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**RISK MANAGEMENT AND THE RULES OF COMBAT**  
SITUATIONAL AWARENESS AS A RISK-MANAGEMENT TECHNIQUE



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# VARIATION IN PHYSICIAN PEER-REVIEW OUTCOMES: ANALYSIS OF FIVE-YEAR TRENDS IN WORKERS COMPENSATION AND DISABILITY

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The medical component of workers compensation claims continues to increase.<sup>1</sup> Physician reviews, also known as peer reviews, are frequently used by workers compensation (WC) managed care organizations to provide expert clinical judgments in order to facilitate effective claim handling. However, studies of the outcomes of WC peer reviews have been relatively limited in size and scope.<sup>2</sup> This analysis was conducted within a WC third party administrator's (TPA) physician review panel.

The panel is comprised of over 100 physicians and other clinical professionals, covering 34 specialties and subspecialties. The scope and staffing levels permit the panel to handle virtually all of the peer reviews required by the organization, with less than 1 percent of its reviews referred to external peer-review vendors.

All physician reviewers are board-certified in their respective specialties and are independent contractors, not employees of the organization. They are assigned reviews based on a “specialty-matching” policy that ensures that cases are sent to a physician whose expertise corresponds to that of the treating physician and the primary condition being treated.

All panel physician reviewers are selected through a rigorous interview and credentialing process, similar to most managed care organizations. This TPA is accredited as an independent review organization by URAC and meets structure and process standards established by this accreditation entity.

Each panel physician receives a thorough initial orientation and ongoing training to ensure that the physician understands the context in which WC/disability determinations are handled and that he or she follows regulatory guidelines consistently. Physicians also agree to abide by a code of ethical conduct that ensures conflict-free judgments in the review process.

Requests for physician reviews may originate from several referral sources:

- claims adjusters who generate review requests directly to the panel;
- the TPA’s own case-management nurses who request physician review of challenging or unclear cases;
- utilization nurses who generate requests for prospective, concurrent, or retrospective file reviews;
- billing-review nurses who request physician reviews after encountering coding or reimbursement issues.

Based on the source of requests for physician reviews, and the category of determination, the TPA’s information management system contains a large repository of outcomes information. Referral determination categories include the following:

- **Medical necessity/appropriateness.** This is the most frequent referral category. Generally known as a “utilization” determination, the certification or authorization of specific medical care as requested by a treating provider is addressed.
- **Causality.** This determines whether certain medical services or conditions are related to a compensable injury.
- **Functional impairment.** This determines whether there is evidence of a claimant’s inability to perform specified job demands, often used in the context of nonoccupational disability.
- **Maximal medical improvement/return-to-work.** This is an evaluation of current capabilities or obstacles that may be delaying timely return

to work, with reference to designating restrictions and limitations, as appropriate.

- **Impairment ratings.** This concerns assignment of a permanent impairment rating, according to applicable state guidelines, when a requestor questions the rating of a treating provider.
- **Treatment planning.** This concerns assessment of the adequacy of the treatment plan a provider is currently following, with an exploration of potential alternatives that may produce greater clinical benefit, resolution, or both.

Reviewing physicians respond to one or more review categories, as requested by the referral source. The data upon which the physician bases a determination include pertinent medical documentation, standards of care, and, when appropriate, a teleconference with the treating physician. A formal report is then dictated, reviewed, edited, and signed by the panel physician and submitted to the referral source upon completion. When applicable, evidence-based medicine references are listed to support the reviewer's conclusions. A "non-supported" determination by the peer reviewer indicates that submitted information fails to support any one or more of the following: the medical necessity of a requested treatment, the work-relatedness (causality) of an injury, the presence of a functional impairment resulting in disability, or the appropriateness of a treatment regimen.

The peer-review process is managed by the TPA's clinical staff, including two full-time physicians and a nurse manager. A department analyst develops reports based on determination outcomes. The large database generated creates a unique opportunity to identify benchmarks for WC practice.

This retrospective analysis was designed to compile and summarize the large database of physician-review outcomes and identify specialty and reviewer-specific trends, as well as potential concerns or topics of interest for further study.

The importance of this study has been recently supported by the observation that "in the area of analytics, workers compensation is in its infancy."<sup>3</sup> Also, there are no known published reports of WC physician reviews of this magnitude, and none have described the results of multispecialty trends over an extended period.

