

# WORKERS' COMPENSATION MEDICAL FEE SCHEDULES

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NEW FINDINGS &  
IMPLICATIONS FOR CALIFORNIA

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MEDICAL FEE SCHEDULES:  
NEW FINDINGS & IMPLICATIONS FOR CALIFORNIA

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EXECUTIVE SUMMARY

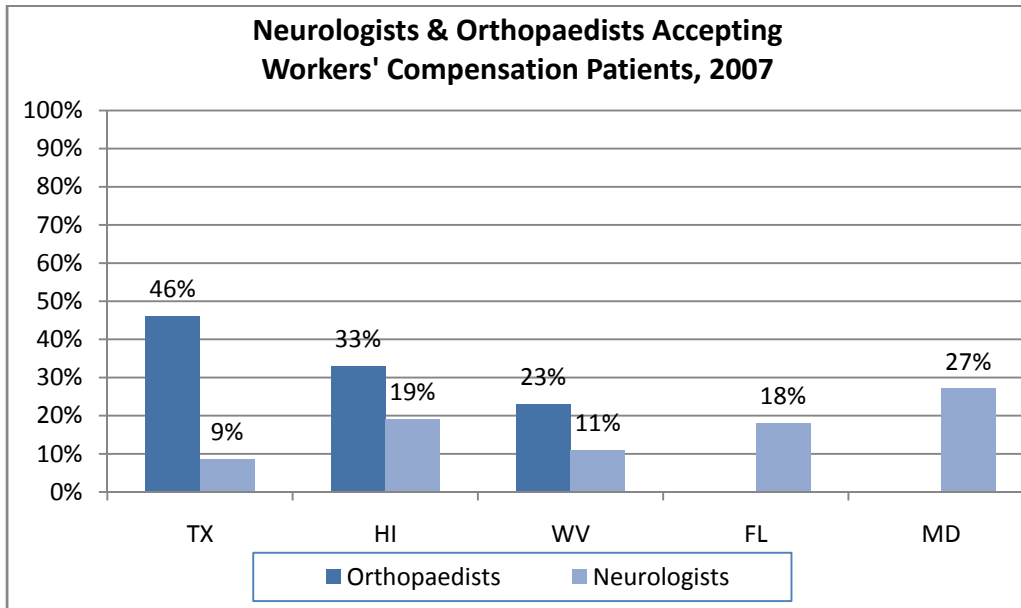
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We recently completed a comprehensive multi-state study of the impact of medical fee schedules on provider participation rates in workers' compensation systems. Specifically, the goal of the study was to determine whether the adoption of a workers' compensation medical fee schedule based on a low-multiple of the Medicare Resource-based Relative Value Scale (RBRVS) affected physicians' willingness to continue to treat workers' compensation patients.

For the purposes of this study, "low-multiple" was defined as a workers' compensation fee schedule that was at or below 125% of the Medicare RBRVS fee scale values. Five states in the country met the definition for neurologists — Florida, Hawaii, Maryland, Texas and West Virginia. Three states met the definition for orthopaedists — Texas, West Virginia and Hawaii. On January 1, 2007, Hawaii raised fees for specialists, and the present survey may overestimate specialist participation for that state. Nearly 1,400 neurologist and orthopaedist offices in these states, together with California, were included in a comprehensive telephonic survey to determine whether these doctors were accepting new workers' compensation patients. Responses were categorized as either: 1) Accepting workers' compensation patients without significant limitations, or; 2) Not accepting workers' compensation patients.

Every state that adopted a low-multiple RBRVS fee schedule demonstrated a markedly low rate of neurologist and orthopaedic participation in workers' compensation. In West Virginia, one of the states that has utilized a low-multiple RBRVS fee schedule the longest, less than a quarter of all orthopaedists and only 11% of all neurologists still accept workers' compensation patients.

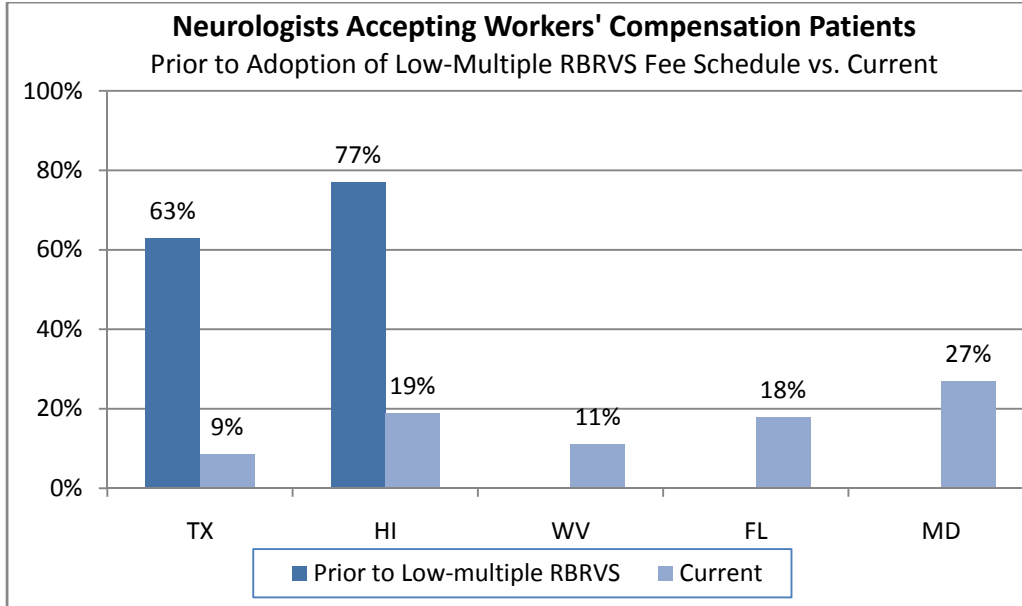
Figure 1



In the two states where pre-RBRVS and post-RBRVS data are available, there was a dramatic decline in participation with the adoption of a low-multiple RBRVS fee schedule. Neurologist

participation levels continued to decline in Hawaii more than a decade after it first adopted its low-multiple fee schedule. In Florida, where fees were raised three years ago to a low-multiple RBRVS level, participation among neurologists nevertheless continued to decline. Two states, Texas and West Virginia, now have neurologist participation rates of approximately ten percent. In contrast, participation in Texas was documented to be 63% a year before the adoption of a low-multiple (125%) RBRVS fee scale in 2003.

Figure 2



The results also demonstrate that specialist workers' compensation participation after the adoption of a low-multiple RBRVS fee schedule was strikingly less than for lower-paying alternatives such as Medicare and Medicaid. This appears largely due to additional administrative and regulatory burdens associated with workers' compensation that are not sufficiently compensated by low-RBRVS fee schedules. An analysis of physician offices in the Los Angeles metropolitan area showed that the hourly practice expense for offices accepting workers' compensation patients was 2.5 to 3 times higher than the Medicare practice expense rate.

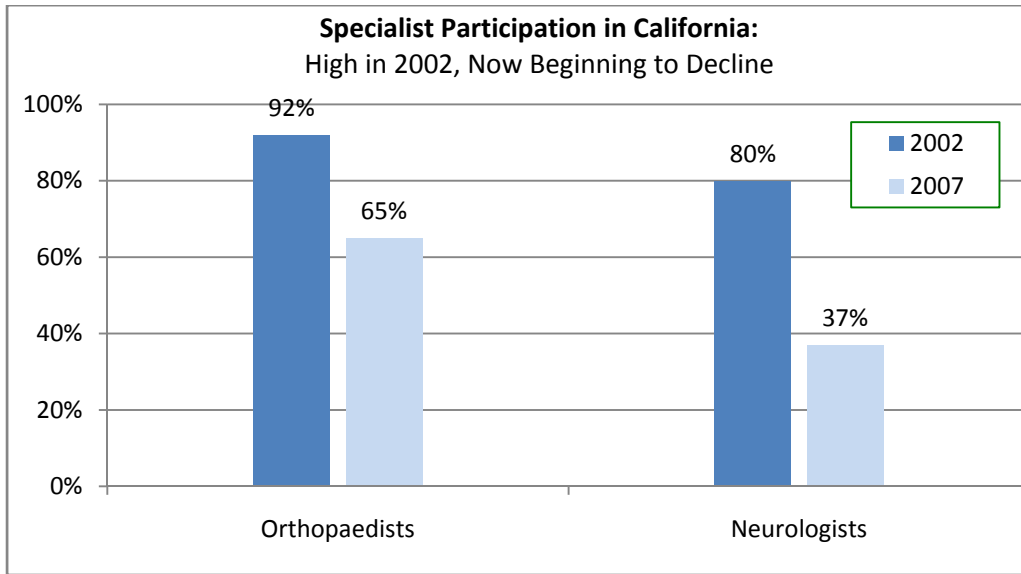
The telephonic surveys also revealed significant differences in the qualifications of neurologists who continued to treat workers' compensation patients after the adoption of a low-multiple RBRVS fee schedule. Only 33% of those who continue to accept workers' compensation patients in Texas and West Virginia attended a U.S. medical school and are board-certified, while more than 50% of those who do not accept injured workers have these qualifications.

The dramatic departure of physicians from workers' compensation systems in states with low-multiple RBRVS fee scales appears to have been precipitated in all cases by decreases in reimbursement for specialist procedures, regardless of changes in other fees. For example, in Texas, the RBRVS conversion, which dramatically lowered specialty fees, also raised office visit fees 36%. It is worth noting that of the three most recent major workers' compensation fee schedule changes (in Hawaii, Tennessee and Illinois), each of the states elected to adopt fee schedules with higher relative fees for specialty providers in order to maintain or restore provider access.

The present survey also indicates that in California, specialist participation has already begun to decline. While 92% of orthopaedists and 80% of neurologists reported accepting workers'

compensation patients in California in 2002, only 65% of orthopaedists and 37% of neurologists continue to do so in 2007.

Figure 3



Our findings suggest the need for an alternative to an unmodified low-multiple RBRVS fee schedule if medical access is to be maintained in California after the upcoming fee scale conversion to the RBRVS systems. Alternatives include 1) preserving existing specialist fees allowing gradual decreases due to inflation, while access is monitored; 2) using an RBRVS base, but with higher fees for specialty codes reflecting other fee data, as was done recently in Hawaii; and 3) using multiple RBRVS conversion factors, higher for specialty areas, as has been done in Tennessee, Oregon and many other states. Regardless of the particular approach, some modification of the RBRVS coupled with access monitoring would appear prudent. Such approaches would potentially allow implementation of a low-cost RBRVS-based fee scale for California, while reducing the likelihood of substantial declines in medical access.

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**PHYSICIAN WORKERS' COMPENSATION PARTICIPATION IN  
LOW-MULTIPLE RBRVS STATES**

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The initial phase of the research study was designed to determine whether the adoption of a workers' compensation medical fee scale that was based on a low-multiple of the Medicare resource-based relative value scale (RBRVS) schedule affected physicians' willingness to participate in that state's workers' compensation system and thereby impacted injured workers' access to care. For the purposes of this study, "low-multiple" was defined as anything at or below 125% of the Medicare RBRVS fee scale values.

According to data from the Workers' Compensation Research Institute in Cambridge, MA, five states in the country met the definition for neurologists: Texas, Florida, Maryland, West Virginia and Hawaii. Three states met the definition for orthopaedists: Texas, West Virginia and Hawaii. As the following table illustrates, these states could also provide insight into both the immediate and longer-term impacts of low-multiple RBRVS fee schedules, as two of the jurisdictions to be studied have had their RBRVS-based fee schedules in place for over a decade while three have only recently converted to this methodology.

*Table 1: States with low-multiple RBRVS-based Workers' Compensation fee schedules*

JURISDICTION	YEAR ADOPTED RBRVS-BASED FEE SCALE	CURRENT OVERALL % OF MEDICARE RBRVS	MET LOW-MULTIPLE RBRVS DEFINITION FOR
West Virginia	1994	113%	Neurologists & Orthopaedists
Hawaii	1995	110%	Neurologists & Orthopaedists
Texas	2003	125%	Neurologists & Orthopaedists
Maryland	2004	109%	Neurologists only
Florida	2005	110%	Neurologists only

Once the jurisdictions were selected, neurologists and orthopaedists practicing in those states were targeted as potential survey participants. All private practice neurologists were identified in Texas, West Virginia and Hawaii utilizing databases maintained by each state's Board of Medical Examiners. In Maryland, Florida and California, where such databases were not publically available, searches were performed using the American Academy of Neurology 2006-07 membership directory in an attempt to identify active neurologists in private practice within each respective state.

All private practice orthopaedist offices identified in Hawaii and West Virginia using the American Academy of Orthopaedic Surgeons (AAOS) 2006-07 membership directory and 411.com were contacted in addition to a random sample of 502 orthopaedist offices identified in Texas and California using the Texas Board of Medical Examiners database and the AAOS membership directory respectively. The Online telephone directory services 411.com and Yellow.com were then used to obtain current telephone numbers for all the physician offices identified.

*The conclusions and opinions expressed in this study are solely those of the authors and do not represent the views of the David Geffen School of Medicine at UCLA.*

*This study was funded in part by a contribution from the California Society of Industrial Medicine and Surgery, Inc.*

This process produced a data set of 1,398 physician offices (790 neurologist offices across six states and 608 orthopaedist offices in four states) to be surveyed. All 1,398 physician offices were contacted telephonically and asked whether the doctor was accepting new workers' compensation patients. Responses were categorized as either:

- Accepting workers' compensation patients without significant limitations, or;
- Not accepting workers' compensation patients

#### CASE STUDIES – PHYSICIAN PARTICIPATION IN TX, HI, WV, FL & MD

##### TEXAS

The Texas Workers' Compensation Commission adopted §134.202, the Medical Fee Guideline (MFG) in April 2002, with the new fee schedule officially going into effect on August 1, 2003. It was part of HB2600, a comprehensive package of workers' compensation reforms intended to control rising medical costs while also attempting to minimize the expense of administering the state workers' compensation fee schedule. Whereas the previous workers' compensation fee schedule was based on provider charge data, the new Texas MFG adopted a simple 125% of Medicare RBRVS fees across all procedure groups.

Interestingly, according to the preamble to §134.202, which officially implemented the 125% of Medicare MFG in 2002, the Workers' Compensation Commission received numerous comments expressing concern over whether the new MFG would negatively impact injured workers' access to quality healthcare in Texas.<sup>1</sup> According to the preamble,

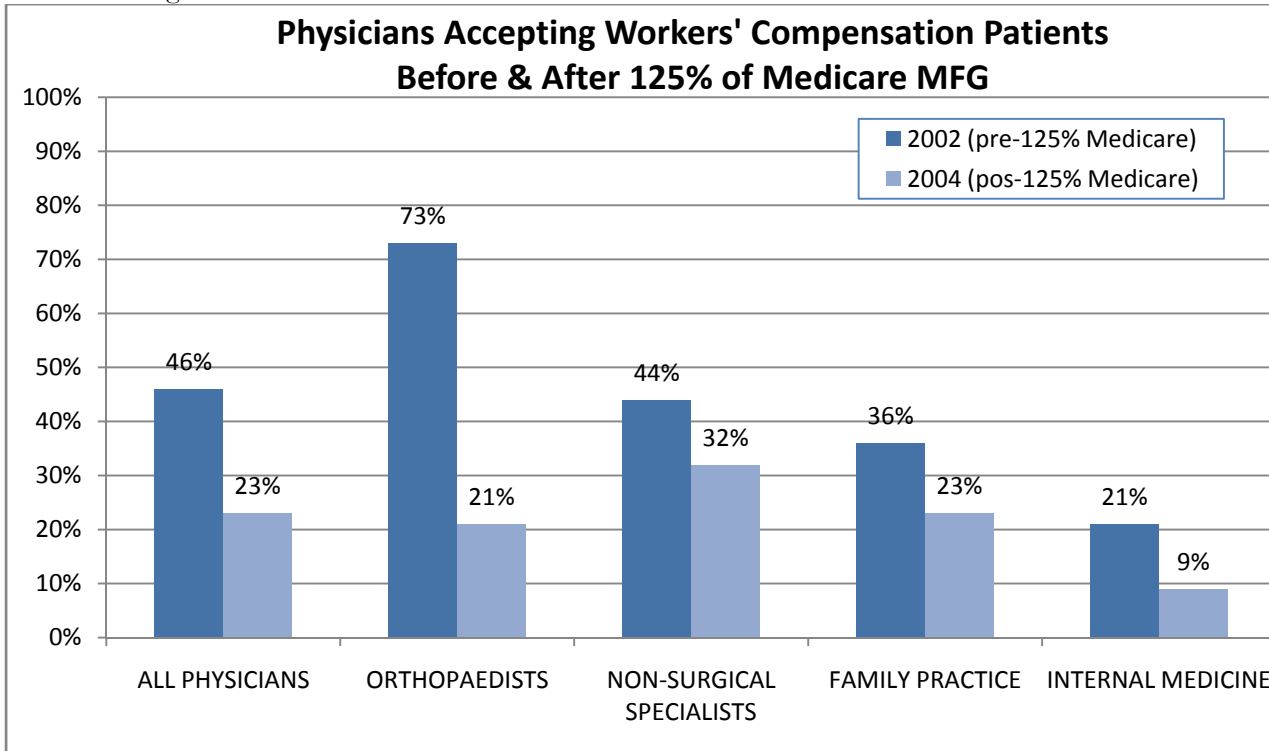
*“Commenters stated the proposed reduction in reimbursement will greatly affect the residents of Texas and impact injured employee by inhibiting care; it will be cost prohibitive to provide quality care, resulting in a lower standard of care. Commenters stated reducing reimbursement to curb costs would directly affect and jeopardize patient access to quality medical care by decreasing medical treatment options and driving ethical quality healthcare providers out of the workers' compensation system. Commenters stated healthcare providers would begin seeing more patients per hour, reducing quality of care. Commenter stated it is already difficult for injured employees to access health care. Commenters stated it would be an injustice for injured employees who will suffer emotional distress due to harassment and delays. Commenter stated the percentage of injured employees who transition from the acute to the chronic stage may increase. Commenters stated injured employees would resort to expensive care in emergency rooms or to poor health care in workers' compensation clinics or end up in the Medicaid system. Commenter stated a loss of access to quality medical care for injured employees will have a negative impact on the Texas labor pool, Texas businesses, and our economy in general.”<sup>2</sup> (Commission, 2002)*

In response to these concerns, the Workers Compensation Commission published comments prepared by the Texas Association of Business Chambers of Commerce (TABCC) which stated, “While there were expressions of concern about potential access problems, no actual access problems have been documented in any specialty. The current level of Medicare payment to physicians is sufficient to provide reasonable access to quality medical care to injured workers.”

