



affirmed the WCJ's findings, granting reconsideration only to adjust some dollar amounts, as requested by defendant and recommended by the judge.

On review, applicant argues that case law clearly supports entitlement to retroactive VR benefits despite lack of prima facie medical support, where the worker is ultimately found eligible for VR, and that unreasonable failure to pay PD and medical treatment before and after the stipulated award gives rise to four penalties. Defendant responds that since there was no prior demand for VR and no breach of a duty to give notice, the Board correctly denied VR benefits during the period in question, and the failure to pay PD and for medical treatment did not give rise to four penalties because the same benefits were delayed both before and after the stipulated award. Oral argument is scheduled for November 30, 2004, at 9 a.m. in Los Angeles, unless waived. *Green v. WCAB*.

Court of Appeal, 2d App. Dist., Div. 8, Sept. 17, 2004, No. B171921.

Editor's Note: Before granting the writ, the court of appeal requested input from the parties on the effect of SB 899, which substantially alters the penalty situation on the issues here. Applicant and an amicus brief by the California Applicants' Attorneys Association argue that since there had been a final award of penalty, the more liberal pre-SB 899 version must be applied. Defendant and an amicus brief by the California Workers' Compensation Institute contend, on the other hand, that there has been no final adjudication of the penalty issue, and that applicant has no vested right to a penalty. Accordingly, the amended version of §5814 should apply, substantially reducing the penalty. Since oral argument is set for November 30, a judicial pronouncement on this timely issue is likely in the near future.

WCAB DECISIONS

WCJ Awards Gym Membership to Worker Injured in 2003, as Primary Treater Recommended; Panel Denies Reconsideration

ACOEM Guidelines Apply Only to Acute Injuries, Not to Chronic Disability

[*Hamilton v. State Comp. Ins. Fund*, STK 189211, Sept. 16, 2004, Order Denying Reconsideration]

A Board panel has denied reconsideration of a trial judge's award of medical treatment that was alleged to be contrary to the American College of Occupational and Environmental Medicine's Occupational Medicine Practice Guidelines. The applicant's condition was chronic, the trial judge said, and the ACOEM guidelines apply only to the treatment of acute injuries. The requirement that medical evidence meet the same scientific standards as the ACOEM guidelines applies only to evidence offered to rebut the presumption of their correctness.

Relevant Facts and Proceedings

Applicant Lisa Hamilton sustained multiple injuries in the course of her employment by Goodwill Industries on February 13, 2003. Defendant State Compensation Insurance Fund, the employer's insurer, accepted liability for the claim and provided benefits. About one year after the injury, applicant's treating physicians recommended that she be provided membership in a gymnasium for therapy.

Although the gym membership had been recommended in several medical reports, SCIF declined to approve it. Applicant sought a hearing on the issue, which was held before Workers' Compensation Administrative Law Judge Alvin R. Webber on June 9, 2004. SCIF contended that the gym membership was not set forth in the American College of Occupational and Environmental Medicine's Occupational Medicine Practice Guidelines.

On July 12, the WCJ awarded the gym membership. In his opinion on decision he wrote:

No analysis is necessary regarding the question of whether the ACOEM guidelines and the presumption of correctness that attaches thereto [have] been rebutted as the ACOEM guidelines themselves, in the opinion of this WCJ, clearly provide for applicability only during the first 90 days following the industrial injury. Acknowledging that the precise interpretation of the "acute injury" reference made in the ACOEM guidelines is as yet unsettled, this is how this WCJ so interprets the guidelines in question. As today's hearing is obviously more than 90 days post-injury, the interpretation set forth above can only allow for a finding that the ACOEM guidelines are no longer applicable, and the guidelines are the only basis for the denial of care in question. The opinions recommending the gym membership are multiple and substantial, and based thereon an award of care will issue.

Defendant petitioned for reconsideration, contending that (1) applicant had the burden of proving the necessity for the treatment by a preponderance of the scientific medical evidence, (2) this evidence must meet the same scientific standards as the ACOEM guidelines, and (3) applicant had not sustained that burden.

WCJ Report and Panel Decision

In his report on reconsideration, WCJ Webber quoted his opinion on decision and iterated that the ACOEM guidelines expressly apply to the treatment of acute injuries. Having occurred over 90 days previously, applicant's injury was no longer acute. *Labor Code §4604.5* requires scientific medical evidence to rebut the presumption that the ACOEM guidelines are correct on the issue of extent and scope of medical treatment. Here, however, the guidelines are inapplicable according to the terms of the

WORKING P A P E R

Evaluating Medical Treatment Guideline Sets for Injured Workers in California

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WR-203

November 2004

Prepared for the Commission on Health and Safety and Workers' Compensation
and the Division of Workers' Compensation, California Department of Industrial
Relations

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INSTITUTE FOR CIVIL JUSTICE AND
HEALTH

PREFACE

This working paper presents an examination of the medical guidelines that might be used to evaluate the appropriateness of care provided California's injured workers, based on the following requirements in California Senate Bill 228 (Alarcón), enacted in September 2003:

- The Commission on Health and Safety and Workers' Compensation is to survey for nationally recognized evidence-based utilization guidelines and make recommendations to the Division of Workers' Compensation (DWC); and
- The Administrative Director (AD) of DWC is to adopt by December 1, 2004, a utilization schedule that will set presumptive standards for the duration and scope of medically appropriate care.

The study identifies comprehensive guideline sets addressing work-related injuries, evaluates their technical quality and clinical content, and highlight policy issues that should be considering in implementing them. The summary of this paper is an abridged version of the study findings that should be of general interest to stakeholders in the California workers' compensation program. The body of the document reports the full details of the guideline evaluation method, results, and implementation. It is intended as a reference for readers seeking more detailed information, and it may also be of interest to health-services researchers in other states.

The work presented here was performed for the Commission on Health and Safety and Workers' Compensation and the Division of Workers' Compensation, California Department of Industrial Relations under Task 3 of Contract Number 40336045. It is part of a broader study that examines the cost and quality issues affecting medical care provided to injured workers in California, and assesses strategies to improve the quality and efficiency of that care. The findings for the other study tasks will be reported in separate documents.

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EXECUTIVE SUMMARY

In recent years, the California workers' compensation system has been encumbered by rising costs and high utilization of medical care. Medical costs for injured workers grew by 111 percent between 1997 and 2002 and now represent more than half the total costs of workers' compensation (CWCI, 2004). Medical care payments were more than twice the national average in 2002 (NASI, 2004).