## **METHOD**

Physician reviews from the four highest-volume peer-review categories conducted over a five-year period (2002–2006) were analyzed. A total of

227,028 reviews were included, representing 99.1 percent of total reviews performed during those five years by the TPA. Exhibit 1 lists the number and percent of reviews resulting in a “non-supported” (NS) determination for each of the four highest-volume review categories. A utilization management request for a specific service, such as a surgical procedure, was deemed NS if the procedure was found to be not medically necessary. A disability management request was deemed NS if the claimant’s functional status did not appear to impair his or her ability to perform job requirements. A work-relatedness request regarding whether a claimant’s medical problems were work-related was deemed NS if the history and clinical findings did not confirm that the claimant had a condition arising out of and in the course of his or her job. A requested treatment plan was deemed NS if the plan was not found to be medically optimal in achieving the desired clinical recovery.

Within each review category, the following analyses were conducted:

- year-to-year patterns of outcomes for all specialties combined;
- differences between specialties for the aggregate five-year period;
- year-to-year variability in outcomes by specialty; and
- individual reviewer contribution to year-to-year variability in outcomes for major specialties.

**RESULTS**

Outcomes for the four review categories (percent NS) were marginally correlated with each other (Exhibit 2), suggesting the relative independence of each. The most significant correlation among the categories in Exhibit 2 was between “treatment plan” and “work-relatedness,” but this small correlation leaves the majority of the variance unexplained.

<b>EXHIBIT 1 HIGHEST VOLUME PEER REVIEW CATEGORIES (2002-2006)</b>		
<b>Review Category</b>	<b>#</b>	<b>%</b>
Utilization Management	114,531	50.0
Disability Management	99,382	43.0
Work-Relatedness	2,974	1.3
Treatment Plan	10,141	4.4

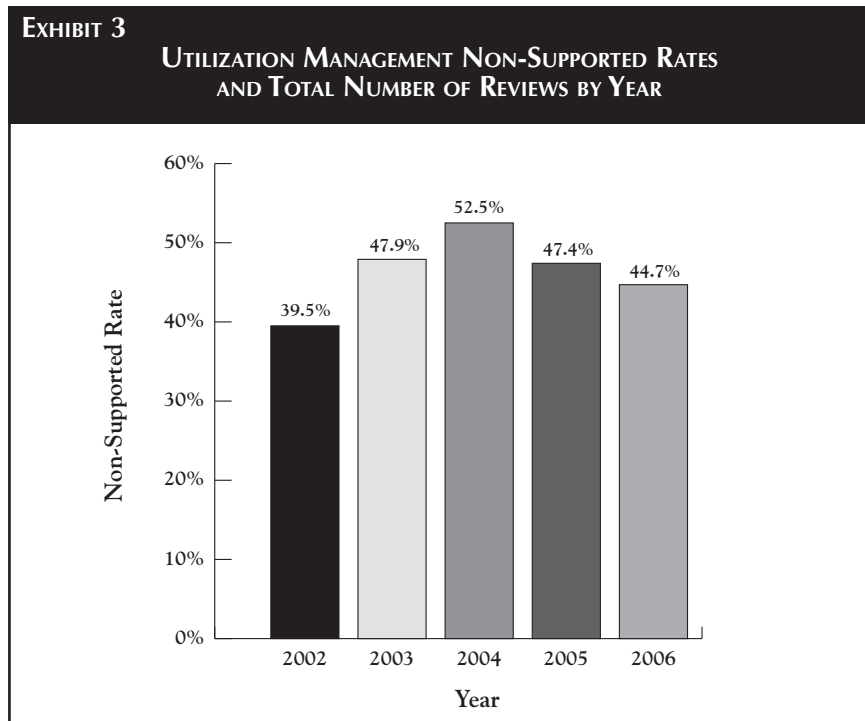
### Utilization Management Outcomes

Utilization management (UM) outcomes for each of the five years for all specialties are depicted in Exhibit 3. These outcomes represent 114,531 reviews, 53,077 (46 percent) of which were deemed NS. Given the narrow confidence intervals, year-to-year differences were “statistically significant,” but the rates nonetheless stayed within a narrow band of 40 percent to 53 percent. (Exhibit 3).