Perhaps in response to the lack of research concerning physician access issues in Texas, two separate studies have been conducted since the adoption of the 125% of Medicare MFG. The first is a survey study now conducted bi-annually by the Texas Medical Association<sup>3</sup>. The goal of the Medical Association's surveys is a broad analysis of access issues throughout Texas and only a small portion of their survey focuses on workers' compensation. However, their workers' compensation

findings are not encouraging. As shown in the figure below, the percentage of physicians who accept workers' compensation patients has declined significantly across all specialties since the adoption of the 125% of Medicare MFG.

Figure 4

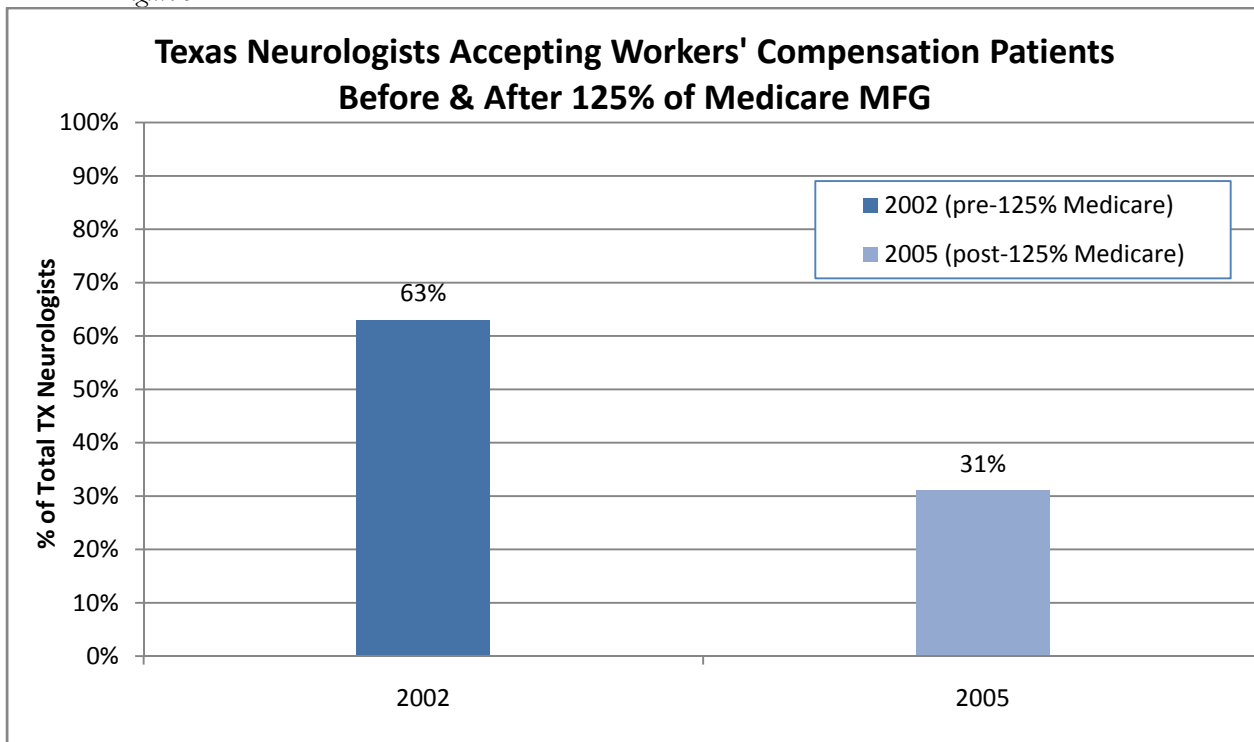


A second relevant study was conducted from December, 2004 to January 2005 by the Association of California Neurologists Workers' Compensation Committee (ACN).<sup>4</sup> The ACN study focused specifically on workers' compensation via a telephonic survey of all neurologists in Texas which specifically asked physicians if they accepted workers' compensation patients without significant limitations. If the provider's office responded that they were not accepting workers' compensation patients without significant restrictions as of the end of 2004, the survey staff then asked follow-up questions. The office was asked whether they had accepted workers' compensation patients without restrictions in 2002 (prior to the 125% of Medicare MFG) and what the most important factors were in their decision to no longer accept workers' compensation patients (reimbursement rates, administrative requirements, etc).

The ACN study of Texas neurologists yielded results that were strikingly similar to the findings of the subsequent Texas Medical Association study. As illustrated below, neurologist participation in the Texas workers' compensation system was cut in half, from 63% of all neurologists accepting injured workers in 2002 to only 31% by 2005.



Figure 5



It is worth noting that in addition to the changes to the medical fee schedule, the Texas Workers Compensation Commission introduced several administrative changes for providers as part of the HB2600 reform package. Perhaps the most important of these in terms of the potential impact on provider participation rates was a requirement that medical providers needed to apply to be on the state's "Approved Doctor List" (ADL) if they intended to treat workers' compensation patients. The primary administrative requirements for providers to be added to the Approved Doctor List were:

- The submission of a financial disclosure document that outlined the identity of any health care provider in which the doctor had a financial interest, an immediate family member of the doctor who had a financial interest, or the health care provider that employed the doctor who had a financial interest.
- The completion of a mandatory ADL training course - Level 1 training was for providers who anticipated treating 18 or fewer workers' compensation patients per year and Level 2 was for those who anticipated treating more than 18 patients per year.

While it could be argued that these additional administrative requirements played a role in the decrease in physicians willing to treat workers' compensation patients in Texas, a closer look at the actual requirements as well as the results of the ACN interviews suggest they were likely not a major factor.

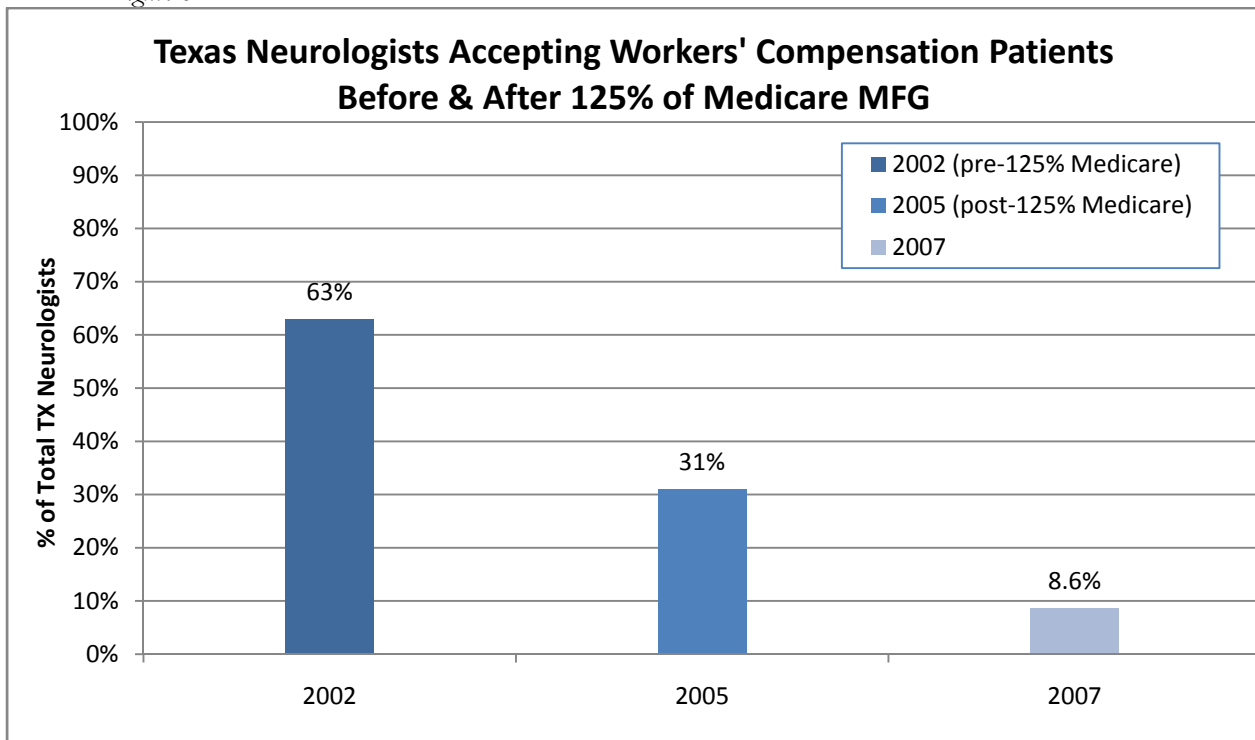
The financial disclosure statement was a straightforward two-page form that would have required less than an hour to complete. The ADL training sessions were very carefully structured to mirror the form and function of the Continuing Medical Education (CME) courses that physicians were routinely required to complete. The training courses were in fact administered jointly by the Workers' Compensation Commission and the Texas Medical Association and were offered as either one-day workshops at locations across the state or as an online training course that could be completed at the

provider's leisure. Considering the numerous financial disclosure forms and continuing education requirements with which all physicians must routinely comply, it seems unlikely that the Texas administrative requirements would have represented a significant impediment to physicians who wished to participate in the workers' compensation system.

Perhaps most telling regarding physician participation is that the ACN study specifically asked those Texas neurologists who had stopped accepting workers' compensation patients between 2002 and 2004/5 why they had done so. Sixty-three percent of those Texas neurologists who stopped seeing workers' compensation patients reported doing so either solely or primarily due to the introduction of the 125% of Medicare MFG<sup>5</sup>.

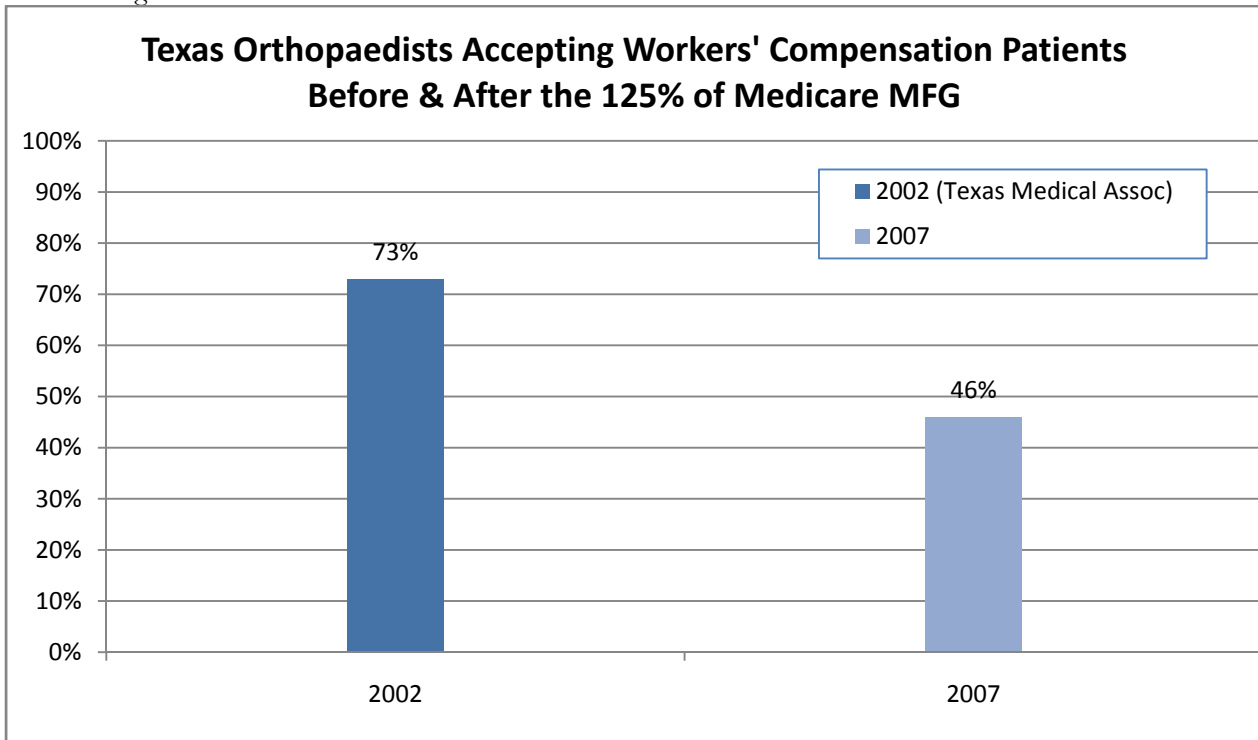
Supporting the notion that it is the fees, not any new administrative requirements that are driving neurologists out of the workers' compensation system, the present survey results suggest that neurologist participation in Texas has continued to decline sharply despite the fact that the Texas Legislature effectively relaxed the ADL administrative/training requirements for providers as part of House Bill 7 in September, 2005. Using telephonic survey methods identical to the 2005 ACN study, we found that less than 9% of all neurologists still accept Texas workers' compensation patients as of 2007.

Figure 6



The latest survey results also show a similar, though not quite as dramatic, continued decline in orthopaedist participation in the Texas Workers' Compensation system.

Figure 7



These trends are even more concerning when placed into their geographic context. According to the most recent survey data, there are now entire regions of Texas without close proximity to a neurologist willing to accept workers' compensation patients. As shown in the maps below, while there was good rural access to neurologists across the state in 2002, by 2007 most of the remaining neurologists willing to accept workers' compensation patients are limited to the major metropolitan areas of Dallas/Fort Worth, Houston and San Antonio. Over a span of only 5 years, access to neurologists for the vast majority of injured workers in Texas has evaporated.

Figure 8: Texas Neurologists Accepting Workers' Compensation Patients, 2002

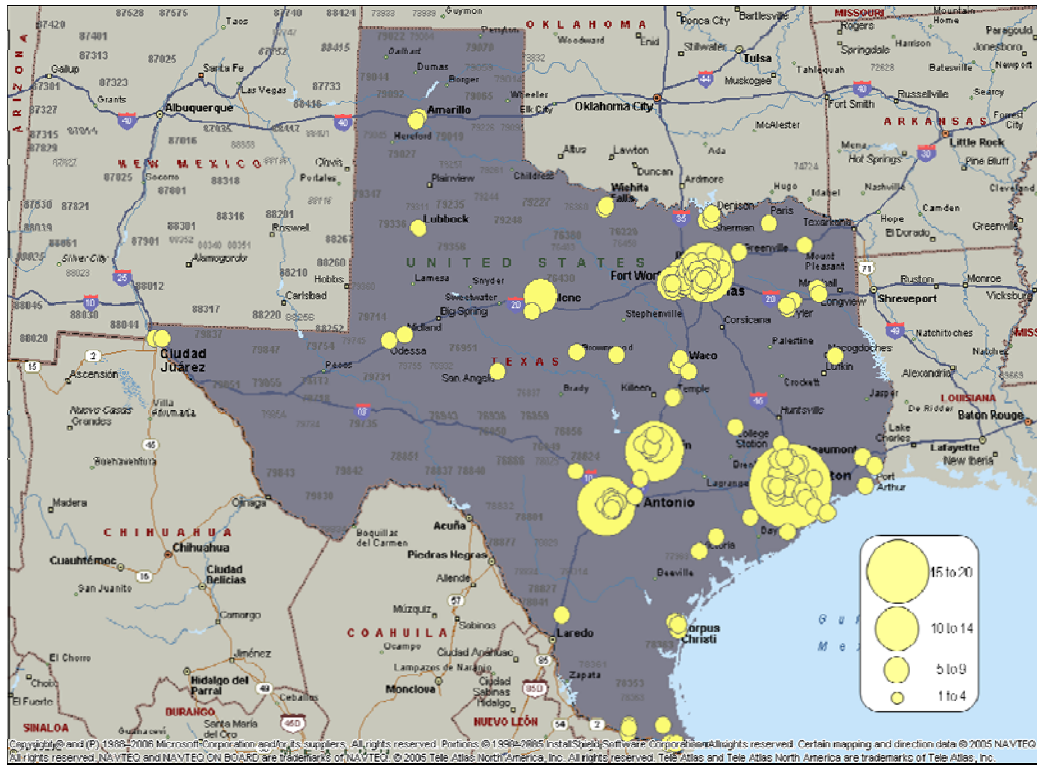
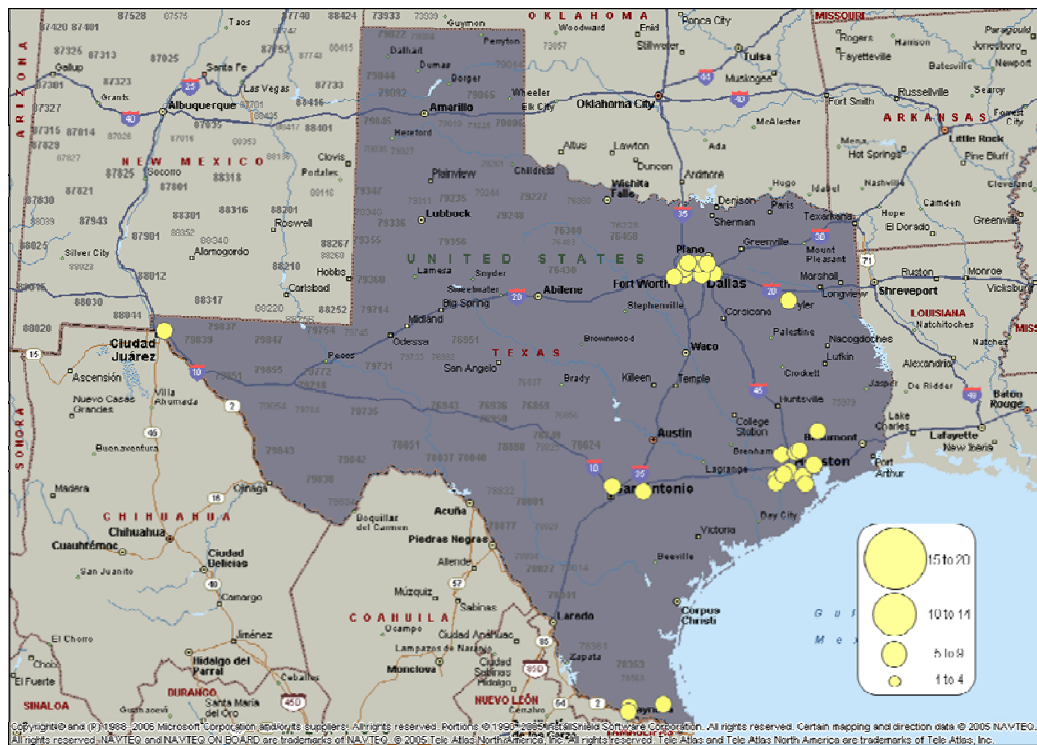


Figure 9: Texas Neurologists Accepting Workers' Compensation Patients, 2007



## HAWAII

While Texas provides evidence of a disturbing trend with regard to physician participation in the years immediately following the adoption of a Medicare-based RBRVS workers' compensation fee schedule, Hawaii offers an opportunity to study the longer term effects of such fee schedules.