A comparative study across 12 states by the Workers' Compensation Research Institute concluded that California's higher medical costs resulted largely from utilization rather than prices (Telles, Wang, and Tanabe 2004). The study found that

- California had more visits per claim—in total and for physicians, chiropractors, and physical/occupational therapists—than any of the other states studied.
- The average number of visits for more mature claims was 31 percent higher for hospitals, 70 percent higher for physicians, and 150 percent higher for chiropractors than the 12-state median.

To address these concerns, the California legislature passed a series of initiatives aimed at reducing costs and inappropriate medical care utilization in the system (Calderon 2002, Alarcón 2003, Poochigan 2004). SB 228, passed in 2003, called for medical treatment guidelines to define the appropriate utilization of medical care provided to injured workers, adopting the American College of Occupational and Environmental Medicine (ACOEM) guidelines as presumptively correct on an interim basis (Alarcón 2003). Previously, physicians' treatment plans were presumed to be correct under the law. SB 899, passed in 2004, refined some of the requirements of SB 228 (Poochigan 2004). The project reported here, jointly sponsored by the California Commission on Health and Safety and Workers' Compensation (CHSWC) and the California Division of Workers Compensation (DWC), surveys and evaluates medical treatment guidelines for injured workers in California, as specified in the revised labor code (California Labor Code 2004):

§77.5(a): Commission on Health and Safety and Workers' Compensation (CHSWC) "shall conduct a survey and evaluation of evidence-based, peer-reviewed, nationally recognized standards of care..."

§5307.27: the Administrative Director of the Division of Workers' Compensation (DWC), in consultation with CHSWC, will adopt after public hearings "a medical treatment utilization schedule, that shall incorporate the evidence-based, peer-reviewed, nationally recognized standards of care ... and that shall address, at a minimum, the frequency, duration, intensity, and appropriateness of all treatment procedures and modalities commonly performed in workers' compensation cases."

In calling for guidelines specifying the appropriate utilization of medical care, SB 228 required the California Commission on Health and Safety and Workers' Compensation (CHSWC) to survey and evaluate existing medical treatment guidelines. Using the results of the evaluation, the state is to adopt either the ACOEM guidelines or a better alternative in the longer term. By

December 1, 2004, in consultation with CHSWC, the Administrative Director of DWC must adopt a utilization schedule based on CHSWC's recommendations (Alarcón 2003).

The legislation is intended to establish a scientific basis for addressing medical care utilization in the California workers' compensation system. The phrase "evidence-based, peer-reviewed, nationally recognized standards of care" refers to the science of evidence-based medicine, which means using the best available research evidence to support medical professionals' decisionmaking (Sackett 1996). The objective of evidence-based medicine has been defined as "minimizing the effects of bias in determining an optimal course of care" (Cohen 2004).

Medical treatment guidelines are an important tool for implementing evidence-based medicine. Guidelines are systematically developed statements that assist practitioner, patient, and, in this case, payor decisions about appropriate health care for specific clinical circumstances (Field and Lohr, Institute of Medicine (IOM) 1990). A high quality guideline can help to curtail the effects of bias in formulating a treatment plan (AGREE 2001). Guidelines have many applications; perhaps the most common is distilling research evidence into a more usable form for busy clinicians. Insurers and third-party payors can also employ guidelines to determine whether a specific treatment is appropriate for a particular patient and therefore whether it should or should not be provided.

Techniques performed by or on behalf of third-party payors to reduce health care costs by assessing the appropriateness of care provided to individual patients are collectively called utilization management (Gray and Field, IOM 1989). There can be substantial variability in utilization management practices, particularly in the criteria used for assessing whether care is appropriate (Gray and Field, IOM 1989; Wickizer and Lesser 2002). Because a lack of standardization may affect access to and quality of care for patients, the recently passed workers' compensation legislation requires payors to employ review criteria that are consistent with the guidelines adopted by the state of California (California Labor Code 2004).

To manage both the initial selection of treatment and the quantity of care provided, SB 228 requires the adopted utilization schedule to address frequency, duration, intensity, and appropriateness (Alarcón 2003). RAND defines appropriate medical care as care for which the potential benefits to the patient outweigh the potential risks, irrespective of cost. Inappropriate care is defined as care for which risks outweigh the potential benefits. Care of uncertain appropriateness falls between the two (Fitch, RAND 2001). SB 228 also stipulates that the utilization schedule must address, when relevant, frequency, intensity, and duration, i.e., quantity of care (Alarcón 2003).

The legislation calls for guidelines addressing all treatment procedures and modalities commonly performed in workers' compensation cases (Alarcón 2003). Workers experience a broad range of injuries of the muscles, bones, and joints, as well as a wide variety of other medical problems. These often require diagnostic tests, such as x-rays and magnetic resonance imaging (MRI). In California, common therapies include medications, physical therapy, chiropractic manipulation, joint and soft-tissue injections, and surgical procedures.

To enable the state to manage medical utilization costs, the guidelines will have to address diagnostic tests and therapies that are not only common but also costly, either individually or in

the aggregate. Utilization management should be most cost-effective when it focuses on costly services (Wickizer, Lessler, & Franklin 1999). Therefore, our analysis concentrated on diagnostic tests and therapies that are frequently performed and that contribute substantially to costs within the California workers' compensation system. We identified several such tests and therapies that we consider to be the priority topic areas that the guidelines should cover: MRI of the spine, spinal injections, spinal surgeries, physical therapy, chiropractic manipulation, surgery for carpal tunnel and other nerve-compression syndromes, shoulder surgery, and knee surgery. Taken together, these procedures account for about 44 percent of the payments for professional services provided to California's injured workers. In addition, the surgeries account for about 40 percent of payments for inpatient hospital services

Our study focused on identifying and evaluating guidelines for these priority areas for possible adoption by DWC before December 1, 2004. Our approach was to identify guidelines for work-related injuries, to screen those guidelines using multiple criteria, and, finally, to conduct comparative evaluations of selected guidelines. It is important to note that we are accomplishing these objectives in a very limited time frame and with limited resources; because of these constraints, we did not conduct an independent review of the clinical literature or develop guidelines ourselves.

We used the Institute of Medicine definition of *guideline* as the basis for our search: "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances" (Field and Lohr, IOM 1990), except that we also included documents developed to assist payor decisions. We added these because the legislation called for the guidelines to address utilization issues.