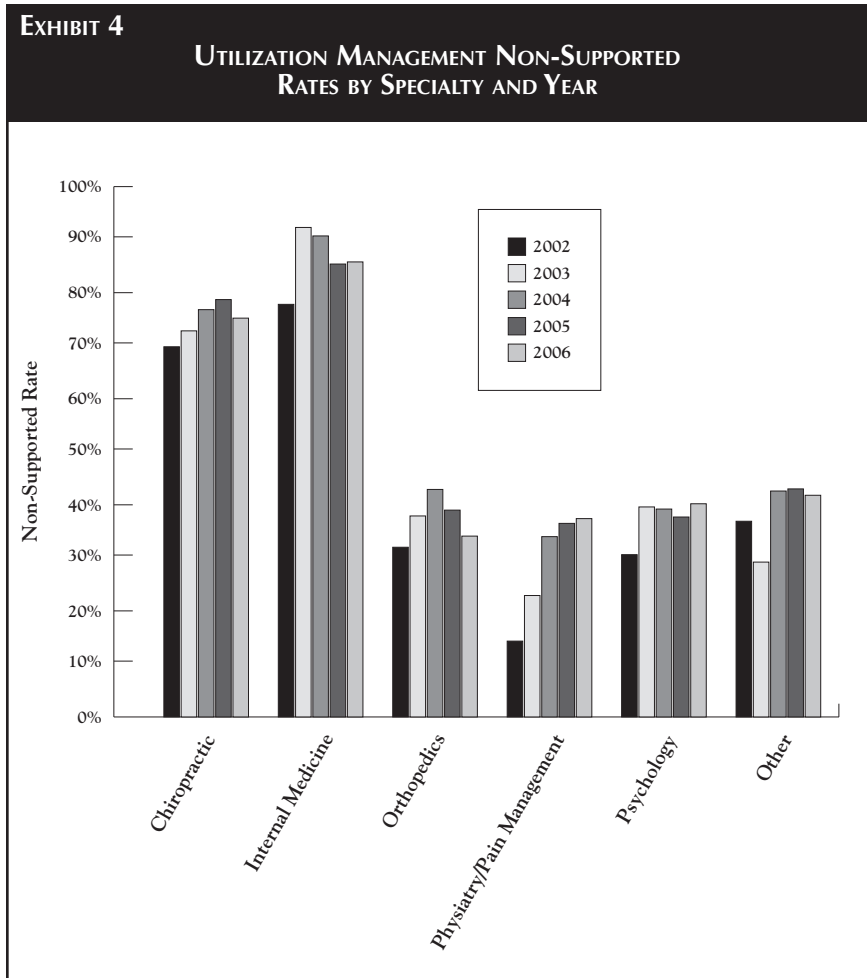
**EXHIBIT 2**  
**PEARSON CORRELATION COEFFICIENTS AMONG REVIEW CATEGORIES**

Review Category	Utilization Management	Work-Relatedness	Disability Management	Treatment Plan
Utilization Management	–			
Work-Relatedness	0.18*	–		
Disability Management	0.10	0.21*	–	
Treatment Plan	0.07	0.42*	0.26*	–

\*p < 0.05 for difference from 0



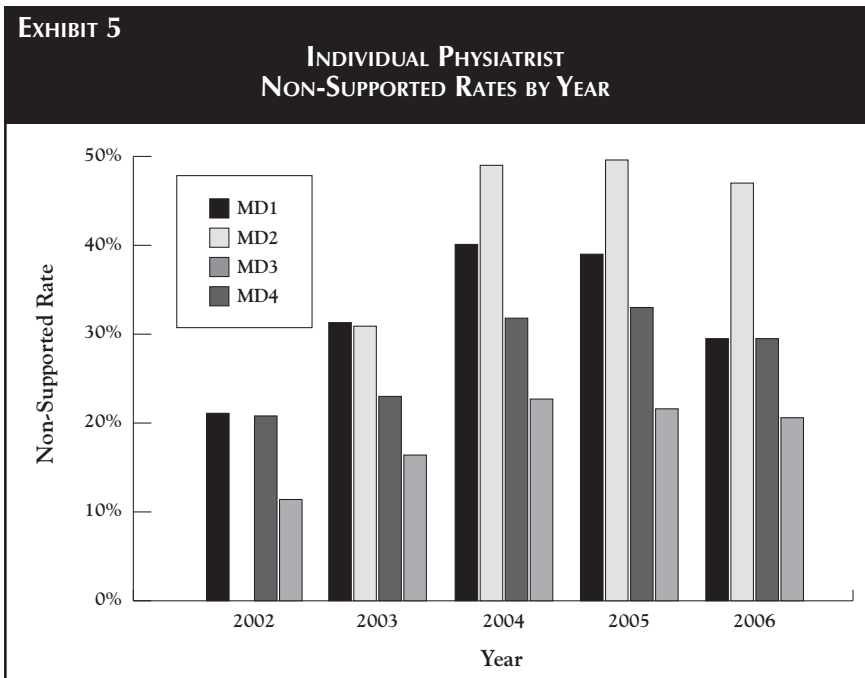
Outcomes for UM reviews among the six highest-volume specialties for the five-year period represented 95 percent of total UM reviews. As indicated in Exhibit 4, internal medicine (IM) and chiropractic demonstrate significantly higher NS rates than the other four specialties. Prior research has suggested that chiropractic services associated with WC claims tend to be overutilized, possibly explaining the observed high NS rate.<sup>4</sup> The high internal medicine NS rate is likely due to the fact that IM physicians were typically assigned “pharmacy” reviews in which questionable (nonformulary) drug requests were scrutinized. Often, use of these drugs was found to be unrelated to work injuries or medically inappropriate.