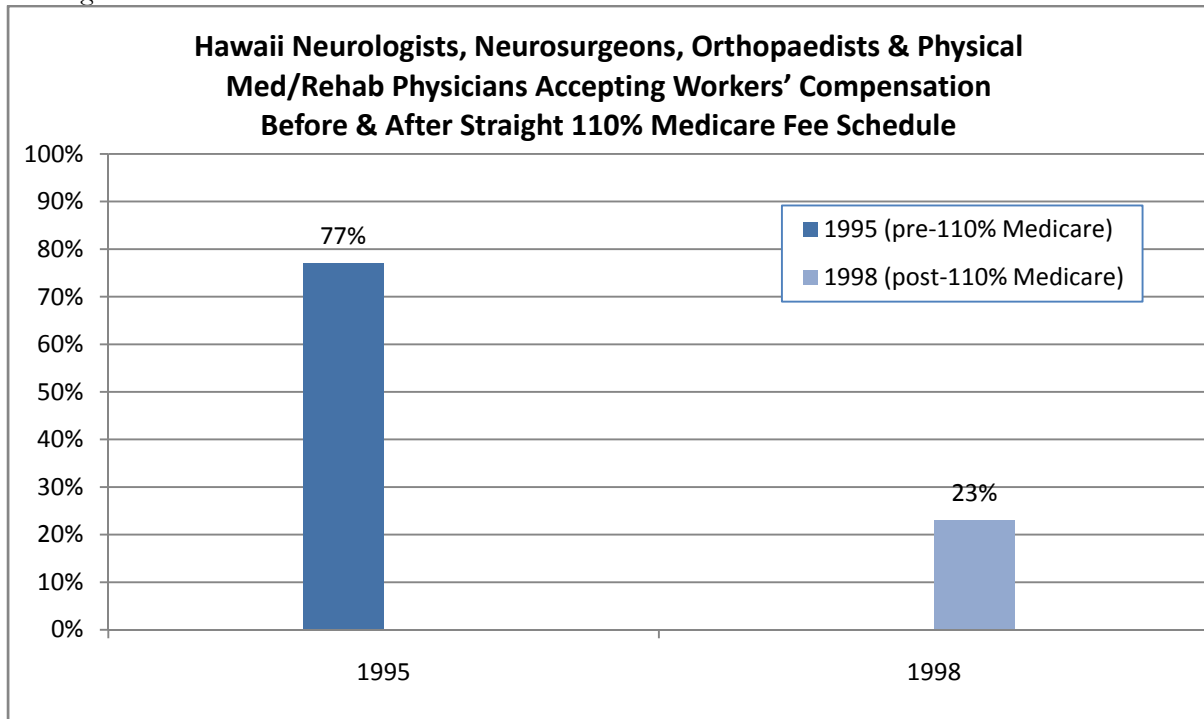
Hawaii adopted its first medical fee schedule more than 40 years ago. The state's Disability Compensation Division is responsible for developing the medical fee schedule with input from the state medical association and public comment. The fee schedule was originally based on relative values supplied by the Hawaii Medical Association, but in 1995 the system converted to a flat 110% of the state's Medicare RBRVS values.

In 1998, in response to growing concerns about injured workers' access to medical care, Hawaii's state legislature commissioned a study by the Legislative Reference Bureau to determine, "if the 110% ceiling on the workers' compensation medical fee schedule should be adjusted, whether the workers' compensation fee schedule has had a negative impact on the access to specialty care or diminished the quality of care, and what the conditions are for adjusting the fee schedule."<sup>6</sup> Completed in December of 1998, the study did find evidence that the fee schedule was having a negative impact on injured workers' access to medical care, particularly specialty care. According to the report,

*"The Bureau identified a significant trend in health care providers that is shifting away from accepting all patients with workers' compensation injuries and moving towards policies that limit or totally reject prospective patients with work-related injuries covered under the workers' compensation law. The most common reason given for this trend is the change to the medical fee schedule level of reimbursement."<sup>7</sup>*

The chart below summarizes the Reference Bureau's finding with regard to the significant decline in the percentage of Neurologists, Neurosurgeons, Orthopaedists and Physical Medicine/Rehab Physicians accepting workers' compensation patients within just three years of the adoption of the 110% of Medicare fee schedule.

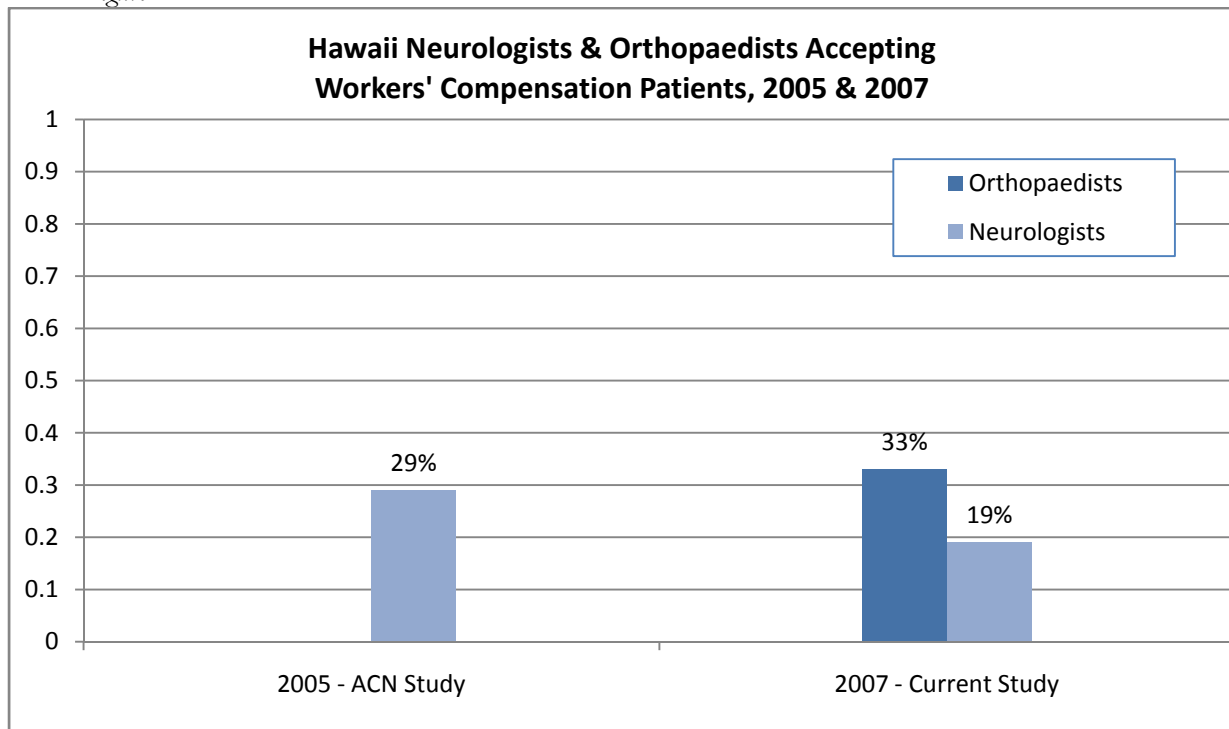
Figure 10



Perhaps the most troubling finding with regard to Hawaii is that it appears that the decline in physicians accepting workers' compensation caused by low-multiple RBRVS fee schedules is extremely long-lasting. As follow-up to their Texas study the Association of California Neurologists (ACN) interviewed all Hawaii neurologists in private practice in 2005 to assess whether workers' compensation participation levels were improving as physicians adjusted their practices to the reality of the 110% fee schedule. As the chart below illustrates, physician workers' compensation participation levels remained largely unchanged even ten years after the original fee schedule was adopted, with less than 30% of all neurologists accepting workers' compensation patients in Hawaii in 2005.

The results of the current research, in which all private practice neurologist and orthopaedist offices that could be identified in the state of Hawaii were interviewed telephonically, suggests that participation levels have dipped even further in 2007, with only 19% of neurologists and 33% of orthopaedists indicating that they still accept workers' compensation patients.

Figure 11



This decline continues in spite of a recent increase in Hawaii's workers' compensation neurological procedure fees (announced in September 2006, effective 1/1/2007). The orthopaedist portion of the study was conducted in June 2007, nearly six months after specialist fees were raised, and may significantly overstate orthopaedist participation that existed in 2006 under the 110% of Medicare regime.

Some of the arguments presented in the original Reference Bureau study<sup>8</sup> and even in the preamble to the Texas Medical Fee Guide<sup>9</sup>, suggested that although specialists appeared to be leaving the workers' compensation system immediately after the adoption of the low-multiple RBRVS fee schedule, they would return once they had adapted their practices and/or treatment patterns to the reality of the new rates. This look at the long term impact of low-multiple RBRVS fee schedules would appear to refute that notion and instead suggests that once physicians choose to exit the workers' compensation system, they are unlikely to return while the fee schedule remains unchanged.

#### WEST VIRGINIA

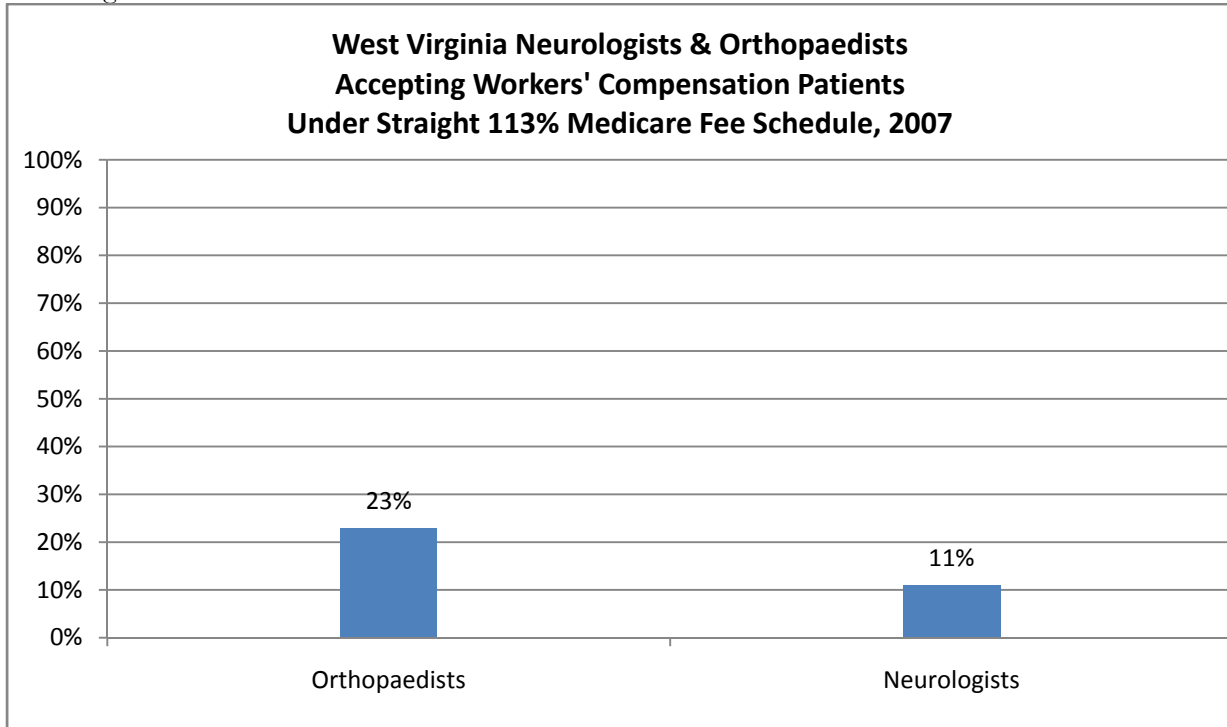
The state of West Virginia offers another potential look at the long term effect of low-multiple RBRVS fee schedules on physician's willingness to participate in the workers' compensation system. West Virginia implemented its first workers' compensation medical fee schedule in April 1988, but changed to a resource-based relative value scale in November 1994. The fee schedule is managed by the state's Workers' Compensation Division (WCD), which most recently moved to a straight 113% of Medicare effective 1/1/2006.

Until recently, West Virginia has also had the relatively unique distinction of being a monopolistic workers' compensation system – a state with only a single workers' compensation carrier, the West Virginia Workers' Compensation Fund. In effect, the Fund (a part of the state's Workers' Compensation Division) was the only source of workers' compensation insurance to employers in the state. This meant that medical providers had to deal with only a single payer when

submitting medical bills for treatment of injured workers, minimizing a significant portion of the administrative complexity usually attributed to the claims payment process in workers' compensation.

Nevertheless, even though the administrative burden was less, our most recent provider surveys found that similar to Hawaii, another state that has been using a low-multiple RBRVS fee scale for more than ten years, less than twenty-five percent of the private practice orthopaedist offices in West Virginia still accept workers' compensation patients. Perhaps even more striking, the number of neurologists still willing to treat workers' compensation patients in West Virginia as of 2007 has declined to only 11%.

Figure 12



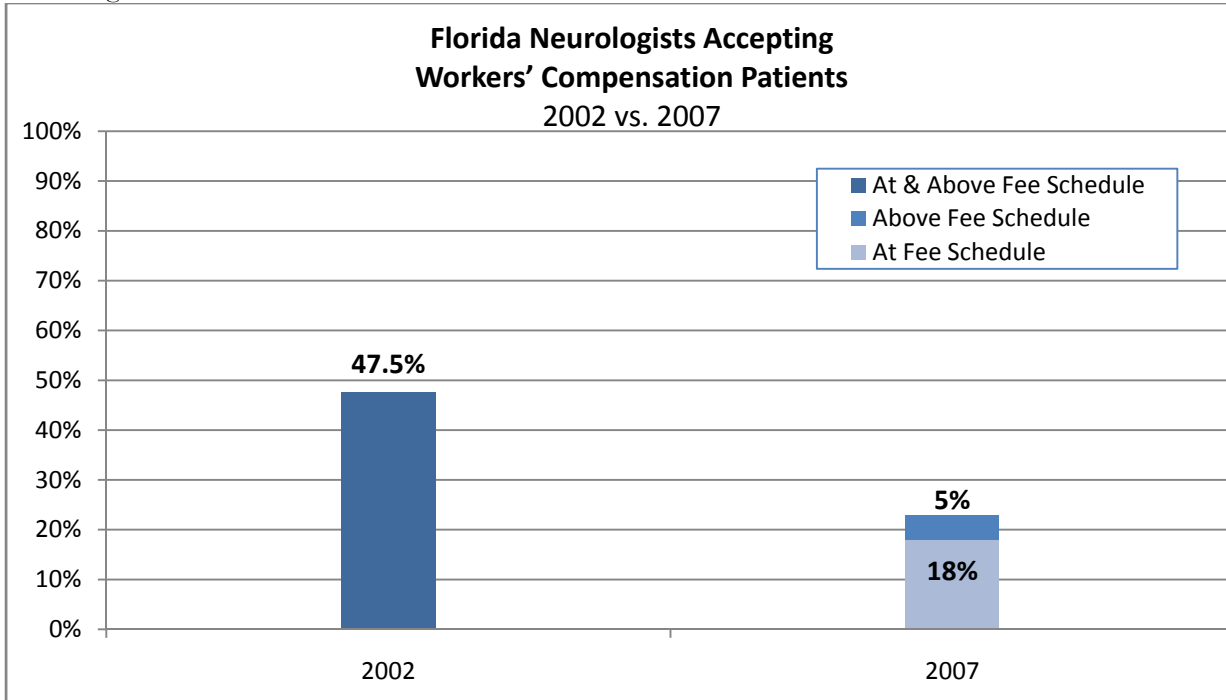
#### FLORIDA

Florida provides a slightly different example of a state that recently turned to a low-multiple RBRVS fee schedule in an attempt to actually improve its' provider reimbursements. Florida had been using a resource-based relative value scale managed by the Department of Insurance to set maximum medical reimbursement levels in workers' compensation since 1993. This fee schedule system actually yielded some of the lowest unit cost reimbursement rates to providers treating workers' compensation patients in the country – estimated at only 83% of the Medicare RBRVS rates. However, Florida's workers' compensation costs continued to rise and as a result, in 2003 the governor appointed a commission to review the entire system and make recommendations designed to address the major cost drivers. With regard to medical reimbursement levels, the governor's commission recommended increasing fees to a straight 150% of Medicare values in order to improve and maintain injured workers' access to care. However, the bill ultimately passed by the Florida legislature in May of 2003 opted instead to set surgical procedures at 140% of Medicare and all other procedures at 110% of Medicare.



A telephonic survey of neurologists practicing in the state of Florida in 2002 conducted by the HJH Group in Tampa, FL determined that 47.5% of all neurologists were accepting workers' compensation patients under the previous fee schedule.<sup>10</sup> Interviews conducted in March of 2007 found that neurologist participation in the workers' compensation system had fallen to just 23% after the adoption of the 110% Medicare RBRVS schedule. In fact, 5% of the neurologists surveyed in 2007 disclosed that they only accepted workers' compensation patients if the payer agreed to reimburse them at rates above the official fee schedule. This means that the number of neurologists actually willing to treat Florida injured workers' at the rates specified by the fee schedule has fallen to only 18%.