Using a variety of complementary sources, we identified 73 relevant guidelines. We searched the National Library of Medicine's MEDLINE and the National Guidelines Clearinghouse for practice guidelines published during the three years prior to June 2004, using keywords referring to work-related injuries. We surveyed the websites of relevant specialty society organizations listed by the American Medical Association. We contacted each of the other 49 U.S. states to inquire about workers' compensation guidelines, and we interviewed national and California workers' compensation experts. These experts included providers, insurers, CHSWC and DWC staff, researchers, and our clinical panelists. We used Google to identify chiropractic guidelines and physical therapy guidelines, as well as to locate specialty society websites. We also posted a call for guidelines on the DWC website.

We next began the task of selecting guidelines satisfying requirements of the legislation and preferences of the state (Table S.1). In accordance with the legislation, our first selection criterion was that the guidelines must be evidence-based and peer-reviewed. Our second criterion was that the guidelines must be nationally recognized. We developed generous definitions for these criteria in order to be inclusive at this stage. Together, "evidence-based" and "peer-reviewed" were taken to mean based, at a minimum, on a systematic review of literature published in medical journals included in MEDLINE. Systematic reviews of the literature are standard and essential features of an evidence-based guideline development process, as reflected by the fact that they are required by the National Guidelines Clearinghouse and are included in various guideline-assessment methodologies (AGREE 2001, National Guidelines Clearinghouse 2004, Shaneyfelt 1999). "Nationally recognized" was taken to mean any one of the following:

accepted by the National Guidelines Clearinghouse; published in a peer-reviewed U.S. medical journal; developed, endorsed, or disseminated by an organization based in two or more U.S. states; currently used by one or more U.S. state governments; or in wide use in two or more U.S. states.

Table S.1
Screening Criteria for Guidelines Warranting Further Evaluation

Evidence-based, peer-reviewed
Nationally recognized
Address common and costly tests and therapies for injuries of spine, arm, and leg
Reviewed or updated at least every three years
Developed by a multidisciplinary clinical team
Must cost less than \$500 per individual user in California

Using our third criterion, we selected sets of guidelines addressing the common and costly tests and therapies for injuries of the spine, arm, and leg to at least a minimal degree. To address the cost-driver topics, the state could (1) choose to have a universe of multiple acceptable guidelines addressing each of the cost-driver topics; (2) choose the single best guideline for each cost-driver topic, putting multiple guidelines together into a patchwork; or (3) choose one guideline set that addresses most or all of them. Having a universe of multiple guidelines would create the most flexible decisionmaking for clinicians, and using a patchwork of guidelines would enable the state to choose the single highest-quality guideline for each topic and to expand the number of topics addressed.

We chose sets of guidelines over multiple individual guidelines for several reasons.

Multiple guidelines may vary in rigor of development and frequency of updating. Moreover, multiple guidelines may address the same injuries and treatments and make contradictory recommendations, which could foster litigation. This is especially problematic for patients with multiple injuries, who might be subject to several different guidelines at the same time. Multiple guidelines may be more complex for the state to implement and administer and may be costly to users. Of course, some of these problems could affect sets of guidelines as well, and the content within each set may vary in quality.

In hopes of identifying a single guideline set that would address many common and costly work-related injuries in a rigorous, evidence-based fashion, as well as facilitate implementation, the policy decision was to pursue the guideline-set approach at this point in time. The short timeline on this project precluded us from pursuing this approach and the patchwork approach simultaneously. If no acceptable guideline sets could be identified, the state would have the option to consider alternative strategies in the future.

Our fourth selection criterion was that the guideline sets be reviewed at least every three years. This requirement was based on prior RAND research demonstrating that new research evidence makes about 50 percent of guidelines out of date after about 5.8 years and at least 10 percent out of date after 3.6 years (Shekelle 2001).

Our fifth criterion was that multidisciplinary clinical panels had to be involved in developing the guidelines. A 1990 Institute of Medicine report on clinical practice guidelines considered a multidisciplinary development process to be an important component of guideline quality. The report asserted that a multidisciplinary team increases the likelihood that (1) all relevant scientific evidence will be considered, (2) practical problems with using the guidelines will be identified and addressed, and (3) affected [provider] groups will see the guidelines as credible and will cooperate in implementing them (Field and Lohr, IOM 1990). Accepted guideline-assessment tools share the requirement for a multidisciplinary development process (AGREE 2001, Shaneyfelt 1999). Also, studies suggest that multidisciplinary panels produce more balanced interpretations of the literature than single-specialty panels do (Coulter 1995). Finally, we believed that sets of guidelines addressing diverse therapies and injuries should have input from a variety of relevant experts.

Our sixth criterion was that guideline sets cost less than \$500 per individual user. Some proprietary guidelines addressing work-related injuries could be marketed predominantly to institutional users, such as insurers. In California, potential users of the workers' compensation medical treatment schedule also include providers, attorneys, judges, and many other types of individual users. We selected this threshold to eliminate guidelines marketed to institutional rather than individual users.

The following five guideline sets met all the screening criteria.

1. AAOS: Clinical Guidelines by the American Academy of Orthopedic Surgeons.
2. ACOEM: American College of Occupational and Environmental Medicine Occupational Medicine Practice Guidelines.
3. IntraCorp: Optimal Treatment Guidelines, part of IntraCorp Clinical Guidelines Tool(R).
4. McKesson: McKesson/InterQual Care Management Criteria and Clinical Evidence Summaries.
5. ODG: Official Disability Guidelines: Treatment in Workers' Comp, by Work-Loss Data Institute.

Many guidelines were eliminated because they did not address most of the cost-driver tests and therapies to at least a minimal degree. A few specialty society documents were excluded because they did not meet our definition of a guideline. Several state guidelines and specialty society guidelines were eliminated because their content was out of date or because we could not confirm an updating plan. No guidelines were eliminated solely for lack of a multidisciplinary panel or on the basis of cost.

The final step in our process was a comparative evaluation of the five selected guidelines, addressing both technical quality and clinical content. The technical quality evaluation assessed the process by which guidelines were developed and other dimensions. Although there are formal, accepted methods for developing guidelines, there is tremendous variation in the rigor of this process. We planned to exclude guidelines that performed especially poorly on technical quality from further evaluation. The clinical content evaluation assessed how well the guidelines address utilization decisions, meaning appropriateness and quantity of treatment.