There was relatively little year-to-year variability in the NS rates within specialties, with the exception of psychiatry, which had the highest standard deviation ( $sd=0.1$ ) over the five-year period. The NS rate for this specialty increased significantly each year during the five-year period. To better understand the variance in NS rates by year within psychiatry, individual psychiatry reviewer NS rates were investigated to see if the trend observed could be attributed to specific reviewers. Figure 3 presents the rates of the four reviewers that performed 98.9 percent of all psychiatry reviews. While there is some general trend toward NS, one physician (MD2) appears to make a disproportionate contribution to the five-year trend. This is partly due to the fact that MD2 had a caseload devoted largely to chronic pain claims, which often contain redundant or excessive treatment requests, thus resulting in higher NS rates. The introduction of reviews from MD2 beginning in 2003 is clearly responsible for the increase in the NS rate from the five-year low observed in 2002.

**Disability Management Outcomes**

The disability review outcomes over five years for all specialties are de-

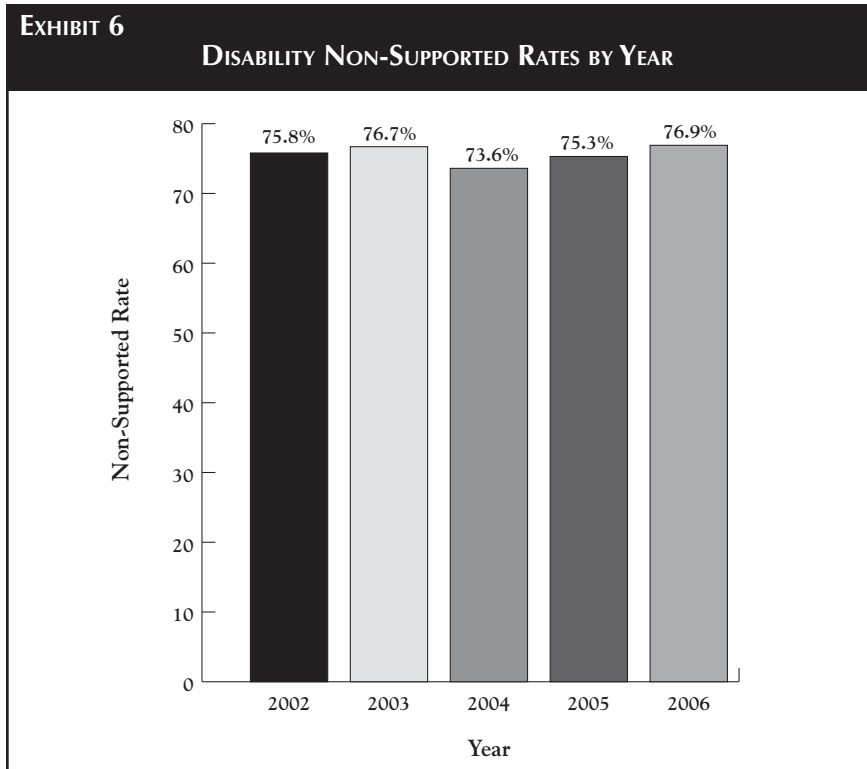


picted in Exhibit 6. These included 99,382 reviews, 76 percent of which were deemed NS. The rate was remarkably stable over the five-year period. Note the very small 95 percent confidence interval (denoted by error bars) associated with each annual estimate.

In Exhibit 7, the NS rates by specialty and year are presented. There were significant differences between specialties during the five-year period and within some specialties as well.

Internal medicine had the highest NS rates and demonstrated minimal variation over five years. High IM rates may be partially attributed to the fact that internal medicine reviews often involve diagnoses such as fibromyalgia, chronic fatigue syndrome, and other conditions that are controversial and often do not have abnormal clinical findings. Consequently, there may be insufficient evidence to support claims of work impairment. Other conditions frequently reviewed by internists are chronic conditions such as diabetes and asthma that are often not sufficiently acute to warrant disability.