Figure 13

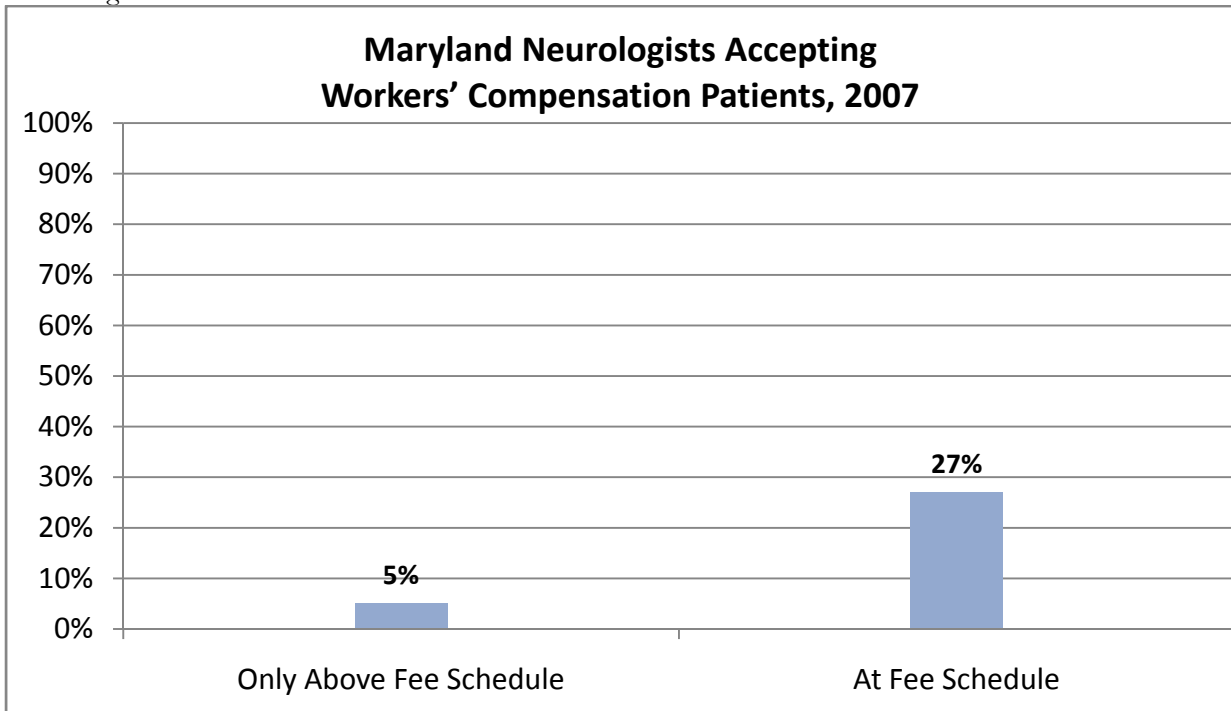


## MARYLAND

Maryland represents the final state that has adopted a low-multiple RBRVS fee scale for workers' compensation. Maryland actually based its first workers' compensation medical fee schedule on the California Relative Value Study (CRVS), with a fee schedule committee responsible for updating the relative values and conversion factors bi-annually. In 2004, Maryland replaced the CRVS-based fee schedule with one set at 109% of the Medicare RBRVS values. Effective February 2006, Maryland has increased the reimbursement rate for Orthopedic and Neurosurgical procedures to 144% of Medicare, while all other procedures remain at 109% of Medicare.

While no historical data is available for Maryland providers, the 2007 survey data suggests a similar pattern to the other states studied. Twenty-seven percent of neurologists are willing to treat workers' compensation patients at the low-multiple RBRVS rates. Another 5% will accept injured workers only for fees above the official state fee schedule.

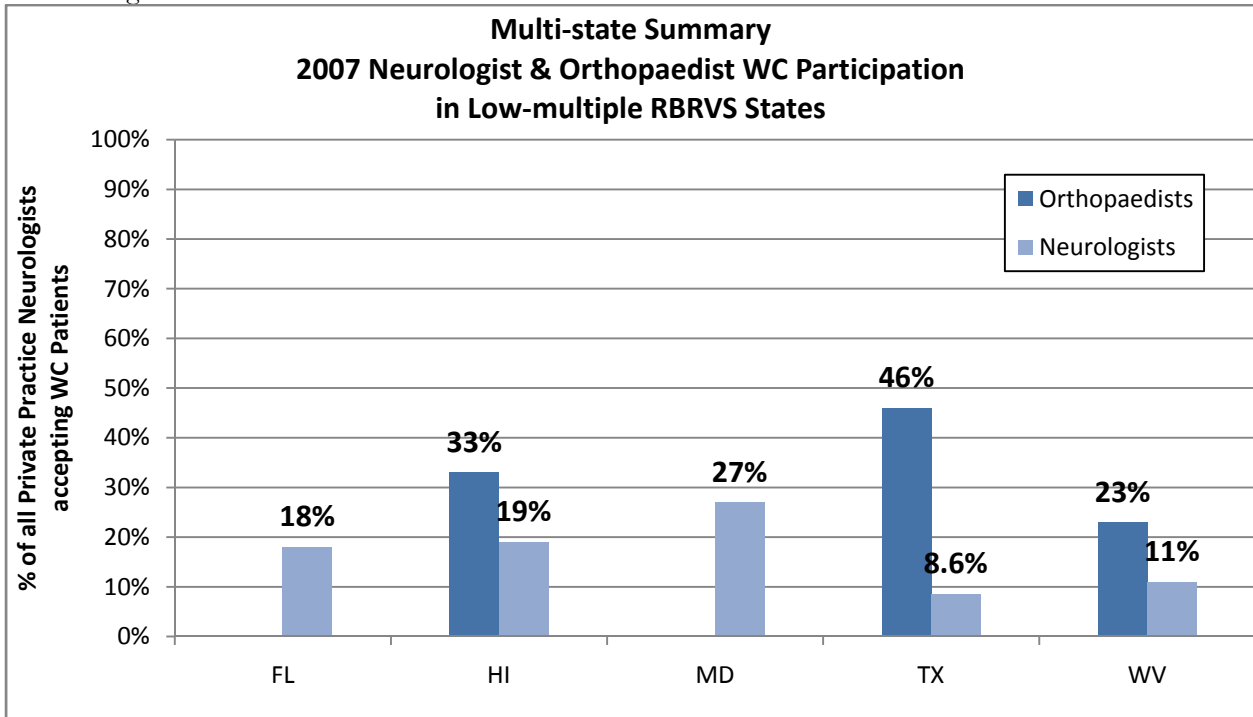
Figure 14



SUMMARY – ALL LOW-MULTIPLE RBRVS STATES

When all five study states are taken into consideration, the prospects for maintaining substantial access for injured workers under a low-multiple RBRVS fee scale are not promising. The chart below illustrates the current neurologist and orthopaedist participation levels in all states that have adopted a low-multiple RBRVS-based fee schedule. In every one of the low-multiple states, less than half of the private practice orthopaedist offices and fewer than a third of the neurologist offices are willing to treat workers' compensation patients at the mandated fee schedule amount. Conversely, over half of orthopaedists and over 70% of neurologists are unwilling to accept workers' compensation in these states.

Figure 15



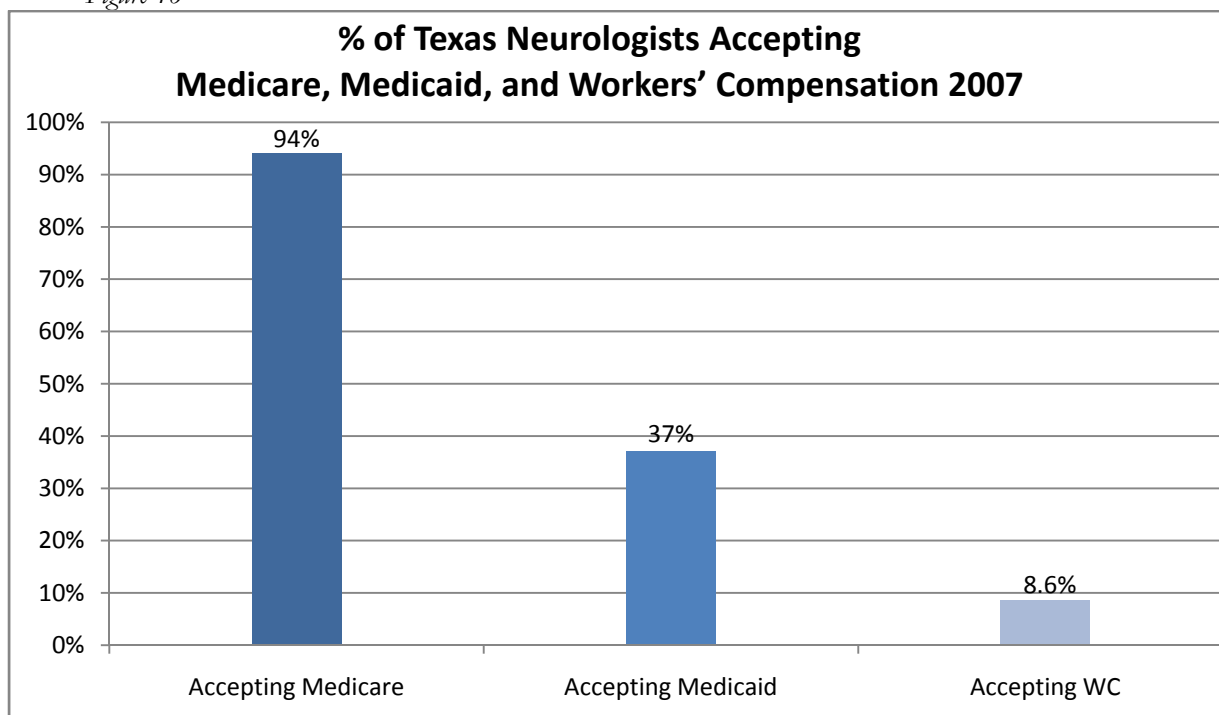
As seen in Texas and Florida, physician participation declines significantly within the first 2-3 years after a low-multiple fee schedule has been put in place. As Hawaii and West Virginia demonstrate, physician participation remains low even ten years after a low-multiple fee schedule has been in place. This suggests that once providers give up on the workers' compensation system, they are not motivated to find ways to adjust their practices or treatment patterns in an effort to rejoin the system. In fact, as Hawaii illustrates, participation continues to drop even once fees begin to rise again, as providers prove extremely reluctant to rejoin the workers' compensation system once they have found other sources of patients and revenues.

## COMPARISON OF MEDICARE, MEDICAID & WORKERS' COMPENSATION

In an attempt to determine whether the barrier to physician participation in the workers' compensation systems of states with low-multiple RBRVS fee schedules was just the reimbursement levels, a secondary survey was conducted of the number of neurologists in the survey groups that accepted Medicare and Medicaid patients. The unit cost reimbursement rates for Medicare and Medicaid patients was lower than for workers' compensation patients and yet, as the charts below illustrate, participation in both the Medicare and Medicaid systems was strikingly higher than in the workers' compensation system.

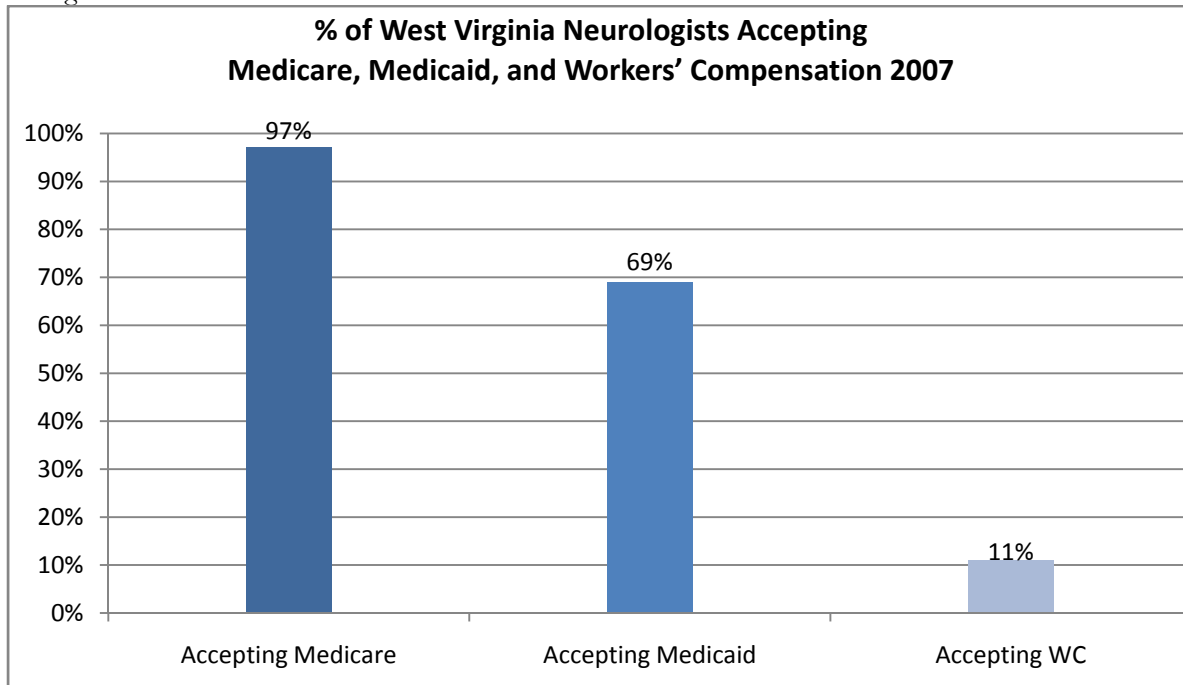
For example, in Texas the neurologist participation rate in Medicare was more than ten times higher than the workers' compensation rate, with 94% of all Texas neurologists accepting Medicare patients. While significantly fewer neurologists accepted Medicaid patients, participation levels were still four times the workers' compensation rate despite Medicaid fees that were only 52% of Medicare fees and 42% of workers' compensation fees.

Figure 16



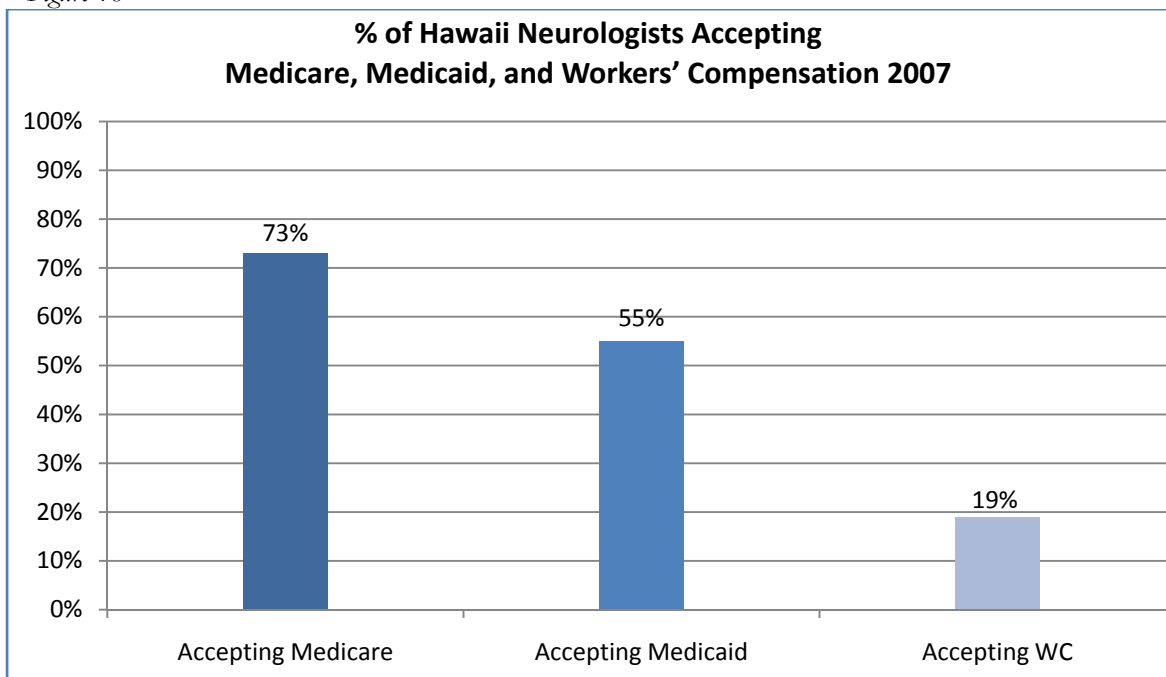
Similarly, in West Virginia, nearly all neurologists surveyed (97%) accepted Medicare patients and more than two-thirds (69%) accepted Medicaid. And yet only 11% reported they were willing to accept workers' compensation patients with higher unit cost reimbursement levels.

Figure 17



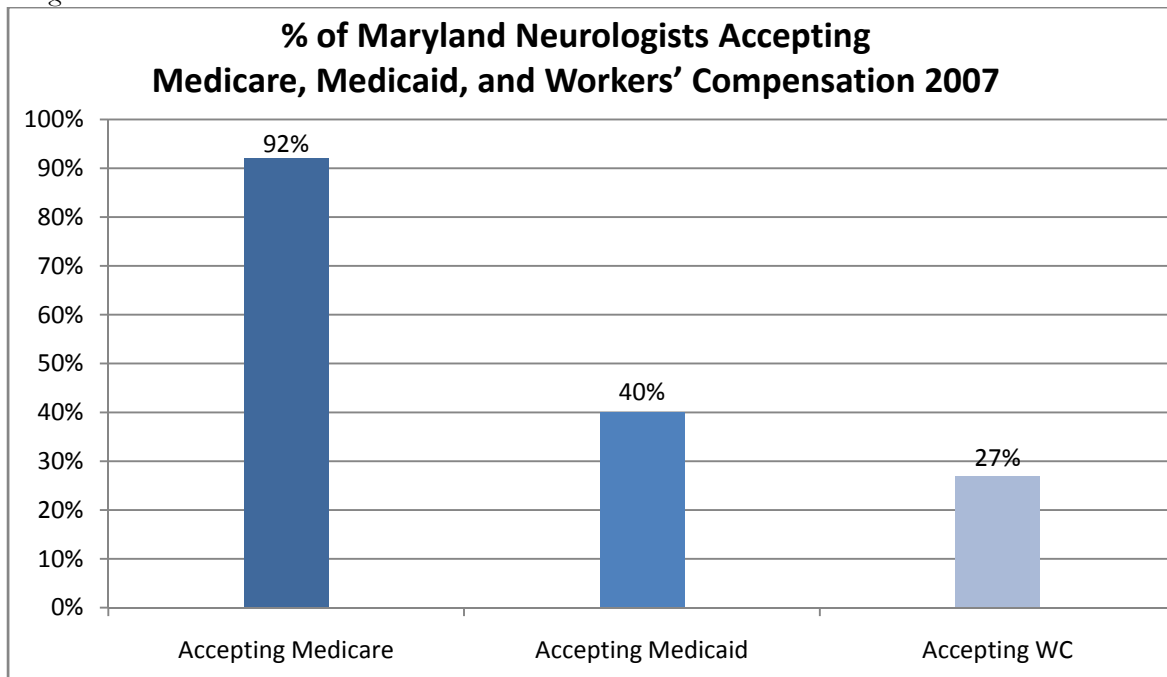
The same pattern was found in Hawaii. Although overall participation levels in Medicare and Medicaid were not as high as in West Virginia, they were still 3-4 times higher than the workers' compensation participation levels in the state.

