#">Ch. 287 Rev. Stat.</a>	No guide for nonscheduled injuries, but ratings from <i>Guides</i> may be used.
MS	6th	<a href="#">Fee Schedule: IV Impairment Rating 'A'</a>	"In determining the extent of permanent impairment attributable to a compensable injury, the provider shall base this determination on the most current edition of the <i>Guides</i> ... which is in effect at the time the service is rendered."
MT	6th	<a href="#">MT Code Ann. §39-71-711(b)</a>	Current edition specified.
NC	State specific	<a href="#">NC Stat. 97, WCA 97-31</a>	Use on guides presented in the NC Workers Compensation <a href="#">Rating Guide</a> .
ND	5th	<a href="#">ND Cent Code § 65-05-12-2</a>	Guides are modified to be consistent with ND law, to resolve issues of practice and interpretation, and to address areas not sufficiently covered by the <i>Guides</i> . Subject to rules adopted under this subsection, impairments must be evaluated under the 6th edition of the <i>Guides</i> .
NE	Not Specified	<a href="#">NE Stat. § 48-121</a>	Guides not specified; however, commonly used as a predicate for disability.
NH	5th	<a href="#">NH Rev. Stat. Ann. § 281-A:32</a>	Most recent edition was previously specified; however legislation in July 2008 removed this requirement and specified ratings are to be performed by the 5th edition with the exception of workers who achieved MMI between January 1 and June 25, 2008 who will be evaluated by the 6th edition.
NJ	Not Specified	<a href="#">NJ Stat. Ann. § 34:15-12</a>	Permanent disability is based upon the objective medical evidence of a disability as well as the injured worker's testimony.
NM	6th	<a href="#">NM Stat. Ann. § 52-1-24</a>	Most recent edition specified.
NV	5th	<a href="#">NV Rev. Stat. 616C.110</a>	5th edition used as of October 2003.
NY	State specific	<a href="#">Medical Guidelines</a>	Uses own Medical Guidelines, not anticipating use of <i>Guides</i> .
OH	5th	<a href="#">OH Rev. Code § 4123</a>	

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State	Edition Most Commonly Used	Statute/Code	Comments
OK	5th	<a href="#">OK Stat. Title 85-3.19</a>	Specifies "latest publication," although 5th edition is most commonly used.
OR	State specific	<a href="#">OR Admin. Rules Ch. 436, Div. 035</a>	"Oregon does not reference any particular edition of the <i>AMA Guides</i> , nor does the usage of the <i>AMA Guides</i> for rating disability currently hold any legal standing in Oregon Workers Compensation."
PA	6th	<a href="#">34 Pa. Code § 123.105.</a>	Most recent edition specified.
RI	6th	<a href="#">RI Gen. Laws § 28-29-2</a>	In January 2011, the Sixth Edition became effective. It is specified in determining "Loss of Use." This provision applies to injuries that occur on and after January 1, 2011.
SC	Not Specified	<a href="#">SC Reg. Sec. 67-1101</a>	"The method for determining hearing impairment is based on the American Academy of Otolaryngology <i>Guide for Evaluation of Hearing Handicap</i> ."
SD	4th		"The method for determining hearing impairment is based on the American Academy of Otolaryngology <i>Guide for Evaluation of Hearing Handicap</i> ."
TN	6th	<a href="#">TN Code Ann. § 50-6-102 and 50-6-204</a>	Most recent edition specified—or "in cases not covered by the <i>AMA Guides</i> , an impairment rating by any appropriate method used and accepted by the medical community."
TX	4th	TX Lab. Code Ann. § <a href="#">408.124</a>	As of 10/15/01, 4th edition required.
UT	State specific	<a href="#">Rule 612-7-3 Method for Rating Utah's Impairment Guides</a>	For rating all impairments, which are not expressly listed in <a href="#">Section 34A-2-412</a> , the Commission adopts Utah's 2006 Impairment Guides as published by the Commission for all ratings of impairments on or after January 1, 2006. For those conditions or exclusions not found in Utah's 2006 Impairment Guides, the <i>Guides</i> are to be used.
VA	Not Specified	VI, § 65.2-503	<i>Guides</i> most often used as source of impairment rating. No specific <i>Guides</i> mentioned in statute or regulation.
VT	5th	<a href="#">VT Stat. Ann. Tit. 21, § 648</a>	<a href="#">Legislation specifies continued use of 5th Edition</a> vs. moving to the 6th Edition.
WA	5th	<a href="#">WAC 296-23-381</a> <a href="#">WAC 296-20-220</a>	State specific guidelines for certain conditions, 5th edition used for loss of function of extremities, partial loss of vision or hearing.

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<b>State</b>	<b>Edition Most Commonly Used</b>	<b>Statute/Code</b>	<b>Comments</b>
WI	State specific	<a href="#">WI Adm. Code 80.32, 80.33;</a> <a href="#">WI Stat. Ch. 102</a>	Not anticipating use of <i>Guides</i> . State specific schedules provided for rating.
WV	4th	<a href="#">WV Title §85-20-3</a>	Code specifies 4th Edition.
WY	6th	<a href="#">WY Stat § 27-14-405(g)</a>	Most recent edition specified.
USLHW	6th		Most recent edition specified.

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