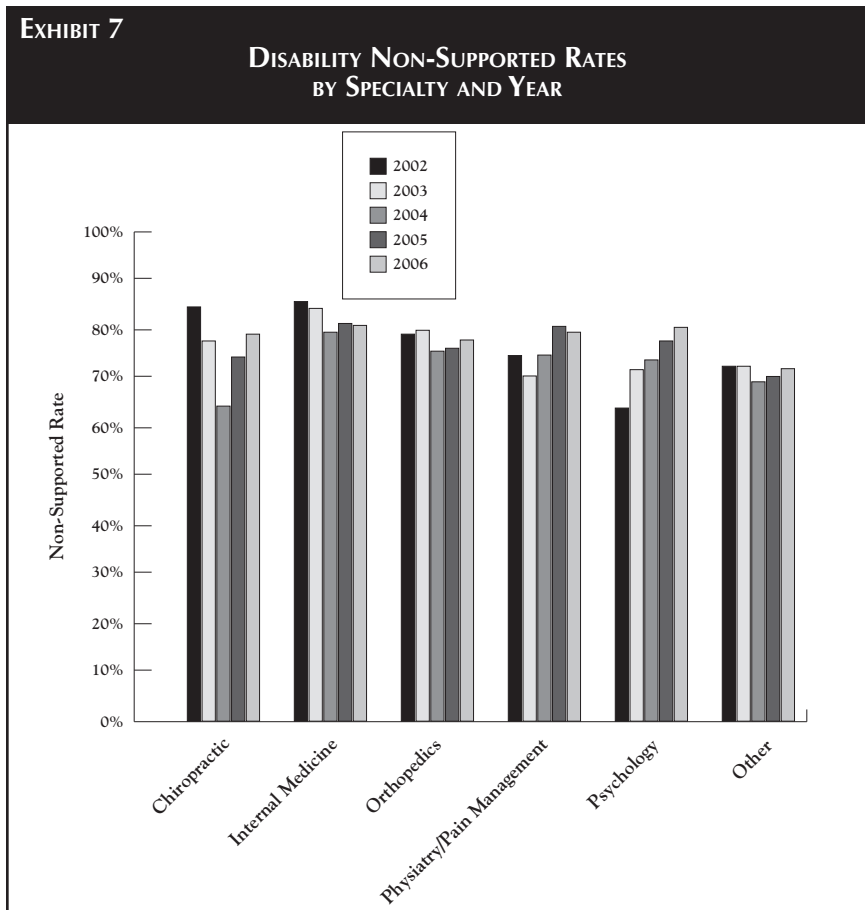
The specialty with the most variability by year was psychology. The



NS rate for this specialty increased every year during the five-year period, suggesting this variability was not random. Rates from year to year were more stable within the other specialties.

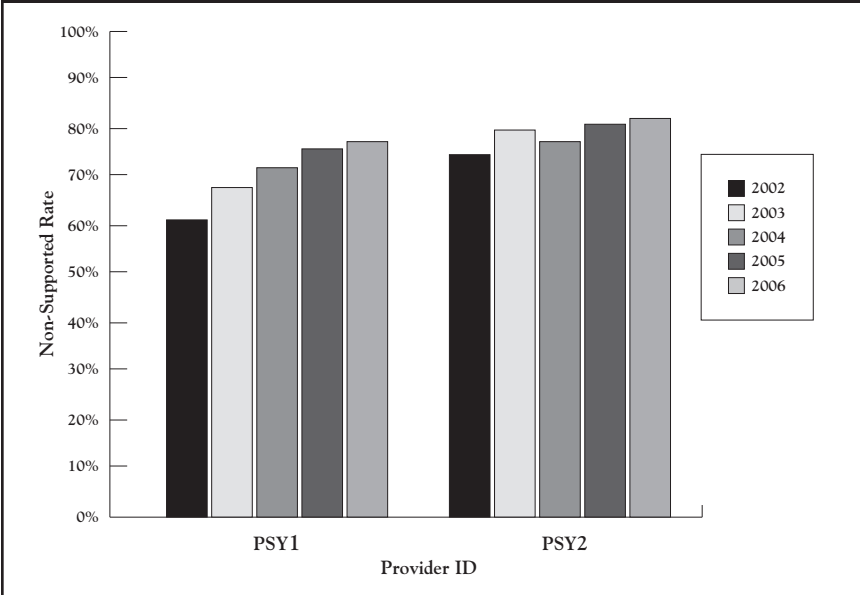
Exhibit 8 presents the NS rates by year for two individual psychologists, PSY1 and PSY2, who reviewed most cases over the entire five-year period. The trend toward greater NS outcomes is apparent for both reviewers.

Workers compensation has seen a rapid escalation in the numbers of stress-related claims in recent years. The trend above may reflect the fact that increasing numbers of questionable claims are being made. Also, during the five-year study period, the psychology panel developed explicit criteria for establishing impairment based on cognitive, behavioral, or emotional deficits.



**EXHIBIT 8**

**DISABILITY NON-SUPPORTED RATES  
BY YEAR FOR PSYCHOLOGISTS**



**Causality Outcomes**

Work-relatedness NS outcomes over five years for all specialties are presented in Exhibit 9.

These outcomes included 2,974 reviews, 2,167 (73 percent) of which were found not to support causality for the five-year period. Despite the apparent drop in NS rates seen for causality in 2005, year-to-year variation was not statistically significant.

Given the smaller numbers of reviews in this category, only psychiatry and orthopedics have sufficient numbers of reviews to make meaningful comparisons of NS rates. Aggregate NS rates for five years were 76 percent for orthopedics and 83 percent for psychiatry. Year-by-year results are presented in Exhibit 10.