RAND researchers evaluated technical quality with the AGREE instrument, which has been endorsed by the World Health Organization and is becoming an accepted standard for guideline development (Grol 2003). AGREE addresses six domains that suggest an unbiased guideline (AGREE 2001):

1. **Scope and purpose:** whether the overall objective, clinical questions, and target patients are specifically described.
2. **Stakeholder involvement:** whether the developers had input from all the relevant professional groups, sought patients' preferences, and piloted the guideline among defined target users.
3. **Rigor of development:** whether developers used systematic and explicit methods to search for evidence and formulate recommendations, considered potential health benefits and risks, had the guideline externally reviewed, and provided an updating plan.
4. **Clarity and presentation:** whether the guideline makes specific and unambiguous recommendations, presents management options clearly, and includes application tools.
5. **Applicability:** whether developers considered organizational barriers and costs of applying the guideline and provided key review criteria for monitoring implementation.
6. **Editorial independence:** whether the guideline is editorially independent from the funding body and conflicts of interest of guideline development members have been recorded.

RAND rated these domains, using detailed descriptions and corroborating evidence provided by the guideline developers.

All five guidelines performed reasonably well in the technical evaluation, which produces standardized domain scores ranging from 0.00 (lowest) to 1.00 (highest) (Table S.2). Scope and purpose were well defined for all. Stakeholder involvement was weakest for AAOS, strongest for McKesson, and good for the rest. Rigor of development was very good for all. Clarity and presentation were excellent for all. Applicability was variable because developers often neglected implementation—McKesson was good, ODG better, and the others poor. Editorial independence was lowest for IntraCorp and excellent for the rest.

Table S.2
Technical Quality Evaluation—AGREE Instrument Results (Standardized Domain Scores)

Domain	AAOS	ACOEM	INTRACrp	MCKessn	ODG
Scope and purpose	1.00	0.89	0.89	1.00	1.00
Stakeholder involvement	0.54	0.79	0.79	0.88	0.79
Rigor of development	0.81	0.88	0.83	0.88	0.81
Clarity and presentation	0.96	0.88	1.00	1.00	0.96
Applicability	0.17	0.33	0.33	0.61	0.72
Editorial independence	1.00	1.00	0.75	1.00	0.92

Two prior studies evaluating a total of about 150 guidelines found highly variable scores across all six domains (Burgers 2004, Harpole 2003). Our five selected guidelines scored higher in the

rigor of development and *editorial independence* domains than many guidelines did in other studies. Like guidelines from other studies, our five guidelines were relatively weak in the *stakeholder involvement* and *applicability* domains. Overall, the scores of our five guidelines were higher than those in the two prior studies. Because all five of these guidelines did reasonably well in the technical quality evaluation, we decided none warranted elimination on this basis.

Next, a multidisciplinary clinical panel evaluated guideline content, assessing relevant content within each guideline and considering ten selected therapies in slightly greater detail. Relevant content addressed utilization decisions, specifically, appropriateness of care and quantity of care. We believe that, to be useful in making utilization decisions, the relevant content should be comprehensive (applicable to most patients) and valid (consistent with evidence or expert opinion). Panelists rated guidelines independently then met on October 1 and 2 to discuss areas of disagreement and to re-rate the guidelines.

For our panel, we selected 11 clinicians referred to us by national specialty societies. We sought national experts in musculoskeletal injuries who were practicing at least 20 percent of the time and who had some experience treating injured workers. Eight national societies, representing a broad spectrum of providers caring for injured workers, made nominations. The only desired specialty that was not represented among our nominees was radiology. We selected clinical leaders from a diversity of geographic locations and practice settings, with diverse experiences caring for injured workers. To avoid potential conflicts of interest, we wanted no more than about 20 percent of the selected panelists to be from California and would have excluded panelists involved in the development of the guidelines under review. We preferred individuals experienced in the development, evaluation, or implementation of medical treatment guidelines, and experience with expert panels was a plus. For services not commonly ordered or provided by other panel members, we chose two panelists in order to increase the discussion related to those topics. We interviewed the most promising candidates by telephone to clarify their experience, and we contacted references to explore the ability of the candidates to function in groups. The final panel included one general internal medicine physician, two occupational medicine physicians, one physical medicine and rehabilitation physician, one physical therapist, one neurologist also board-certified in pain management, two doctors of chiropractic medicine, two orthopedic surgeons, and one neurosurgeon.

Panelists evaluated ten therapies in detail, as well as reviewing the entire set of guidelines. The ten therapies were selected to represent regions of the body frequently injured at work, such as the spine and the large and medium-sized joints in the arms and legs. Within each region, we focused on cost-driver tests and therapies, preferring those for which the guidelines had different recommendations and those for which we had panel nominees providing the services under consideration. Our limited time frame forced us to narrow the number of topics under consideration. Because all of the guidelines made similar recommendations about spinal MRI and knee surgery, there seemed little benefit to comparing these topics. Furthermore, lacking a radiologist on the panel would have made it difficult to evaluate MRI of the spine or spinal injections. This left us with the following ten types of therapies, which included surgery and physical modalities (i.e., physical therapy and chiropractic manipulation) for detailed consideration: physical therapy, chiropractic manipulation, surgical decompression procedures, and surgical fusion procedures for lumbar spine problems; physical therapy, chiropractic

manipulation, and surgery for carpal tunnel syndrome; physical therapy, chiropractic manipulation, and surgery for shoulder injuries. We defined physical therapy as treatments provided by physical therapists and chiropractic manipulation as any additional treatments that can be provided only by chiropractors. California chiropractors told us that there is substantial overlap between the physical modalities provided by these two specialties, and that the appropriateness of manipulation influences when chiropractors provide other physical modalities. We distinguished physical therapy and chiropractic manipulation because we did not want panelists to rate the same content twice.

Although the residual (i.e., nonselected) content within each guideline varied in scope, we wanted to evaluate it. Panelists rated residual content in each guideline as though it were a separate topic, considering other common and costly therapies for work-related injuries.

Panelists also evaluated the entire content of each guideline, considering common and costly therapies for work-related injuries, to rate and rank the guidelines.

We provided the panelists with booklets containing relevant guideline chapters for the ten selected therapies, annotated to identify content addressing surgery, physical therapy, and chiropractic manipulation. For the residual and entire-content evaluations, each panelist was provided with electronic access to the entire content of the five guidelines.

We adapted the RAND/UCLA Appropriateness Method to rate the comprehensiveness and validity of the various topics. Panelists rated comprehensiveness and validity separately on 9-point scales, with 9 as the highest rating. When panelists were unfamiliar with a topic, we instructed them to rate the content a 5 (Fitch, RAND 2001).