Figure 18



Results from the Maryland surveys complete the picture. In every state with a low-multiple RBRVS fee schedule for workers' compensation, neurologists were much more likely to accept Medicare or Medicaid patients than injured workers covered by higher workers' compensation rates.

Figure 19



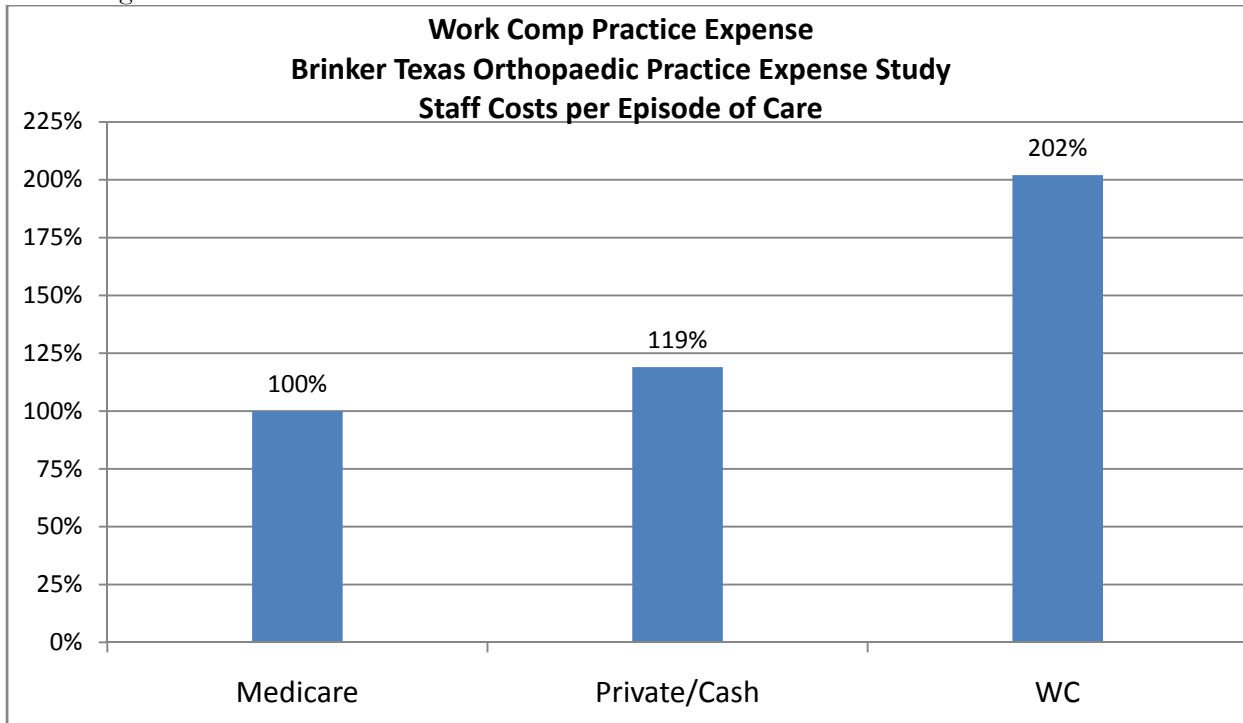
Since the procedure-level reimbursement rates for workers' compensation patients were higher than the rates for either Medicare or Medicaid in each of the study states, it is clear that fees alone are not the determining factor in a physician's willingness to participate in that state's workers' compensation system.

On the basis of comments from physicians and office staff during the survey process, it appears that additional administrative burdens or "hidden costs" which are not sufficiently offset by low-multiple RBRVS fee schedules are embedded in the workers' compensation system. It seems that the combination of these additional workers' compensation-specific administrative burdens, coupled with what are perceived as an insufficient increment in fees to pay for the added overhead drives the significant differences between physicians' willingness to accept Medicare, Medicaid and workers' compensation patients.

## COMPARISON OF PHYSICIAN PRACTICE EXPENSE

The evaluation of incremental expenses associated with operating a medical practice that accepts workers' compensation patients has been the subject of previous research. A study of the effect of payer type on orthopaedic practice expense was completed in Texas in 2002.<sup>11</sup> The results, published in the American Journal of Bone and Joint Surgery (Brinker, 2002), demonstrated that the staff costs per episode of care for a single type of injury (knee pain) were twice as high for workers' compensation patients compared to Medicare patients.

Figure 20



The Brinker study, along with provider feedback from the telephonic surveys conducted in the low-multiple RBRVS states, suggested that the physician work component (typically the focus of RBRVS-driven fee scales) may not adequately reflect additional administrative burdens embedded in the workers' compensation system. These additional administrative requirements typically encountered in workers' compensation claims include:

- Obtaining PPO and/or MPN network certification,
- Interfacing with Nurse Case Managers,
- Seeking approval for treatment from Utilization Review,
- Transcribing dictated medical reports and,
- Reconciling medical invoices that have been reduced to state fee schedules

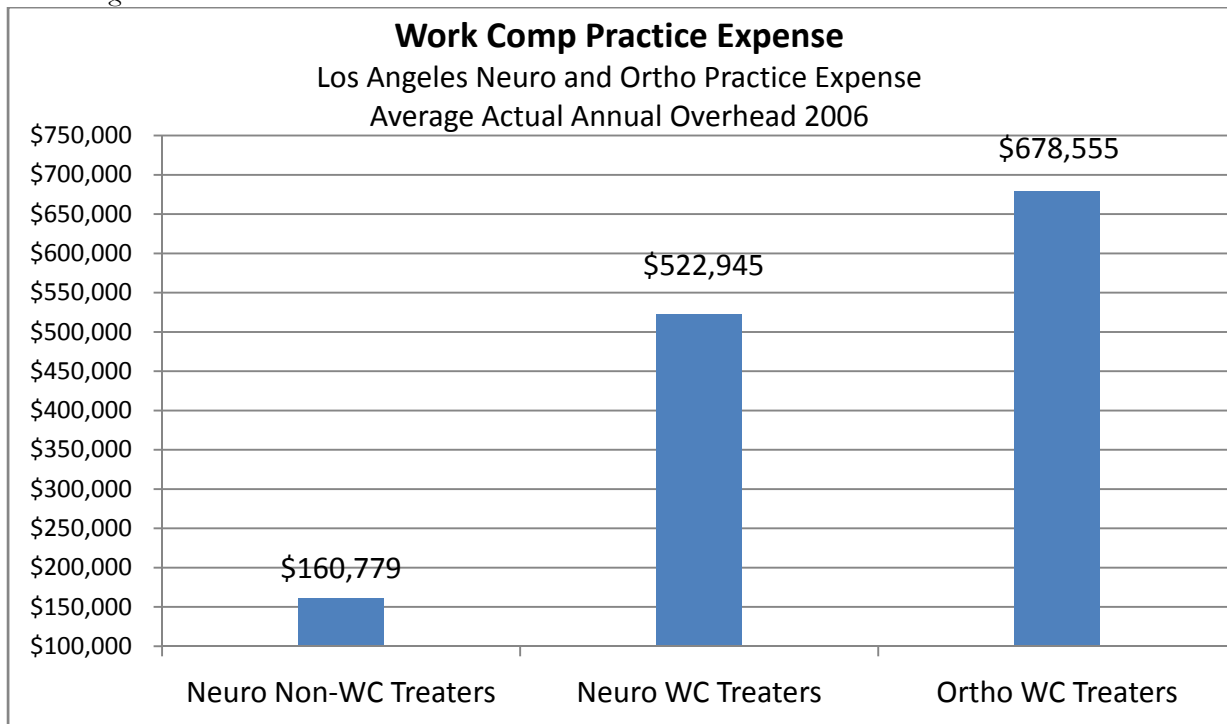
In addition to requiring some additional physician time for workers' compensation claims, these factors are much more likely to require additional staff resources that increase offices' overall practice expense.

With this in mind, a more detailed analysis of the practice expenses of neurologist and orthopaedist practices in the Los Angeles metropolitan area was conducted. Eleven neurologists and six orthopaedists in fifteen private practices agreed to confidentially share with the authors their practice expenses for the calendar year 2006. Practice expenses included all business expenditures but did not include physician income and retirement contributions. Data was self-reported by the physicians. Neurologists were classified as either accepting or not accepting workers' compensation patients without major limitation. All orthopaedists in the survey accepted workers' compensation patients. Several orthopaedists who do not accept workers' compensation patients agreed to participate, but were eliminated because they practiced with partners who did, and their practice expense data could not be segregated.

Practice expense per hour was calculated as annual overhead divided by 2,200 hours, per the U.S. Department of Health and Human Services Health Resources and Services Administration. Medicare 2007 practice expense data per hour was multiplied by the Los Angeles County GPCI practice expense factor of 1.156, yielding Medicare practice expense of \$80.57 per hour for neurologists and \$124.85 for orthopaedists.

The actual average practice overhead expenses for calendar year 2006 were calculated for each group (shown below). The average overhead practice expense for neurologists who did accept workers' compensation patients was more than 3 times the overhead expense of those neurologists who did not treat injured workers.

Figure 21

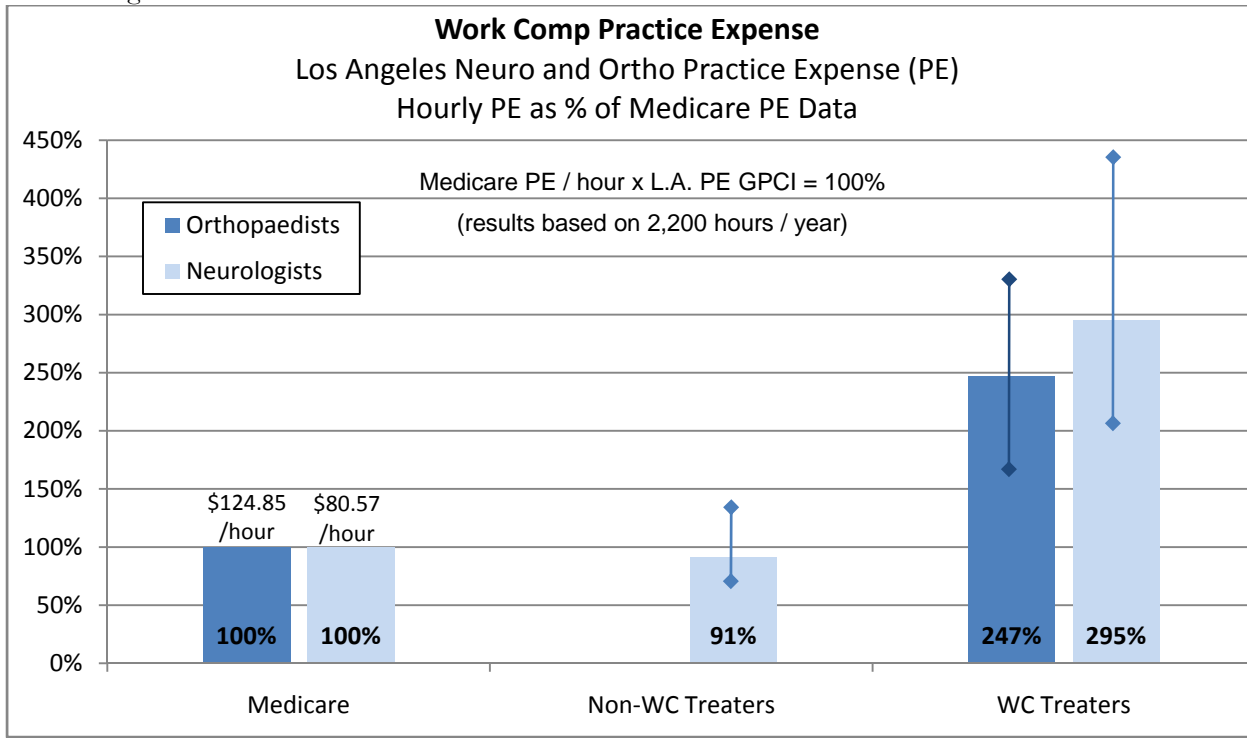


Data from the Medicare GPCI for Los Angeles County was then incorporated to provide a relative comparison of the hourly practice expense of three distinct groups of providers: 1) Medicare



providers; 2) neurologists/orthopaedists who treat workers' compensation patients and; 3) neurologists who do not treat workers' compensation patients.

Figure 22



The hourly practice expense for physicians who accepted workers' compensation patients was determined to be 2.5 to 3 times the hourly Medicare practice expense. This significant gap between the Medicare hourly cost and the practice expense of offices that treat workers' compensation patients helps explain why the Medicare participation rates were so much higher than workers' compensation acceptance rates across all study states despite the fact that procedure reimbursement rates were higher for workers' compensation. If practice expenses associated with treating workers' compensation patients are 247-295% of Medicare for neurologists and orthopaedists, fee scales set at 100-125% of Medicare fees simply do not provide enough financial incentive to maintain high physician participation levels.

Based on the actual 2006 practice expense data from the Los Angeles area offices, the ratio of practice expenses by specific category for those neurologists who treat workers' compensation patients was compared to those who do not. As the following table illustrates, practice expenses were found to be significantly higher for workers' compensation treaters across all categories – including both fixed and variable expenses.

Table 2

<b>CATEGORY</b>	<b>WC TREATERS VS. NON-TREATERS PE RATIO</b>
Rent	289%
Staff	392%
Office Expense	378%
Equipment	412%
Outside Services	326%
Health Plan	136%
Insurance	215%
Non-Income Taxes	453%

## QUALIFICATIONS OF PHYSICIANS ACCEPTING WORKERS' COMPENSATION

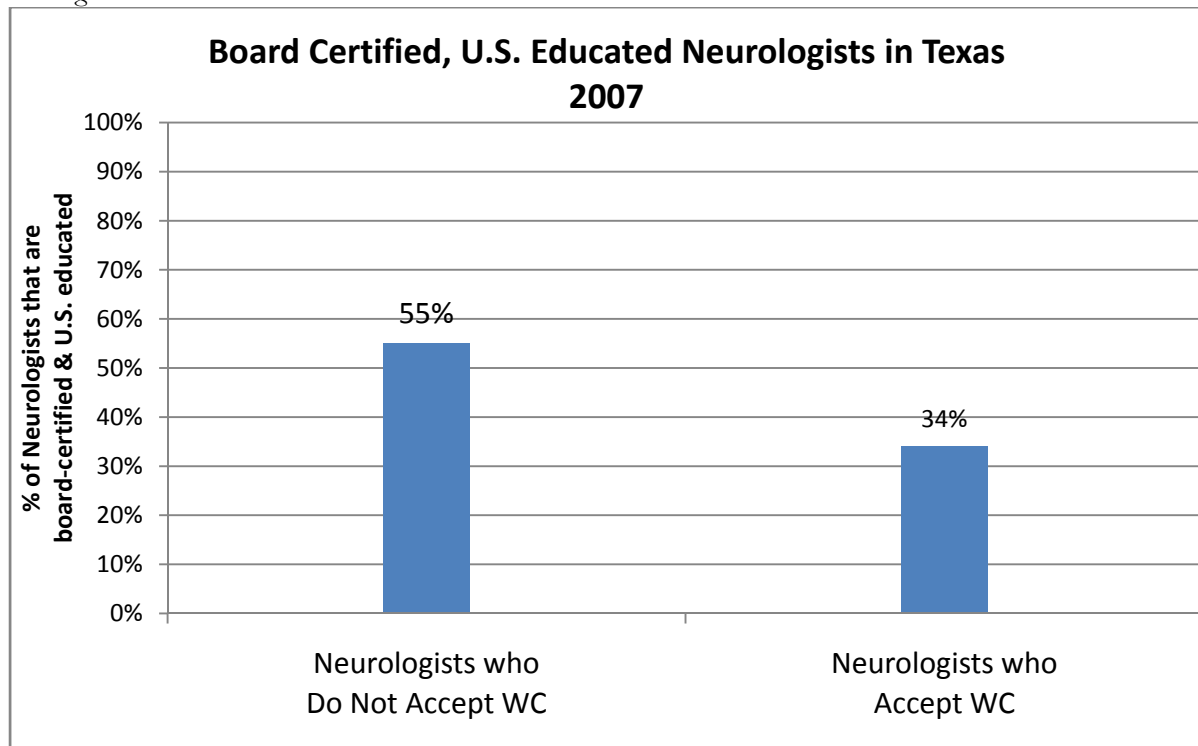
In states with low-multiple RBRVS workers' compensation fee schedules, the telephonic surveys also uncovered interesting differences in the qualifications of neurologists who continued to treat injured workers.

Searches were performed using the Texas Medical Board website ([http://reg.tsbme.state.tx.us/OnLineVerif/Phys\\_SearchVerif.asp](http://reg.tsbme.state.tx.us/OnLineVerif/Phys_SearchVerif.asp)), the West Virginia Board of Medicine website (<http://www.wvdhhr.org/wvbom/licensesearch.asp>), and the website of the American Board of Medical Specialties (<http://www.abms.org/>) to determine the educational and certification status of each survey respondent as listed on the websites. The educational status results for all physicians in the survey population were categorized as (1) graduated from a U.S. or Canadian Medical School (U.S.-educated) or not; and (2) and certified in adult neurology by the American Board of Psychiatry & Neurology or not.