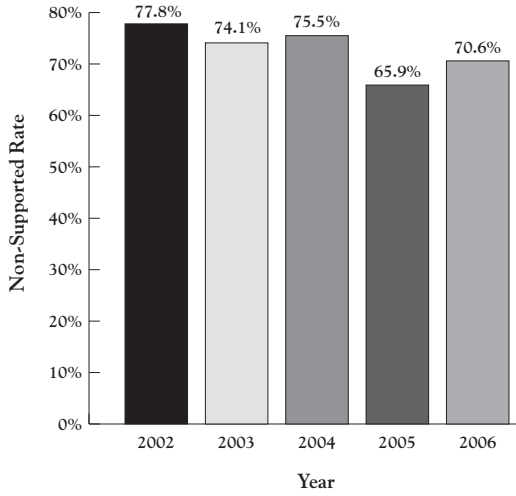
These data do not confirm any trend over time or significant differences between specialties. However, it appears orthopedics was the specialty least likely to contribute to the drop in NS rates in 2005.

**Treatment Plan Outcomes**

Outcomes for treatment plan determinations for all specialties by year are

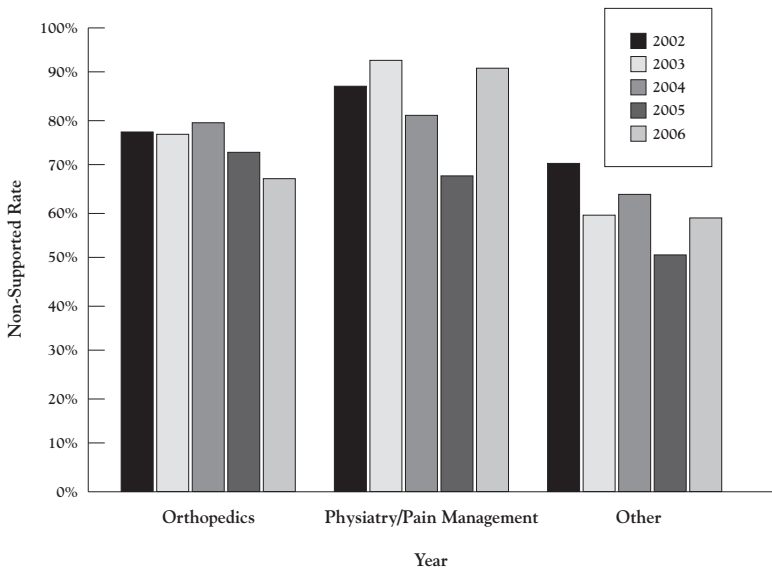
**EXHIBIT 9**

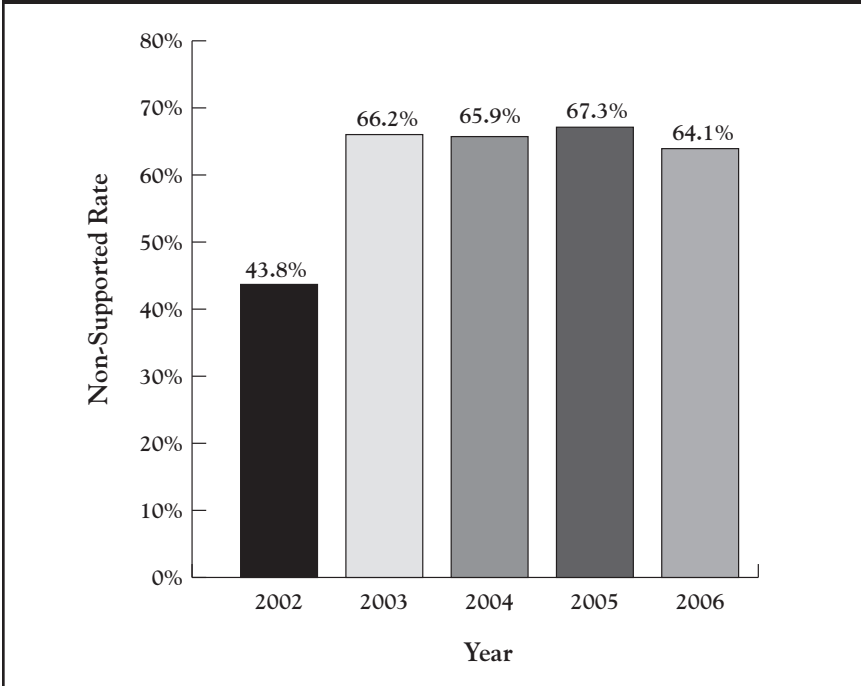
**CAUSALITY NON-SUPPORTED RATES BY YEAR**