In the analysis, ratings were interpreted as follows:

- Comprehensive or valid: a median rating of 7 to 9 without disagreement.
- Not comprehensive or invalid: a median rating of 1 to 3 without disagreement.
- Uncertain comprehensiveness or validity: a median rating of 4 to 6 or any rating with disagreement.

After the panelists ranked the entire content of each guideline, we determined the median rank.

Using these methods, we found that the appropriateness of surgery is sometimes addressed well by the five guideline sets, as depicted in Table S.3. Panelists agreed that the AAOS guideline was valid and comprehensive for lumbar spinal decompression and fusion surgeries. They were uncertain whether it was valid for carpal tunnel surgery and agreed it was not comprehensive in addressing shoulder surgery. Panelists agreed that the ACOEM guideline was valid and comprehensive for lumbar spinal decompression surgery, carpal tunnel surgery, and shoulder surgery. Validity was uncertain for lumbar spinal fusion surgery. They agreed that the IntraCorp guideline was valid and comprehensive for shoulder surgery and invalid for lumbar spinal fusion surgery; the other two topics were of uncertain validity. The McKesson guideline ratings for surgical topics were the same as the ACOEM ratings. The ODG guideline was rated comprehensive and valid for both carpal tunnel surgery and shoulder surgery; the other two topics were of uncertain validity.

Yes means the panel agreed the content was both comprehensive and valid. *Not comprehensive* means that the panel agreed the guideline was not comprehensive; we assume minimal relevant content and do not report validity. *Not valid* means that the content was of uncertain or better comprehensiveness, and the panel agreed the content was not valid. *Validity uncertain* means that the content was of uncertain or better comprehensiveness and the panelists were uncertain of validity.

Table S.3
Comprehensiveness and Validity of Content Addressing
the Appropriateness of Surgical Procedures

	<i>AAOS</i>	<i>ACOEM</i>	<i>IntraCorp</i>	<i>McKesson</i>	<i>ODG</i>
<i>Appropriateness</i>					
<i>-- Panelists Agreed Content Was Comprehensive and Valid --</i>					
Lumbar spinal decompression	Yes	Yes	Validity uncertain	Yes	Validity uncertain
Lumbar spinal fusion	Yes	Validity uncertain	Not valid	Validity uncertain	Validity uncertain
Carpal tunnel surgery	Validity uncertain	Yes	Validity uncertain	Yes	Yes
Shoulder surgery	Not comprehensive	Yes	Yes	Yes	Yes

As seen in Table S.4, appropriateness of physical modalities is rarely addressed well by any of the five guidelines. Panelists were uncertain of the validity of the AAOS guideline for two topics and agreed that it was not comprehensive for the four others. Panelists agreed that the ACOEM guideline was valid and comprehensive for physical therapy of the shoulder. They agreed that it was not comprehensive for chiropractic manipulation of the shoulder. Validity was uncertain for the other four topics. Panelists agreed that the IntraCorp guideline was not valid for chiropractic manipulation of the spine and carpal tunnel. Validity was uncertain for the remaining topics. They agreed that the McKesson guideline was valid and comprehensive for chiropractic manipulation of the carpal tunnel and physical therapy of the shoulder. They also agreed that it was not comprehensive in addressing chiropractic manipulation of the shoulder. Validity was uncertain for the other three topics. Panelists agreed that the ODG guideline was valid and comprehensive for physical therapy and chiropractic manipulation of the carpal tunnel. They agreed that it was not comprehensive in addressing chiropractic manipulation of the shoulder. Validity was uncertain for the other three topics.

Table S.4
Comprehensiveness and Validity of Content Addressing
the Appropriateness of Physical Modalities

	<i>AAOS</i>	<i>ACOEM</i>	<i>IntraCorp</i>	<i>McKesson</i>	<i>ODG</i>
Appropriateness					
<i>-- Panelists Agreed Content Was Comprehensive and Valid --</i>					
Lumbar spine Physical therapy	Validity uncertain	Validity uncertain	Validity uncertain	Validity uncertain	Validity uncertain
Lumbar spine chiropractic	Not comprehensive	Validity uncertain	Not Valid	Validity uncertain	Validity uncertain
Carpal tunnel physical therapy	Not comprehensive	Validity uncertain	Validity uncertain	Validity uncertain	Yes
Carpal tunnel chiropractic	Not comprehensive	Validity uncertain	Not valid	Yes	Yes
Shoulder Physical therapy	Validity uncertain	Yes	Validity uncertain	Yes	Validity Uncertain
Shoulder chiropractic	Not comprehensive	Not comprehensive	Validity uncertain	Not comprehensive	Not comprehensive

Quantity of physical modalities is rarely addressed well by any of the five guidelines, as is evident from Table S.5. Panelists agreed that the AAOS guideline was not comprehensive in addressing the six quantity topics. They agreed that the ACOEM guideline was valid and comprehensive for physical therapy of the carpal tunnel. They agreed that it was valid for physical therapy of the shoulder but were uncertain of its comprehensiveness. Validity was uncertain for physical therapy of the spine. Panelists agreed that was not comprehensive for the remaining three topics. Panelists agreed that the IntraCorp guideline was not valid for chiropractic manipulation of the spine and carpal tunnel. It was of uncertain validity for all physical therapy topics and for chiropractic manipulation of the shoulder. Panelists agreed that the McKesson guideline was comprehensive and valid for chiropractic manipulation of the carpal tunnel. They agreed that it was not comprehensive for chiropractic manipulation of the shoulder. Validity was uncertain for the remaining topics. They agreed that the ODG guideline was comprehensive and valid for physical therapy of the shoulder, and they agreed that it was not comprehensive for chiropractic manipulation of the shoulder. Validity was uncertain for the remaining topics.

Table S.5
Comprehensiveness and Validity of Content Addressing
the Quantity of Physical Modalities

	<i>AAOS</i>	<i>ACOEM</i>	<i>IntraCorp</i>	<i>McKesson</i>	<i>ODG</i>
<i>Quantity</i>					
<i>-- Panelists Agreed Content Was Comprehensive and Valid --</i>					
Lumbar spine Physical therapy	Not comprehensive	Validity uncertain	Validity uncertain	Validity uncertain	Validity uncertain
Lumbar spine chiropractic	Not comprehensive	Not comprehensive	Not valid	Validity uncertain	Validity uncertain
Carpal tunnel physical therapy	Not comprehensive	Not comprehensive	Validity uncertain	Validity uncertain	Validity uncertain
Carpal tunnel chiropractic	Not comprehensive	Yes	Not valid	Yes	Validity uncertain
Shoulder Physical therapy	Not comprehensive	Valid, comprehensive uncertain	Validity uncertain	Validity uncertain	Yes
Shoulder chiropractic	Not comprehensive	Not comprehensive	Validity uncertain	Not comprehensive	Not comprehensive

Table S.6 presents summary results for each guideline, reiterating the appropriateness ratings, then presenting the residual-content and entire-content evaluations. To summarize, the panel ratings indicate that they thought all five guidelines require substantial improvement. However, they preferred ACOEM.