The 2005 ACN study found that in Texas, neurologists who stopped treating injured workers in the period immediately following the implementation of the 125% of Medicare fee scale were nearly two times more likely to be board-certified graduates of U.S. medical schools than those physicians who continued to participate in the workers' compensation system.

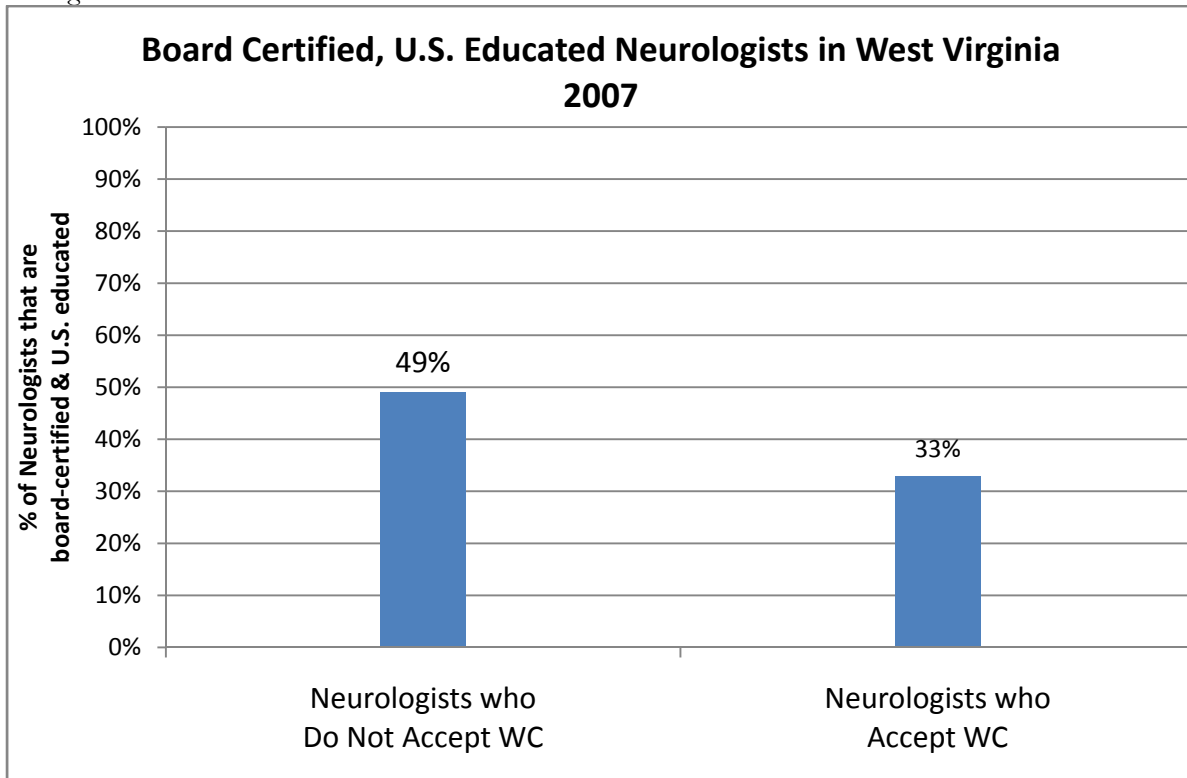
The current study found that among Texas neurologists who do not accept injured workers the proportion of those who are board-certified graduates of U.S. medical schools is far higher than among those who do accept injured workers.

Figure 23



This same trend was found in West Virginia where only one-third of all neurologists who still accept workers' compensation patients were board-certified and U.S. educated compared to nearly half of all neurologists who do not treat injured workers.

Figure 24

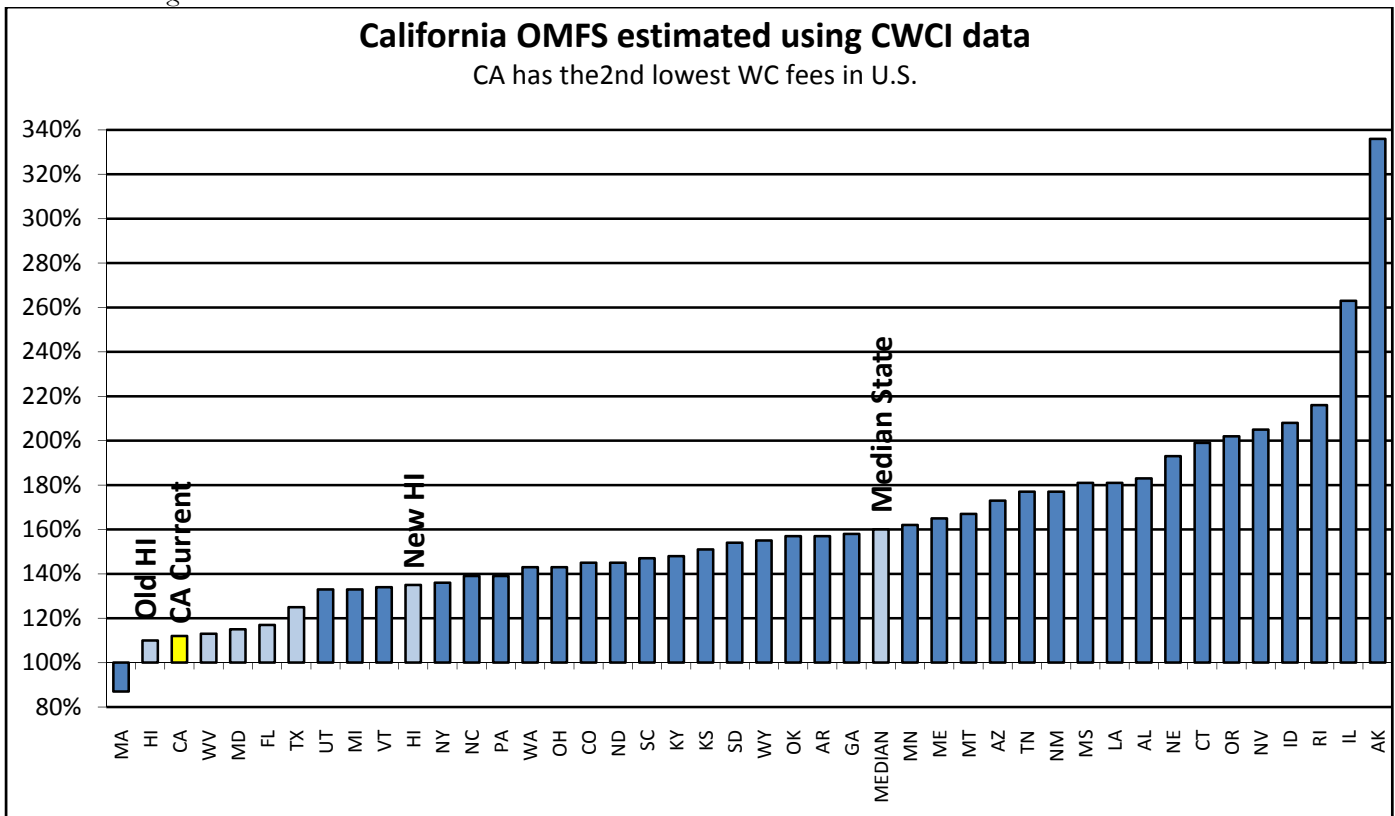


**CALIFORNIA UPDATE**

California’s current workers’ compensation regulations provide for a charge-based Official Medical Fee Schedule (OMFS) that averages between 112% - 121% of the state Medicare rates. Under the current OMFS system, California medical fees are generally in a range very comparable to the study states of Hawaii, West Virginia, Texas and Florida.

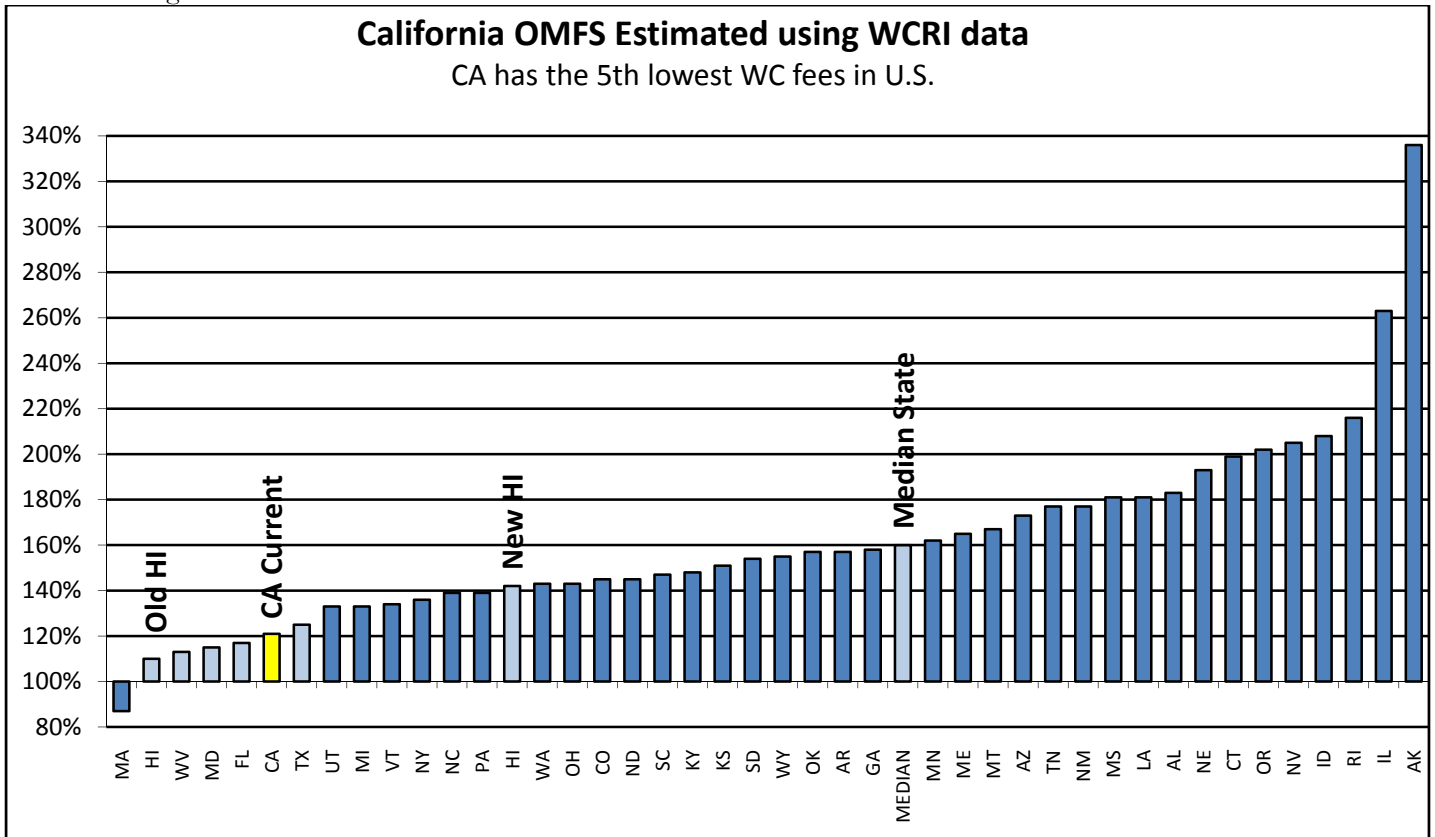
Historical procedure utilization data from CWCI would suggest that California (at 111.9% of Medicare) had the third lowest workers’ compensation unit cost fees in the country, with only Massachusetts and Hawaii offering lower fees to workers’ compensation providers. However, in 2006 as a result of continued concerns over injured worker access to specialty providers, the Hawaii state legislature increased their fee schedule to an average of approximately 135% of Medicare. Interestingly, rather than simply increase the Medicare multiple from 110% to a flat 135% across all procedure groups, Hawaii implemented a system which allocated higher fees to surgery and other specialty care in an effort to retain those providers engaged in the system and attract those who had deserted the system over the previous decade. As a result, California now has the second lowest workers’ compensation fee schedule in the country according to the CWCI data.

Figure 25



Alternatively, if the historical distribution of medical charges from WCRI is used; California is currently the fifth lowest unit cost state in the nation at an average of 121% of Medicare.

Figure 26



Both CWCI and WCRI agree that the greatest medical cost drivers in California have been unregulated charges from outpatient surgery centers and over-utilization of specific procedure groups such as physical medicine, rather than high fee levels. Recent California reforms would appear to have successfully controlled both of these cost driver issues as billing for outpatient surgical centers is now capped at 120% of Medicare and the introduction of utilization review with hard limits on both physical therapy and chiropractic care has dramatically reduced over-utilization concerns.

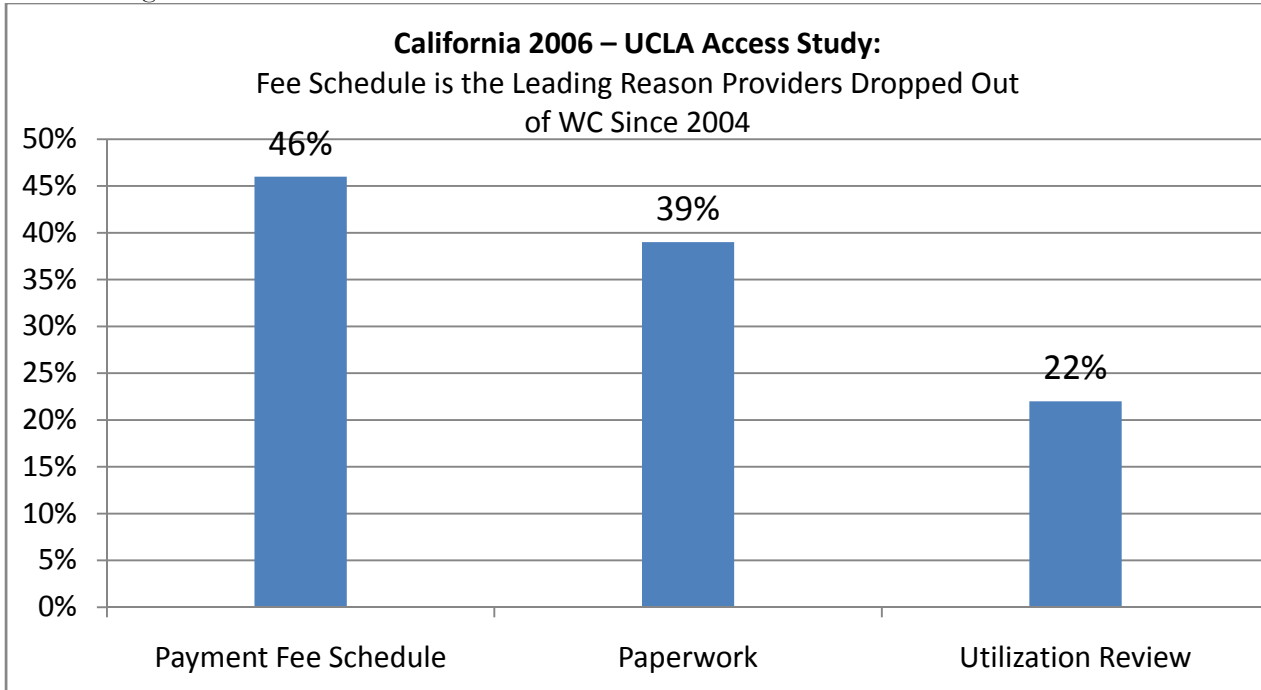
However, it must be noted that no data whatsoever is publicly available (from CWCI or WCRI) regarding code frequencies or even code group weightings in the post-reform era, during which a vigorous regime of pre-authorization/utilization review affecting expensive procedures has been applied. Given the likely shifts in code use since the reforms were implemented, it is difficult to accurately determine the current rank of California’s fee schedule compared to other states and it is virtually impossible to precisely predict the impact of implementing an entirely new fee schedule methodology. Nonetheless, it is clear that California’s fee schedule is among the lowest in the nation.

While the rates for the most common Evaluation and Management procedure codes were recently increased to approximately 100% of California Medicare values, major specialty care fees were cut 5% on January 1, 2004. This fee reduction coupled with the increase in the perceived administrative burdens of recent California reforms (utilization review, medical provider networks, etc.) and increase in practice expenses with inflation has apparently weakened the incentives for

physicians, particularly specialty physicians, to continue participating in the workers' compensation system.

A provider access study conducted by UCLA in 2006 identified the top three reasons physicians have dropped out of the workers' compensation system as involving the existing payment fee schedule, additional paperwork required and the introduction of utilization review.<sup>12</sup>

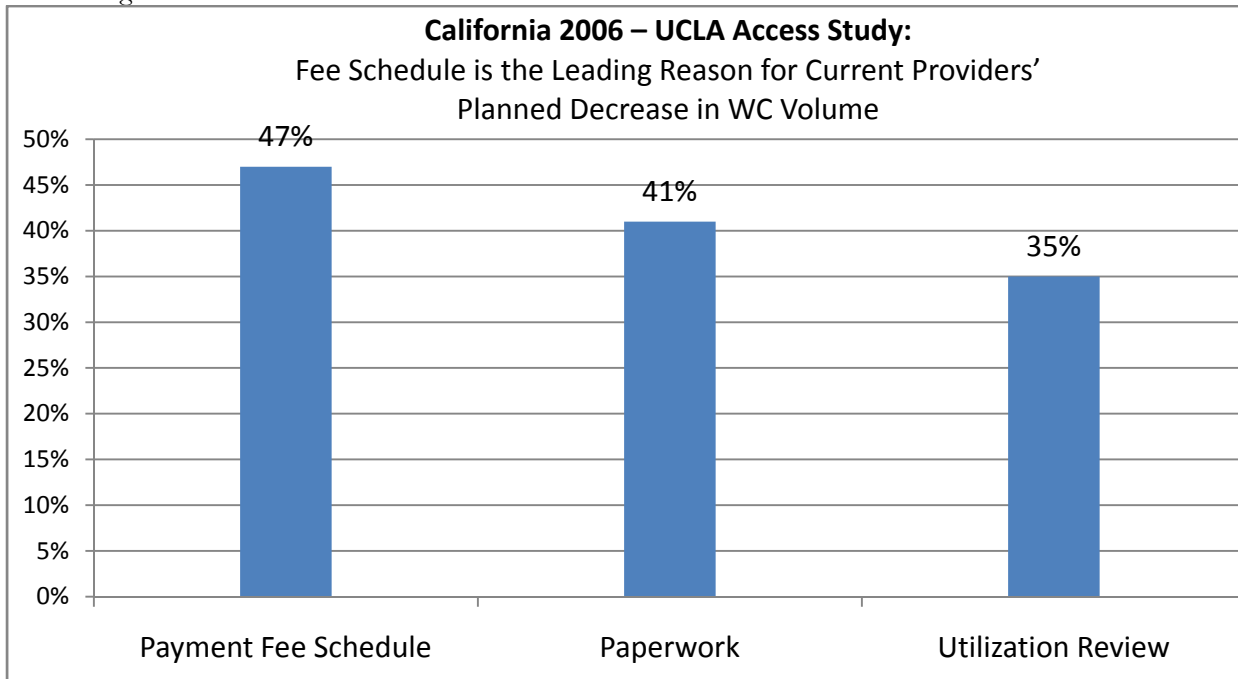
Figure 27



Providers noted that the combination of growing regulatory burdens and increased overhead required to service workers' compensation patients coupled with fees for procedures that are already considered low and will likely decrease prompted their decisions to exit the market.