**EXHIBIT 10**

**CAUSALITY NON-SUPPORTED RATES BY YEAR AND SPECIALTY**

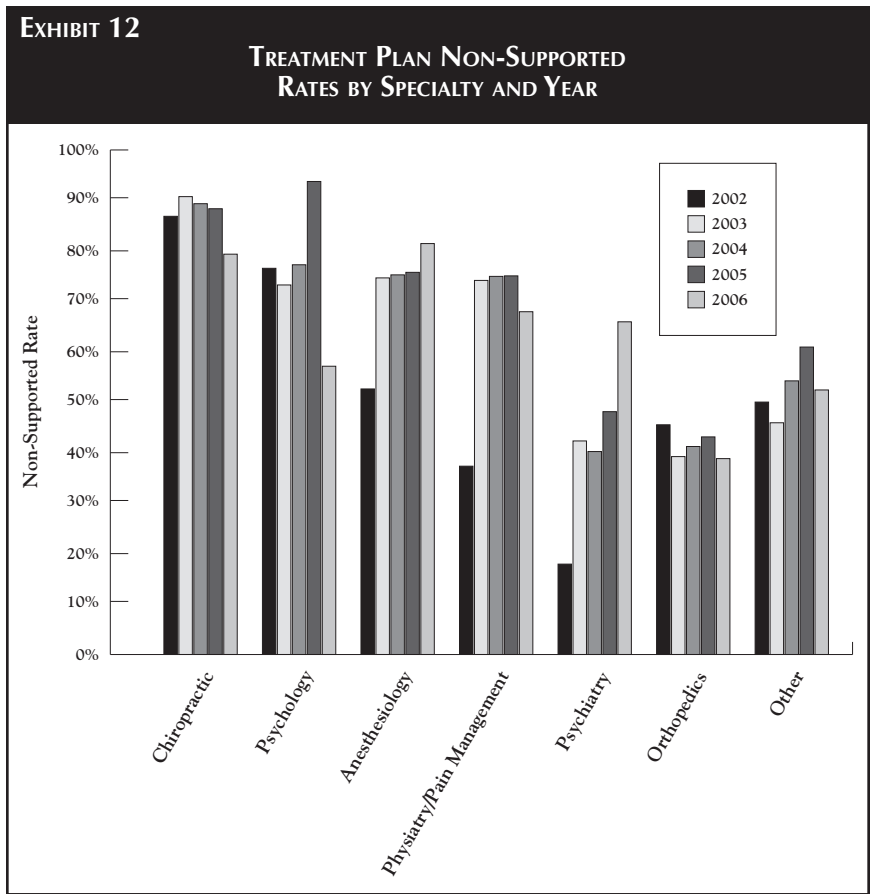


**EXHIBIT 11****TREATMENT PLAN NON-SUPPORTED RATES BY YEAR**

presented in Exhibit 11. Among 10,141 reviews, 63 percent were deemed NS. Rates appear to increase from 2002 to 2003, but the rates varied little over the final four years.

NS rates for the seven highest-volume specialties are presented in Exhibit 12. These seven specialties represented 95 percent of all treatment plan reviews. Chiropractic and psychology had the highest NS rates, for reasons previously discussed. Anesthesiology reviews often address controversial interventional procedures and pharmacological management of chronic pain, which may explain the high NS rate in this specialty.

The variability seen within physiatry and anesthesiology specialties may be explained in part by their rise in NS rates after 2002. For physiatrists, a new reviewer (MD2) began after the first year and maintained a high NS rate on a large volume of cases. For anesthesiologists, the majority of reviews were completed by a single reviewer. Therefore, the patterns observed could be attributed to a single reviewer within each of these specialties. Exhibit 13 presents the rates for individual physiatry and anesthesiology reviews.