1. The AAOS guideline addressed appropriateness well for two of the four surgical topics and none of the six physical modality topics. Panelists agreed that the guideline had little residual content. In the entire-content rating, panelists agreed the guideline was valid but were uncertain whether it was comprehensive. It was ranked last.
2. The ACOEM guideline addressed appropriateness well for three of the four surgical topics and one of the six physical modalities. Panelists were uncertain whether the residual content was valid. In the entire-content rating, panelists agreed that the guideline was valid but were uncertain whether it was comprehensive. It was ranked first.
3. The IntraCorp guideline addressed appropriateness well for one of the four surgical topics and none of the six physical modalities. Panelists were uncertain whether the residual content was valid. In the entire-content rating, panelists agreed that the guideline was not valid. It was ranked third.
4. The McKesson guideline addressed appropriateness well for three of the four surgical topics and two of the six physical modalities. In the residual-content and entire-content evaluations, panelists were uncertain of validity. This guideline tied for second.
5. The ODG guideline addressed appropriateness well for two of the four surgical topics and two of the six physical modalities. In the residual-content and entire-content evaluations, panelists were uncertain of validity. It tied for second.

**Table S-6
Clinical Evaluation Summary**

	<i>AAOS</i>	<i>ACOEM</i>	<i>IntraCorp</i>	<i>McKesson</i>	<i>ODG</i>
<i>Appropriateness</i>					
<i>-- Panelists Agreed Content Was Comprehensive and Valid --</i>					
Surgery	2 of 4 topics	3 of 4 topics	1 of 4 topics	3 of 4 topics	2 of 4 topics
Physical therapy and chiropractic	0 of 6 topics	1 of 6 topics	0 of 6 topics	2 of 6 topics	2 of 6 topics
<i>Residual-Content Evaluation</i>					
<i>-- Panelists Agreed Content Was Comprehensive and Valid --</i>					
	Not comprehensive	Validity uncertain	Validity uncertain	Validity uncertain	Validity uncertain
<i>Entire-Content Evaluation</i>					
<i>-- Panelists Agreed Content Was Comprehensive and Valid --</i>					
<i>Ratings</i>	Valid, comprehensive uncertain	Valid, comprehensive uncertain	Not valid	Validity uncertain	Validity Uncertain
<i>-- Median Rank --</i>					
<i>Rankings</i>	4	1	3	2	2

Panelists' qualitative comments and discussion tone and content during the meeting were informative in interpreting these results. They appeared quite comfortable rating the surgical topics, based on their personal understanding of the relevant literature. However, for the physical modalities, panelists providing those services and those not providing them had quite different understandings. Some of the physicians were relatively unfamiliar with certain physical modalities, such as chiropractic manipulation of the carpal tunnel and shoulder. Providers of physical modality services cited published literature for their specialties, and occasionally, physicians admitted being unfamiliar with that literature. For some physical modality topics, it appears that little literature may exist at this time. For example, the two chiropractors, both very familiar with evidence-based medicine and chiropractic guidelines, were aware of only two preliminary studies addressing chiropractic manipulation for carpal tunnel syndrome.

At the conclusion of the meeting, panelists elaborated upon their ratings and preferences. Multiple panelists voiced the opinion that all five guidelines require substantial improvement. Seven of the 11 panelists felt that

- The five selected guidelines "are not as valid as everyone would want in a perfect world,"
- "They do not meet or exceed standards, they barely meet standards," and
- "California could do a lot better by starting from scratch."

Some panelists reported preferring the specialty society guidelines over the proprietary ones marketed for utilization management purposes, which they found too "proscriptive," meaning that they limited clinical options to a degree that made the panelists uncomfortable.

The panelists' comments may shed light on some internal inconsistencies in our findings. One notable inconsistency is that the ACOEM and McKesson guidelines performed similarly for the selected topics and for the residual content, yet the ACOEM was judged valid overall and the

McKesson was not. When asked about this, some panelists explained that the McKesson guideline was overly proscriptive, as noted above. Clinicians may be biased against guidelines marketed for utilization management purposes or biased in favor of specialty society guidelines. Alternatively the McKesson guideline may be overly proscriptive, limiting care options to an unacceptable degree.

Another inconsistency is the fact that all five guidelines did reasonably well in the technical quality evaluation, yet ratings were very uneven in the clinical content evaluation. This inconsistency was most pronounced for the physical modalities. There could be several possible explanations for this. First, even rigorously developed guidelines use expert opinion to fill gaps in the evidence. Such gaps appear common for physical modality issues, particularly quantity of care and chiropractic manipulation of the carpal tunnel. Panelists are less likely to agree that opinion-based recommendations are valid. Second, physicians might not know that chiropractors manipulate the extremities, making it difficult for them to develop or assess guidelines for such modalities. Third, although one would expect that good technical quality, including rigorous development methods, would produce valid clinical content, we know of no studies addressing this.

Our methods have important limitations that might also explain these inconsistencies. First, we were unable to provide panelists with literature reviews for the therapies under consideration. This is an especially important limitation for our evaluations of the physical modalities because panelists understood this literature differently, and for chiropractic manipulation of the carpal tunnel, some panelists were not familiar with the relevant literature at all. Second, in typical RAND/UCLA appropriateness studies, panelists assess appropriateness for well-defined surgeries and categories of patients (Fitch, RAND 2001). In contrast, we aggregated large amounts of clinical material and asked panelists to provide summary judgments. This may mean that panelists are averaging highly valid content with invalid content, leading to intermediate, i.e., uncertain, summary judgments. The residual-content evaluation involved aggregating the largest amount of content; therefore, this weakness would be most pronounced in that evaluation. The residual content was rated of uncertain validity for four of the five guidelines. Third, to our knowledge, no methods for evaluating clinical content have been validated to date. We borrowed from validated methods to the degree possible, but the main premise of our evaluation, using an expert panel to evaluate and compare multiple guidelines, has not been described in the published literature.