Similarly, those providers who were still accepting workers' compensation patients at the time of the survey cited the same three issues as the major reason they were planning to decrease the volume of workers' compensation patients they accepted going forward.

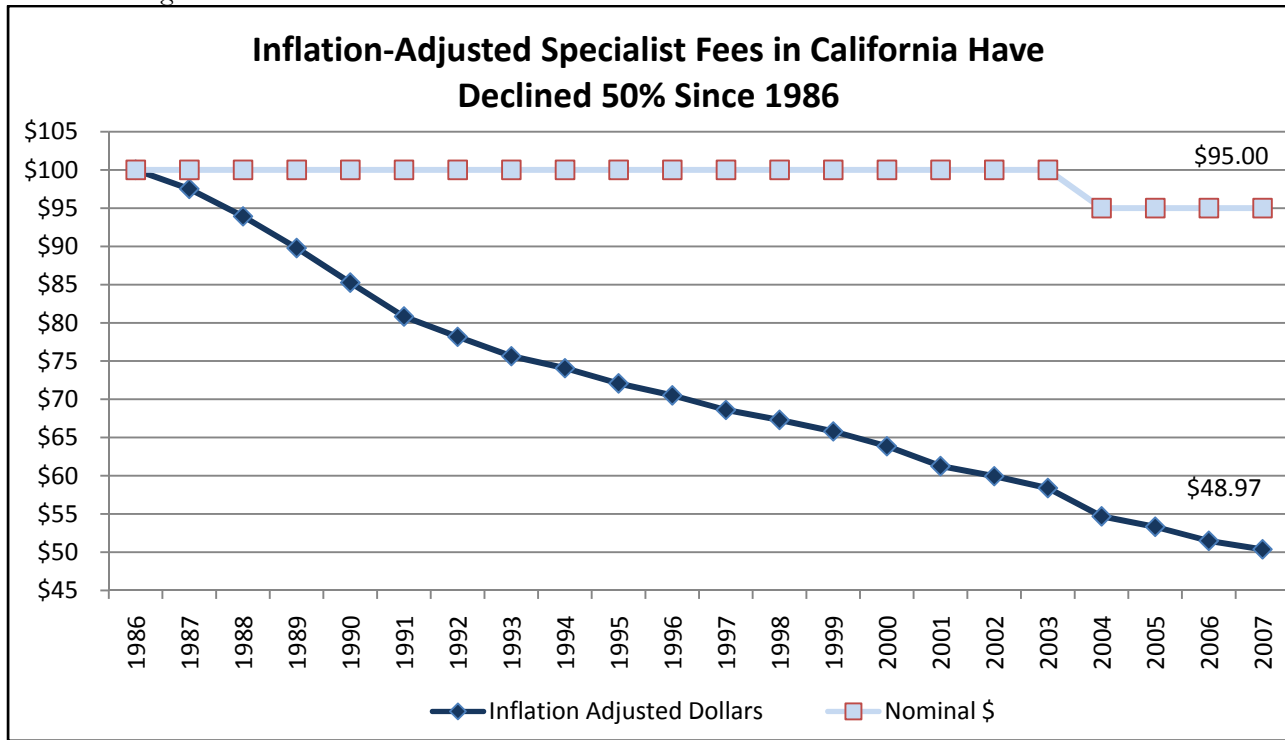
Figure 28



The issue of fees that are no longer sufficient to offset growing administrative and regulatory burdens is even clearer when workers' compensation specialist fees in California are adjusted for inflation. As the following chart illustrates, the California fee schedule for specialists has not changed between 1986 and 2003, but inflation adjusted fees have actually declined by 50%. At the same time, the number and complexity of the additional administrative burdens associated with treating workers' compensation patients has increased dramatically.

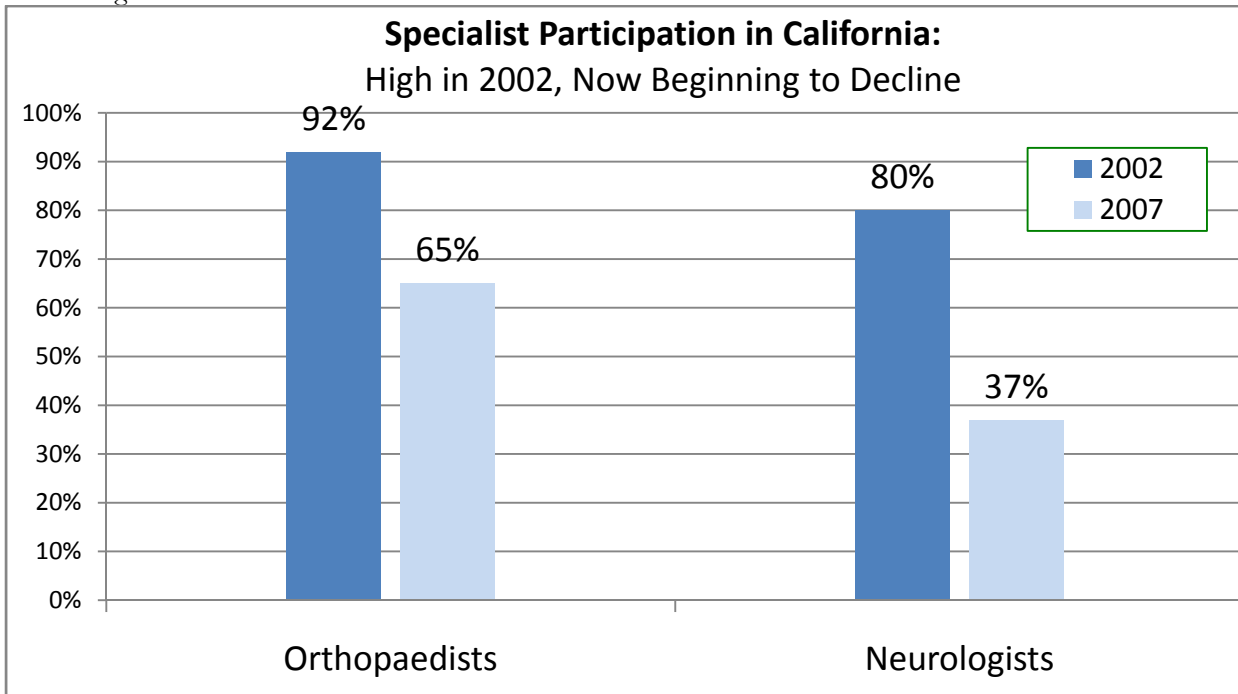


Figure 29



Interestingly, over that same time period specialist participation in the California workers' compensation system remained high. As recently as 2002, more than 80% of all neurologists and 92% of orthopaedists reported they still accepted workers' compensation patients without significant restrictions.<sup>13</sup> The current survey shows that participation has recently begun to change, with only 37% of neurologists and 65% of orthopaedists still accepting workers' compensation patients in 2007.

Figure 30



This change appears to be largely driven by changes (and proposed changes) in the fee structure coupled with the growing administrative burdens of reform. In 2002, the California fee schedule averaged 112% of Medicare, but specialty care was priced at 140-180% of Medicare while common Evaluation & Management (E&M) procedures were priced at 90% of Medicare. With the recent 5% cut in specialty fees and the threat of additional fee shifts away from specialty care towards primary care E&M visits, many specialists have already begun to exit the workers' compensation system.

A similar pattern emerged in Texas after the 2003 fee schedule reform. Even though E&M fees rose a full 36% in the conversion to RBRVS and the overall payment level only fell from 138% of Medicare to 125%, specialist participation in the workers' compensation system plummeted.

Although California workers' compensation patients still have reasonable access to specialists, participation has already begun to decline and the conversion to a low-multiple RBRVS schedule threatens to create the same result as Texas, where less than 10% of all neurologists and less than 50% of all orthopaedists still accept injured workers.

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## CONCLUSIONS

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Ultimately the present research points to several major conclusions. First and foremost, low-multiple, unmodified RBRVS fee scales do not maintain specialist participation. Every state that has adopted a low-multiple RBRVS workers' compensation fee schedule has experienced a subsequent rapid and dramatic drop in neurologist and orthopaedist participation levels. In each of the study states, specialist participation levels were reduced by half or more within two years of the adoption of the low-multiple RBRVS fee schedule. Specialist participation levels continued to decline in Hawaii and West Virginia more than a decade after the low-multiple fee schedules were first adopted.

In addition, the workers' compensation system is far less attractive to specialists than lower-paying alternatives such as Medicare or Medicaid. This appears largely due to the additional administrative and regulatory burdens associated with workers' compensation, which apparently are not sufficiently compensated by the slightly higher fees paid per procedure. Overhead costs are far higher for workers' compensation practices than is generally recognized, driven by common system-specific requirements such as utilization review, case management and medical provider networks.

There are also clear demographic and professional qualification differences between providers who choose to leave the workers' compensation system and those who continue to treat injured workers under low-multiple RBRVS fee schedules. Physicians who choose to exit the workers' compensation system are much more likely to be board-certified and to have been educated at an American medical school.

It is worth noting that none of the three most recently adopted workers' compensation state fee schedules elected to employ an unmodified RBRVS system. Hawaii abandoned 110% of Medicare RBRVS after 11 years, and increased specialist fees in an attempt to restore access, raising average fees to about 135% of Medicare. Tennessee adopted a multiple conversion factor RBRVS fee scale with higher fees for specialty codes that average 177% of Medicare (slightly above the median state average of 160% of Medicare). Finally, Illinois adopted a charge-based scale with higher relative fees for specialty procedures as it's first ever workers' compensation fee schedule.

This trend away from unmodified RBRVS fee schedules may be driven by evidence which suggests that once specialists choose to leave the workers' compensation system they are slow to return even when reimbursement rates increase. States that have been down this path and ultimately decided to increase fees in an attempt to lure specialists back to workers' compensation demonstrate that it is far easier to maintain physician participation than to rebuild it.

The dramatic departure of physicians from workers' compensation systems in states with low-multiple RBRVS fee scales appears to have been precipitated in all cases by decreases in specialist procedure fees.

There are a variety of ways to mitigate the impact of a low-multiple RBRVS fee schedule on medical access in California: 1) Initially maintain existing specialist fees, allowing gradual decreases due to inflation, while access is monitored; 2) Use an RBRVS base, but with higher fees for specialty codes reflecting other fee data, as was done recently in Hawaii; or 3) Use multiple RBRVS conversion factors, higher for specialty areas, as has been done in Tennessee, Oregon and many other states.

Regardless of the particular approach, modification of the low-multiple RBRVS fee structure would appear prudent. The approaches suggested would potentially allow implementation of a low-cost RBRVS-based fee scale for California, while reducing the likelihood of substantial declines in medical access.

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## APPENDIX A: REFERENCES

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1. Workers' Compensation Special Report – 2004 Survey of Texas Physicians. Texas Medical Association. 2004.  
[http://www.texmed.org/uploadedfiles/Global\\_Media/wcn\\_04surveytxphysicians.pdf](http://www.texmed.org/uploadedfiles/Global_Media/wcn_04surveytxphysicians.pdf)
2. Adoption of New Proposed §134.202 Medical Fee Guideline, Texas Register, 2002.
3. Ibid.
4. Impact of Medicare-based Workers' Compensation Fee Schedules on Injured Worker Access to Neurological Care in Texas & Hawaii. Association of California Neurologists – Workers' Compensation Committee. 2005. p 2.
5. Ibid.
6. Martin P. The Medical Fee Schedule Under the Workers' Compensation Law. Hawaii Legislative Reference Bureau, Report No. 8. 1998. p 11-13.
7. Ibid, p10.
8. Ibid.
9. Workers' Compensation Special Report – 2004 Survey of Texas Physicians. Texas Medical Association. 2004. p 1.
10. Johnson C, Huth D, Bush R. RBRVS-Based Fee Schedules in Workers' Compensation: Implications for California. HJH Group Inc. 2002. p 4-5.
11. Brinker MR, et al. The Effect of Payer Type on Orthopaedic Practice Expense. *J Bone Joint Surgery (Amer.)*. 2002 Oct; 84: 8116-22.
12. Kominski GF, et al. Access to Medical Treatment in the California Workers' Compensation System, 2006. UCLA Center for Health Policy Research. December 2006. p xxv-xxvi, 84, 102, 122.
13. Johnson C, Huth D, Bush R. RBRVS-Based Fee Schedules in Workers' Compensation: Implications for California. HJH Group Inc. 2002.
14. Levine SE, Kent RN. New Findings and Recent Events in Workers' Compensation Fee Scales: Implications for California. March 2007.

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## APPENDIX B: METHODOLOGY

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### PART 1, SECTION 1: PHYSICIAN WORKERS' COMPENSATION PARTICIPATION IN LOW-MULTIPLE RBRVS STATES

#### TIMING OF SURVEYS

All telephone surveys were conducted between December 2006 and March 2007, except for Hawaii and West Virginia orthopaedists, who were surveyed in June 2007.

#### TELEPHONE SURVEY OF TEXAS NEUROLOGISTS

The Texas Board of Medical Examiners maintains a searchable database of physicians by specialty ([http://reg.tsbme.state.tx.us/OnLineVerif/Phys\\_SearchVerif.asp](http://reg.tsbme.state.tx.us/OnLineVerif/Phys_SearchVerif.asp)).

A search was performed using this website to all licensed, active physicians who listed neurology as their specialty. The initial search found 1622 physician names.

In order to capture Texas Neurologists in private practice open to the public, physicians were excluded if they did not have a Texas practice address, did not hold an active license, were deceased or retired, were pediatric neurologists, or were practicing in hospitals (VA included), the military, universities, or HMO's. 1,180 listings were excluded for the following reasons:

- 44%: Out of state practice addresses
- 26%: Could not be located using 411.com, Yellow.com, or the American Academy of Neurology membership directory, or whose listed phone number was not answered on three attempts in two different weeks.
- 14%: Practicing in hospitals, the military, universities, or specialized in pediatric neurology
- 12%: Inactive licenses, not in practice, or were not physicians
- 4%: Retired or deceased

After the above exclusions, the final survey population consisted of 442 identifiable adult neurologists in private practice open to the public, which is believed to be the entire population of such neurologists in Texas. Thus, the survey was not a sample, but a full census population study.

All 442 neurologists' offices were contacted by telephone between 12/1/06 and 2/1/07. The receptionist answering the phone was asked if the doctor is accepting new WC patients. The responses were categorized as accepting WC patients for treatment without significant limitations or not accepting WC patients. All but 18 neurologists clearly fell into the accepting or not accepting categories. These 18 (4%) were accepting WC patients, but with significant limitations (only accepting employees from a single employer; only accepting from out of state insurance carriers; or accepting only on a limited, case-by-case basis after review of all files). For the present analysis, these neurologists were categorized as not accepting WC patients, since they are not generally available to treat injured workers. This assignment conforms to the methodology of the 2002 HJH study<sup>1</sup>, the 2005 ACN WC Committee study<sup>2</sup>, and the 2002 and 2004 Texas Medical Association Surveys<sup>3</sup>. Responses were obtained from all 442 offices in the census population. The same assignment methodology was followed for orthopaedists and neurologists in all states surveyed. The percentage of physicians who accepted WC patients only with significant limitations ranged from 0% to 13% in the other surveys, with the average being 4%.

#### TELEPHONE SURVEY OF TEXAS ORTHOPAEDISTS

The Texas Board of Medical Examiners website was searched for orthopaedists. All active, practicing, Texas orthopaedists whose office phone numbers ended with the digits 6, 7, 8 or 9 were included, according to the same criteria as Texas neurologists. The resulting sample consisted of 278 orthopaedists. All offices of the orthopaedists were contacted in the same fashion as the Texas neurologists, and were categorized as accepting or not accepting WC patients. Responses were obtained from all 278 offices in the survey sample.

#### TELEPHONE SURVEY OF WEST VIRGINIA NEUROLOGISTS

The West Virginia Board of Medicine maintains a searchable database of physicians by specialty (<http://www.wvdhhr.org/wvbom/licensesearch.asp>). A search was performed using this website, which returned 100 names of neurologists with active licenses.

The initial search returned 100 neurologists for the state. Using identical filtering methods and criteria as the Texas survey, the resulting survey population was 45 adult neurologists. Exclusions were for the same reasons as for Texas, with the majority of the 55 exclusions involving an out of state practice address.

The resulting population consisted of 45 identifiable adult neurologists in private practices open to the public, believed to be all such neurologists in West Virginia. Thus, the survey was not a sample, but a full census population study.

All 45 offices were contacted by telephone and asked if they are accepting new WC patients for evaluation and treatment. The results were categorized into the same groups as Texas. Responses were obtained from all 45 neurology offices in the census population.

#### TELEPHONE SURVEY OF WEST VIRGINIA ORTHOPAEDISTS

The West Virginia Board of Medicine maintains a searchable database of physicians by specialty (<http://www.wvdhhr.org/wvbom/licensesearch.asp>). A search was performed using this website, which returned 52 names of orthopaedists with active licenses.