**CONCLUSION**

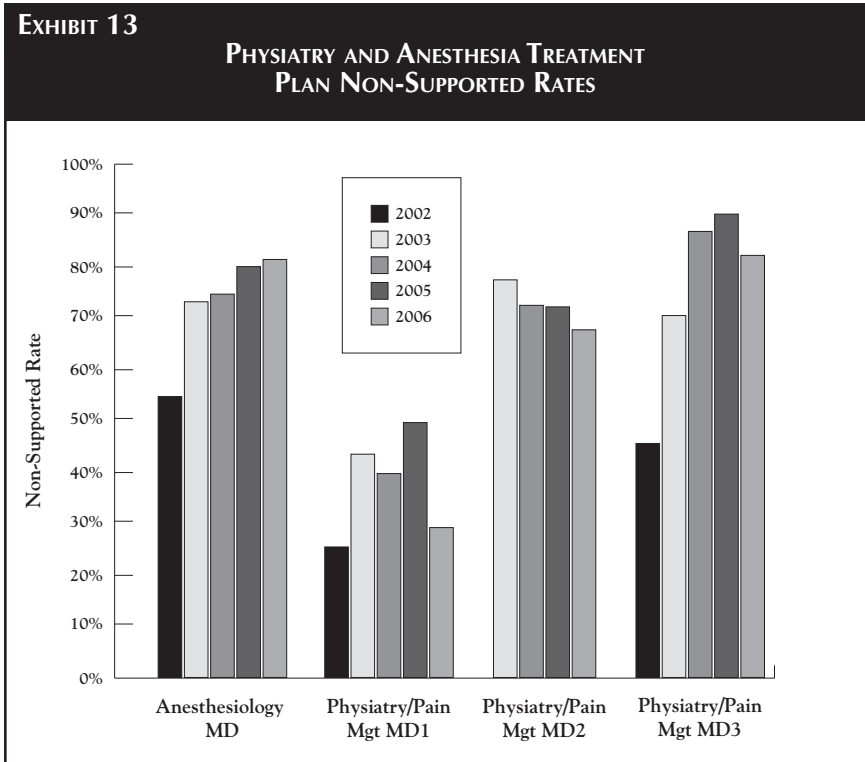
Variations in NS rates can often be explained by the nature of the specialty, the introduction of specific criteria-driven methodologies, or by an individual provider’s outcomes. While some variations were found in outcome rates by year, specialty, and individual reviewers, this large body of data overall demonstrates a remarkably stable pattern of outcomes. This may be due to the TPA’s quality control efforts. To further diminish the effects of any individual reviewer’s idiosyncrasies, increasingly rigorous quality control measures were implemented. The TPA’s internal physician review unit benefits from a structured quality assurance program for physicians involved in the clinical review process. This helps to ensure consistency and compliance.

The TPA provides an orientation program for new physician reviewers,

including an overview of organizational structure and philosophy, regulatory requirements, and the roles and responsibilities of the physician reviewer, as well as policies, procedures, and a code of ethical conduct governing the peer-review process. The orientation also includes a review of applicable proprietary and commercial clinical criteria/guidelines and evidence-based medicine resources.

Physicians joining the review panel have the opportunity to mentor or precept with an experienced physician reviewer. Reviewers are instructed in successful techniques for completing a nonadversarial and constructive peer-to-peer teleconference, an important tool for eliciting information and resolution of challenging cases.

New panel reviewers are subject to a physician-level over-read of all their peer review reports to ensure that all questions, issues, and concerns have been addressed appropriately, with supportive clinical rationale and evidence-based medicine references. Once a physician has demonstrated a high level of proficiency, reports no longer require 100 percent over-reading.



Another component of the quality assurance program is an annual audit. A random sampling of reports for each physician reviewer is audited for selected criteria. The audit results are shared with each reviewer and an action plan for those physicians with significant identified deficiencies is implemented.

The TPA develops proprietary clinical guidelines/criteria to supplement the commercially available tools used by the utilization-management and case-management staff. The subject matter for these guidelines is derived from the needs of the operations units, and they are reviewed and updated annually. Physician reviewers are involved in both the initial development and annual reevaluation process through research and review of medical literature and specialty panel meetings. Guidelines and criteria are intended to develop consensus and improve consistency of clinical determinations.

Continued monitoring and evaluation of outcome trends is an effective tool to ensure that atypical outcome patterns receive timely attention and remedial action as needed.

## ENDNOTES

1. Harty, S., "Health Insurers Try to Bring Managed Care to Workers Comp," *Business Insurance* 39 (2005): 11-13; Elam, K., V. Taylor, M. Ciol, and G.M. Franklin, "Impact of a Worker's Compensation Practice Guideline on Lumbar Spine Fusion in Washington State," *Medical Care* 35 (1997): 417-424.
2. Wickizer, T.M., G. Franklin, J.V. Gluck, and D. Fulton-Kehoe, "Improving Quality Through Identifying Inappropriate Care: The Use of Guideline-Based Utilization Review Protocols in the Washington State Workers' Compensation System," *Journal of Occupational & Environmental Medicine* 46 (2004): 198-204; Bernacki, E.J., and S.P. Tsai, "Ten Years' Experience Using an Integrated Workers' Compensation Management System to Control Workers' Compensation Costs," *Journal of Occupational & Environmental Medicine* 45 (2003): 508-516.
3. Barrett, T.F., "Meaningfully Measuring Workers Compensation Network Performance," *The Journal of Workers Compensation* 16, no. 2 (2007): 9-16.
4. Lenstra, M. and W.P. Olszynski, "The Effectiveness of Standard Care, Early Intervention, and Occupational Management in Worker's Compensation Claims," *Spine* 28 (2003): 299-304.

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