Despite these limitations, the clinical content evaluation leads us to the following research conclusions. All five guideline sets appear far less than ideal—in the words of the panelists, they barely meet standards. The clinical panel preferred the ACOEM guideline to the alternatives and considered it valid but not comprehensive in the entire-content rating. The ACOEM guideline addresses cost-driver surgical topics and did so well for three of the four therapies the panel rated. A surgical weakness in the ACOEM guideline set, lumbar spinal fusion, is well addressed by the AAOS guideline set. The ACOEM guideline does not appear to address physical modalities in a comprehensive and valid fashion but the other four guidelines do little better. The same was true of the residual content in each guideline.

Since March 31, 2004, the ACOEM guideline has been implemented in the California workers' compensation as presumptively correct on an interim basis. Through interviews with

stakeholders, we learned about difficulties that have arisen during this period. Payors appear to be interpreting and applying the ACOEM inconsistently. Moreover, payors appear uncertain about which topics the ACOEM guideline covers in enough detail to determine appropriateness of care. Sometimes the ACOEM guideline has been applied to topics that it addresses minimally or not at all, for example, chronic conditions, acupuncture, medical devices, home health care, durable medical equipment, and toxicology.

We received additional stakeholder input on using medical treatment guidelines within the California workers' compensation system after the clinical evaluation process was completed on the five guideline sets. We invited selected stakeholders to a meeting, the purpose of which was twofold: to share our findings to date and to obtain their input on implementation issues. Most of the participants were representatives of stakeholder organizations that were suggested to us by CHSWC and represented a variety of perspectives: labor, applicant's attorneys, physicians and other practitioners, payors and self-insured employers. Much of the meeting was spent on the issue of how the Administrative Director of the Division of Workers' Compensation (DWC) could address the topical areas in the ACOEM guidelines that need improvement.

A commonly shared viewpoint among the participants was that the longer-term goal should be to take the best guideline available for each topic area and patch these guidelines together into a single coherent set, but there were differing viewpoints as to the mechanism for reaching that goal and the policies that should be adopted in the interim. Payors tended to favor "staying the course" until a more valid and comprehensive set could be developed. They noted that the ACOEM guidelines had just been implemented and that additional time is needed both to work out the issues with ACOEM and to consider carefully the consistency and administrative issues that might arise with using multiple guidelines. Other participants tended to favor using guidelines from different developers to address the shortcomings but suggested different strategies, ranging from using the AAOS guidelines for spinal surgery as a short-term strategy while evaluating guidelines for other topical areas to adopting multiple guidelines as long as they met some minimum criteria, such as listing in the National Guideline Clearinghouse or having been developed by the specialty societies, as the short-term strategy while working toward a comprehensive consistent guideline set, using a multidisciplinary group of evaluators. These participants were concerned about the potential detrimental impact on workers of using guidelines with uncertain validity.

Because each of the comprehensive guideline sets we evaluated was of such uneven quality, we agree with the common view among stakeholders that the state will need to patch multiple guidelines together into a coherent set. However, issues arise when multiple guidelines addressing the same topic are considered presumptively correct under the law. Identifying and resolving conflicting recommendations would, therefore, be helpful. Having, for each topic, a single high quality guideline rather than multiple guidelines appears likely to minimize such conflicts.

From our research conclusions and the stakeholder comments described above, we provide the following recommendations to the state for the short term, intermediate term, and long term:

Short Term (After December 1, 2004)

1. The panelists preferred the ACOEM guideline set to the alternatives, and it is already in use in the California workers' compensation system; therefore, there is **no reason to switch to a different comprehensive guideline set at this time.**
2. ACOEM content was rated comprehensive and valid for three of the four surgical topics considered, and our evaluation methods appeared successful for these topics; therefore, **the state can confidently implement the ACOEM guideline for carpal tunnel surgery, shoulder surgery, and lumbar spinal decompression surgery.**
3. Spinal fusion surgery is especially controversial, risky, and rapidly increasing in the United States (Deyo 2004, Lipson 2004), warranting additional emphasis. The AAOS content was rated comprehensive and valid for this procedure as well as for lumbar spinal decompression surgery; therefore, **the state can confidently implement the AAOS guideline for lumbar spinal fusion surgeries and, if convenient, for lumbar spinal decompression surgery.**
4. The ACOEM guideline set performed well for three of the four categories of surgery we evaluated. Generalizing these findings to other surgical topics would be reasonable; therefore, **the state could implement the ACOEM guideline for other surgical topics.**
5. Our findings question the validity of the ACOEM guideline for the physical modalities and the remaining content, but our evaluation methods appeared to have important limitations for these areas; therefore, **we are not confident that the ACOEM guideline is valid for nonsurgical topics.** Deciding whether or not to continue using ACOEM for nonsurgical topics as an interim strategy remains a policy matter.
 - a. To identify high quality guidelines for the nonsurgical topics, we recommend that the state proceed with the intermediate-term solutions described below as quickly as possible.
6. **We suggest implementing regulations to clarify the following issues:**

Stakeholder interviews suggest that payors in the California workers' compensation system are applying the ACOEM guidelines inconsistently and sometimes for topics the guideline does not address or addresses only minimally; therefore, **we recommend that the state issue regulations clarifying the topics for which the adopted guideline should apply.**

 1. e.g., acupuncture, chronic conditions, and other topics our stakeholder interviews suggest may not be covered well by the ACOEM guideline.
- b. **For topics the adopted guideline does not apply to, the state should clarify who bears the burden of proof for establishing appropriateness of care.**

- c. **For topics not covered by the adopted guideline and throughout the claims adjudication process, the state should consider testing the use of a defined hierarchy to weigh relative strengths of evidence.**
- d. Because the medical literature addressing appropriateness and quantity of care may be very limited for some physical modalities and other tests and therapies, some guideline content will include a component of expert opinion; therefore, **the state should clarify whether expert opinion constitutes an acceptable form of evidence within "evidence-based, peer-reviewed, nationally recognized standards of care."**
- c. Our stakeholder interviews suggest that payors are uncertain whether they have the authority to approve exceptions to the guidelines for patients with unusual medical needs. Therefore, **the state should consider specifically authorizing payors to use medical judgment in deciding whether care at variance with the adopted guidelines should be allowed.**