All 52 offices were contacted by telephone and asked if they are accepting new WC patients for evaluation and treatment. The results were categorized into the same groups as Texas. Responses were obtained from all 52 neurology offices in the census population.

#### TELEPHONE SURVEY OF HAWAII NEUROLOGISTS

The Hawaii Board of Medical Examiners does not maintain a searchable database of physicians. Consequently, a search was performed using (1) the American Academy of Neurology 2006-7 membership directory; (2) and the websites 411.com and Yellow.com. It is believed that all adult neurologists practicing in the state of Hawaii were located, with the possible exception of a few practicing in several multi-specialty groups, none of which accepted WC patients. Thus, the results may overstate the proportion of private practice neurologists who accept WC patients.

Using identical inclusion criteria as the Texas and West Virginia surveys, the resulting survey population was 27 adult neurologists. Responses were obtained from all 27 neurology offices.

#### TELEPHONE SURVEY OF HAWAII ORTHOPAEDISTS

The Hawaii Board of Medical Examiners does not maintain a searchable database of physicians. Consequently, a search was performed using (1) the American Academy of Orthopaedic Surgeons 2006-7 membership directory; (2) and the website 411.com.

A total of 54 orthopaedists were found. All 54 offices were contacted by telephone and asked if they are accepting new WC patients for evaluation and treatment. Responses were obtained from all 54 offices.

#### TELEPHONE SURVEY OF CALIFORNIA NEUROLOGISTS

The Medical Board of California does not maintain a searchable database of physicians. Consequently, a search was performed using (1) the American Academy of Neurology 2006-7 membership directory, and (2) the directory websites 411.com and Yellow.com, to find all neurologists in private practice in the state of California. The same filtering methods and criteria were applied as in other states, but to achieve a manageable sample size, an additional filter was added, to exclude telephone numbers with last digits other than 6, 7, 8, or 9 (as did the 2005 ACN WC Committee Survey). After all filters were applied, the resulting sample comprised 106 adult neurologists. Responses were obtained from all 106 neurology offices.

#### TELEPHONE SURVEY OF CALIFORNIA ORTHOPAEDISTS

Since California does not maintain a searchable database of physicians, the membership directory of the American Association of Orthopaedic Surgery was searched for California orthopaedists whose phone numbers end in the digits 6, 7, 8 or 9. Orthopaedists were included using the same criteria as Texas neurologists. The resulting sample consisted of 224 orthopaedists. Responses were obtained from all 224 orthopaedic offices.

#### TELEPHONE SURVEY OF FLORIDA NEUROLOGISTS

The Florida Department of Health maintains a listing of licensed physicians by specialty, but not a searchable database. Consequently, a search was performed using (1) the American Academy of Neurology membership directory, and (2) the directory websites 411.com and Yellow.com to find all neurologists practicing in the state of Florida. The same filtering criteria applied as in California, with the final phone number digits 2 and 8 chosen to obtain a sample size under 100. Using the same inclusion criteria as in Texas, the final sample consisted of 88 adult neurologists. Responses were obtained from all 88 neurology offices.

#### SECONDARY TELEPHONE SURVEY OF PROVIDERS IN FLORIDA FOR ACCEPTANCE AT FEE SCALE

Since the 2002 HJH study<sup>1</sup> indicated that some Florida providers regularly negotiated fees above the Florida WC Fee Schedule, all 20 Neurologists' offices which responded that they accept WC patients for treatment were surveyed a second time to determine if the physician accepted such patients at fee scale. This often required speaking to an office manager or billing representative to acquire the most informed answer. Responses were obtained from all 20 neurology offices.

#### TELEPHONE SURVEY OF MARYLAND NEUROLOGISTS

Maryland does not maintain a searchable database of physicians. Hence, the membership directory of the American Academy of Neurology 2006-7 membership directory was searched to find all Maryland neurologists in private practice. The resulting sample consisted of 82 adult neurologists in private practice. All offices were contacted in the same fashion as the other surveys, but were not only asked if they were accepting WC patients for treatment and evaluation, but also if they accept those patients at Florida WC fee scale. Responses were obtained from all 82 neurology offices.

**PART I, SECTION 2: COMPARISON OF MEDICARE, MEDICAID AND WORKERS' COMPENSATION PHYSICIAN PARTICIPATION IN LOW-MULTIPLE RBRVS STATES**

SECONDARY TELEPHONE SURVEY OF PROVIDERS FOR MEDICARE AND MEDICAID ACCEPTANCE IN TEXAS, WEST VIRGINIA, MARYLAND, HAWAII AND FLORIDA

A secondary survey was conducted separately to determine the number of physicians in the survey groups who are accepting Medicare and Medicaid patients.

*Texas*

From the original Texas neurologist survey group, selecting neurology offices whose phone number final digit was 0 (zero) produced a sample of 100 neurologists. These offices were called a second time, and were asked if the physician is accepting new Medicare patients for evaluation and treatment. Clear accepting or not accepting responses were obtained for all 100 neurologists.

Additionally, selecting offices whose phone number final digit was 4, 5, or 6 produced another random sample of 100 neurologists who are accepting or not accepting Medicaid patients for evaluation and treatment. Clear accepting or not accepting responses were obtained for all 100 neurologists.

Medicare fees were considered 100% of Medicare by definition. Medicaid fees as a percentage of Medicare for Texas neurologists was determined for the General Medicine and Evaluation and Management codes. Medicaid was 52% of Medicare using code frequencies weighted per California work comp (see Part IV methodology below) and was 51% using direct average of fees without frequency weighting.

<http://www.tmhp.com/File%20Library/File%20Library/Fee%20Schedules/Texas%20Medicaid%20Fee%20Schedule%20PRCR400C%20-%202006.xls>

*West Virginia*

All 45 neurology offices were called two weeks after the original survey and asked if they are accepting Medicare patients for evaluation and treatment. All 45 offices were called one week after the Medicare survey and were asked if they are accepting Medicaid patients for evaluation and treatment. Clear accepting or not accepting responses were obtained for all 45 neurologists on both occasions.

Medicaid fees as a percentage of Medicare for West Virginia were determined as follows: West Virginia Medicaid pays straight RBRVS at a conversion factor of \$29.53 (<http://www.wvdhhr.org/BMS/>). The national Medicare conversion factor is \$37.8975. The West Virginia average Medicare conversion factor was calculated to be \$36.15, based on a weighting of 55% physician work, 40% practice overhead, and 5% malpractice expense, and applying the West Virginia GPCI's for each of these factors. This yielded an estimate of Medicaid fees in West Virginia at 82% of West Virginia Medicare fees.

*California*

All 106 neurology offices were called and asked if they are accepting Medicare patients for evaluation and treatment. All 106 offices were called two weeks later and were asked if they are accepting Medi-Cal (California's version of the Medicaid program) patients for evaluation and treatment. Clear accepting or not accepting responses were obtained for 85 neurologists for Medicare, and 97 neurologists for Medi-Cal.

Medi-Cal fees as a percentage of California Medicare were determined as follows: California Medi-Cal rates were determined for each code from the Medi-Cal link on the state of California's website:



[http://files.medi-cal.ca.gov/pubsdoco/pubsframe.asp?hURL=/pubsdoco/Rates/rates\\_range\\_display.asp](http://files.medi-cal.ca.gov/pubsdoco/pubsframe.asp?hURL=/pubsdoco/Rates/rates_range_display.asp)

Once these rates were determined and compared to California's Medicare rate (straight RBRVS using 1.063 GPCI and \$37.985 conversion factor), each was multiplied by the frequency per code, returning the overall cost of Medicare and Medicaid for our code set. Comparing the total cost of Medi-Cal to the total cost of Medicare returned Medi-Cal as 53% of California Medicare.

#### *Maryland*

All 82 neurology offices were called after the original survey and asked if they are accepting Medicare patients for evaluation and treatment. All 82 offices were called after the Medicare survey and were asked if they are accepting Medicaid patients for evaluation and treatment.

Medicaid fees as a percentage of Medicare for Maryland were determined as follows: Maryland Medicaid RVU's were obtained

<http://www.dhmh.state.md.us/mma/providerinfo/pdf/2007physfeemanual.pdf>

and the national conversion factor of \$37.8975 was applied. Based on frequency weighting per California WC, and further weighting of 70% Evaluation and Management and 30% General Medicine (neurodiagnostics), Maryland Medicaid fees were estimated to be at 58% of Maryland Medicare.

#### *Hawaii*

All 27 neurology offices were called after the original survey and asked if they are accepting Medicare patients for evaluation and treatment. All 27 offices were called after the Medicare survey and were asked if they are accepting Medicaid patients for evaluation and treatment.

Medicaid fees as a percentage of Medicare for Hawaii were determined as follows: Hawaii Medicaid fees were obtained

<http://www.med-quest.us/PDFs/Provider%20Memos/2005%20Medicaid%20Fee%20Schedule.pdf>

Based on frequency weighting per California WC, Hawaii Medicaid fees were estimated to be at 58% of Maryland Medicare.

#### *Florida*

All 88 neurology offices were called after the original survey and asked if they are accepting Medicare patients for evaluation and treatment, then were called and asked if they are accepting Medicaid patients for evaluation and treatment.

Medicaid fees as a percentage of Medicare for Florida were determined as follows: Florida Medicaid fees were obtained ([http://files.medi-cal.ca.gov/pubsdoco/rates/rates\\_information.asp](http://files.medi-cal.ca.gov/pubsdoco/rates/rates_information.asp)). Florida Medicaid fees were estimated to be at 46% of Maryland Medicare.

**PART I, SECTION 3: COMPARISON OF PHYSICIAN PRACTICE EXPENSE WITH WORKERS' COMPENSATION, MEDICARE AND PRIVATE PATIENTS**

LOS ANGELES NEURO AND ORTHO PRACTICE EXPENSE

Eleven neurologists and six orthopaedists in fifteen private practices agreed to confidentially share with the author practice expenses for the calendar year 2006. Practice expenses included were all business expenditures except physician income and retirement contributions. Data was self-reported by the physicians. Neurologists were classified as accepting or not accepting WC patients without major limitation. All orthopaedists in the survey accepted WC patients. Several orthopaedists who do not accept WC agreed to participate, but were eliminated because they practiced with partners who did, and their expense data was inseparable.

Practice expense per hour was calculated as annual overhead divided by 2,200 hours, per U.S. Department of Health and Human Services Health Resources and Services Administration.

(<http://bhpr.hrsa.gov/healthworkforce/reports/physiciansupplydemand/trendsinphysicianproductivity.htm>).

Medicare 2007 practice expense data per hour was multiplied by the Los Angeles County GPCI practice expense factor of 1.156, yielding Medicare practice expense of \$80.57 per hour for neurologists and \$124.85 for orthopaedists.

(<http://www.cms.hhs.gov/apps/ama/license.asp?file=/physicianfeesched/downloads/pehrtable.zip>)

Comparison of the major expense categories for WC treaters' practice expense as a percentage of non-treaters' practice expense was calculated based on actual expense without regard to Medicare data.

**PART I, SECTION 4: QUALIFICATIONS OF PHYSICIANS ACCEPTING WORKERS' COMPENSATION IN LOW-MULTIPLE RBRVS STATES**

Searches were performed using the Texas Medical Board website ([http://reg.tsbme.state.tx.us/OnLineVerif/Phys\\_SearchVerif.asp](http://reg.tsbme.state.tx.us/OnLineVerif/Phys_SearchVerif.asp)), the West Virginia Board of Medicine website (<http://www.wvdhhr.org/wvbom/licensesearch.asp>), and the website of the American Board of Medical Specialties (<http://www.abms.org/>) to determine the educational and certification status of each survey respondent as listed on the websites. The educational status results for all physicians in the survey population were categorized as (1) graduated from a U.S. or Canadian Medical School (U.S.-educated) or not; and (2) and certified in adult neurology by the American Board of Psychiatry & Neurology or not.

**PART II: CALIFORNIA UPDATE**

INFLATION-ADJUSTED SPECIALIST FEES IN CALIFORNIA

The effects of inflation on specialist fees under OMFS 1986–2007 were calculated by annual deflation from \$100 in 1986. This was accomplished by applying the annual CPI for western urban regions maintained by the U.S. Bureau of Labor Statistics website (<http://data.bls.gov/PDOQ/servlet/SurveyOutputServlet>). The 5% cut imposed by SB 228 at the end of 2003 was included in the calculations.

**PART III: STRATEGIES EMPLOYED BY STATES TO MAINTAIN AND/OR IMPROVE  
SPECIALIST WORKERS' COMPENSATION PARTICIPATION RATES**

CALCULATED COST OF 2007 HAWAII WC FEE SCHEDULES

(Appendix C- spreadsheet titled 'Calculated Cost of HI WC')

Due to the unavailability of frequency data for Hawaii, the adjusted frequency data for California (based on 2004/2006 CWCI statistics) was used to determine the cost of the new 2007 Hawaii WC Fee Schedule. This was done in order to create a meaningful comparison of Hawaii and California fee scale costs.

The new 2007 Hawaii workers' compensation medical fee scale pays 110% of Hawaii Medicare for all codes except those listed in the supplemental fee scale effective January 1, 2007 ([http://hawaii.gov/labor/dcd/pdf/wc/approved\\_mfs\\_eff\\_01-01-07.pdf](http://hawaii.gov/labor/dcd/pdf/wc/approved_mfs_eff_01-01-07.pdf)). The 2007 Hawaii Medicare fee was determined from the Hawaii Department of Industrial Labor website ([http://www.hawaii.gov/labor/dcd/pdf/MFS\\_1-2-07.pdf](http://www.hawaii.gov/labor/dcd/pdf/MFS_1-2-07.pdf)). If a code appears on the supplemental fee schedule, the supplemental unit value (multiplied by a conversion factor of \$33.54) supersedes the HI Medicare fee. An Excel formula was applied to return for each CPT code in the CA code frequency table used in the present analysis either the HI supplemental if one exists, or 110% of the HI Medicare fee. The resulting fee is the new 2007 HI WC fee. These were multiplied by the CA frequency to determine the cost per code and these costs were summed across all codes to determine the total cost of the new 2007 HI WC Fee Schedule overall and by code group.

ADJUSTING YEAR 2000 CODE FREQUENCIES TO REFLECT 2004 CODE GROUP WEIGHTING

Top 100 Codes from year 2000, released in May, 2003 by the California Workers' Compensation Institute, along with accompanying tables for several code groups, yielded frequencies for about 170 codes. After deleting codes which never did or no longer appear in the Medicare RBRVS, 152 codes remain. These were separated into the following five major fee schedule sections (code groups): Surgery, Medicine, Radiology, Physical Therapy, and Evaluation and Management (E/M). These codes and their frequency data from year 2000 are shown in Appendix C (Excel spreadsheet titled 'Adjustments to Code Frequencies'). Code groups not included in the present analysis are those for which the Medicare main RBRVS methodology does not apply (chiropractic, acupuncture, anesthesia, pathology, special services [P&S reports, etc.]). CWCI has released a list of Top 200 Codes for 2004 data, but has refused to make these available to non-members.

Due to the unavailability of more recent code frequency data, a formula for updating the 2000 claim frequency data was applied using the most current statistics available to the general public. The CWCI report "ICIS SAYS: Early Returns on Workers' Comp Medical Reforms: Part 3," table 1, shows 2004 physician payment distribution by fee schedule section. The percentage of payment distribution (i.e., percentage of spending per code group) from Table 1 was applied for each of the five subject code groups. According to Table 1 of the ICIS study, these five code groups represented 76.5% of total physician payments in 2004.

Recently, CWCI released a brief analysis of the effects of the increase in fees for the ten most common E/M codes. In that analysis, it was revealed that E/M payments had risen from 19.7% of physician payments in 2004 (the ICIS Table 1 referred to above) to 21.17% in 2005. This latter amount was used instead of the 19.7% in the 2004 Table 1, and the difference distributed proportionately among the remaining four code groups.

The 76.5% represented by the new code group percentages was adjusted to represent 100% of spending for the current analysis. In order to achieve this, each code group target percentage was multiplied by the ratio of 100% over 76.5% (1.307) to achieve a normalized percentage for each group. This became the new target percentage of total spending per code group.

Using 2006 OMFS fees, the spending for each code group in the sample was determined. To correct to target weighting, all frequencies within each code group were multiplied by a single factor that would result in the spending for each code group matching the target weight for the code group per Table 1 ICIS. By this method, the 2000 frequency data now matched the code group weighting of spending as reported for 2004 by CWCI in the ICIS study, adjusted for the recent revelation about the increase in 2005 for the weight of the E/M code group.

Relative frequencies of codes within code groups was unaffected by these adjustments – only the weightings of the code groups were changed from the 2000 data to reflect the 2004 ICIS Table 1 weightings.

It must be noted that no data whatsoever is publicly available (CWCI or WCRI) that addresses code frequencies or even code group weightings in the post-reform era, during which a vigorous regime of pre-authorization/utilization review affecting expensive procedures has been applied.

#### CALCULATED COST OF CURRENT CA AND CA WITH MEDICARE MINIMUM & HOLD HARMLESS

(Appendix C- spreadsheet titled 'Calculated Cost CA with Medicare Minimum & Hold Harmless')

With the new code frequency data equivalent to 2004 code group spending, the cost of current OMFS and Medicare, and any other variation of the fee schedule, could be determined (as of 2004).

#### COST OF 2007 OMFS

For each code, the new (adjusted) frequency was multiplied by the 2007 OMFS fee to determine the cost of 2007 OMFS per code, and these costs were summed across all codes to determine the total cost of 2007 OMFS.

#### COST OF 2007 CALIFORNIA MEDICARE

For each code, the new (adjusted) frequency was multiplied by the 2007 California Medicare Fee (national RVU x CF \$37.8975 x 1.063, the geographical factor used by DWC to implement SB228), to determine the cost of 2007 Medicare per code, and these costs were summed across all codes to determine the overall cost of 2007 California Medicare.

#### COST OF 2007 OMFS AS % OF CA MEDICARE

The total cost of 2007 OMFS was divided by the total cost of 2007 Medicare and multiplied by 100 to determine the percentage of Medicare to which the current OMFS spending is equivalent.