Intermediate Term

1. If the state wishes to develop a future patchwork of existing guidelines addressing work-related injuries, our research suggests the following priority topic areas: **physical therapy of the spine and extremities, chiropractic manipulation of the spine and extremities, spinal and paraspinal injection procedures, magnetic resonance imaging (MRI) of the spine, chronic pain, occupational therapy, devices and new technologies, and acupuncture.**
 - a. When guidelines within a patchwork have overlapping content, the state may want to identify and resolve conflicting recommendations before adopting the additional guidelines.
2. Because high scores in the technical evaluation were not associated with high evaluations by expert clinicians, **we recommend that future evaluations of existing medical treatment guidelines include a clinical-evaluation component.** Specifically, we recommend against adopting guidelines solely on the basis of acceptance by the National Guideline Clearinghouse or a similar standard because this ensures only the technical quality of listed guidelines.
3. If the State wishes to employ the clinical evaluation method we developed for multiple future analyses, **we suggest that at least one analysis should involve an attempt to confirm the validity of the clinical-evaluation method,** including determining the effect of a literature review on panel findings.
4. Lack of a comprehensive literature review appeared to be a major limitation in our evaluation of content addressing the physical modalities; therefore, **future evaluations addressing the physical modalities should include a comprehensive literature review.**

Longer Term

1. Our technical evaluation revealed that ACOEM and AAOS developers did a poor job of considering implementation issues, and our stakeholder interviews indicated that payors are applying the ACOEM guideline in an inconsistent fashion. Therefore, **we recommend that the state develop a consistent set of utilization criteria (i.e., overuse criteria) to be used by all payors.**
 - a. Rather than covering all aspects of care for a clinical problem, as guidelines do, these utilization criteria should be targeted to clinical circumstances relevant to determining the appropriateness of specific tests and therapies.
 - b. Rather than defining appropriateness for all tests and therapies provided to injured workers, the criteria should focus on common injuries that frequently lead to costly and inappropriate services.
 - c. The utilization criteria should be usable for either prospective or retrospective assessments of appropriateness, because utilization management in the California workers' compensation system involves both types of activities.
 - d. The criteria should use precise language so that they will be interpreted consistently.
2. Another task within this project addresses developing a quality monitoring system for California workers' compensation. Underuse of medical care is one important component of quality; therefore, the state may need to develop criteria for measuring underuse. **It would be resource-efficient for the state to develop the overuse and underuse criteria at the same time.**
3. There are two basic ways the state could develop overuse and underuse criteria:
 - a. **The criteria could be developed from existing guidelines**, such as the ACOEM, AAOS, and any other guidelines judged valid in future studies. We suspect that it may be somewhat difficult to develop overuse criteria from clinical guidelines.
 - b. **The criteria could be developed from the literature and expert opinion**, without the intermediate step of developing or selecting guidelines.

Impact of Roll Back to December 15, 1999 Rates on Hospital Based Services

Presented by Rod Betit, President, ASHNHA

March 15, 2005

Inpatient Category	2000 Rate	2005 Rate	\$ Diff:	% Diff:
Medical	\$3591	Combined \$7586	\$2669	35.2%
Surgical	\$6244			
ICU/CCU	\$8940	\$13,907	\$2446	35.7%
Outpatient Category	2000 Rate	2005 Rate	\$ Diff:	% Diff:
Unknown actual impact since there are 1000's of codes billed				

Notes:

It is estimated that the effect of the roll back to 1999 rates would be to reduce hospital reimbursement to approximately 50% of the amount billed for these services. This is simply an unsustainable discount for this type of specialty care.

NORTHWESTERN ILLINOIS UNIVERSITY HOSPITALS
ASHNHA
 AMERICAN SOCIETY OF HOSPITALS AND HEALTH CARE SERVICES

STATE OF ALASKA

DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

WORKERS' COMPENSATION DIVISION

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March 15, 2005

Senator Con Bunde
State Capitol, Room 506
Juneau, Alaska 99801-1182

Dear Senator Bunde:

As you requested I have summarized below reemployment benefits provided under the Alaska Workers' Compensation Act. Certain activities and costs associated with those benefits are listed by annual year. The information is based upon the annual reports prepared by the Division of Workers' Compensation as well as those from the Administrator of the Reemployment Benefits program. From those reports (covering annual years 1997 - 2003) I excerpted the following data:

<u>Yr</u>	<u>Elig. for plan</u>	<u>Req'd</u>	<u>Settled</u>	<u>In plan</u>	<u>Completed plan</u>	<u>Costs</u>
2003	414	361	112	99	3*	\$15,710,000.00
2002	457	368	120	101	28	15,700,000.00
2001	430	360	109	85	15	13,100,000.00
2000	393	351	118	78	22	12,200,000.00
1999	315	251	102	92	35	9,500,000.00
1998	287	225	107	83	24	8,800,000.00
1997	<u>294</u>	<u>240</u>	<u>134</u>	<u>69</u>	<u>30</u>	<u>8,600,000.00</u>
Total	2,590	2,156	802	607	157	\$83,610,000.00

* The Reemployment Benefits Administrator revised his report to indicate that while only 3 plans were begun and completed in 2003, there were 40 plans completed that had started in earlier years (7 from 2000, 14 from 2001, and 19 from 2002.) Based on this revised analysis the RBA concluded a total of 43 plans had been completed in 2003.

Sincerely,

Paul F. Lisankie
Director

Comparison of Maximum Allowable Rates for Various Medical Procedures

CPT Code (Current Procedural Terminology)	29881	49505	63005	71020	72131	99205	99213
Short Description	Arthroscopy	Repair Initial Inguinal hernia	Laminectomy Lumbar	Radiological exam, chest, 2 views	Scan, lumbar without contrast	Office visit, new patient, comprehensive exam	Office visit, established patient intermediate exam
Idaho WC 2005	\$3,507	\$1,824	\$6,613	\$144	\$921	\$265	\$115
Oregon WC 2005	\$1,491	\$1,170	\$2,624	\$65	\$528	\$315	\$97
Washington WC FY05	\$795	\$627	\$1,393	\$33	\$316	\$233	\$71
Alaska WC 2000	\$3,283	\$1,869	\$4,977	\$120	\$930	\$280	\$94
Alaska WC 2004	\$3,813	\$2,204	\$5,728	\$135	\$1,266	\$388	\$114
Alaska WC 2005	\$4,181	\$2,295	\$5,936	\$153	\$1,369	\$368	\$127
% increase in AK WC charges between 2000 and 2005	27%	23%	19%	28%	47%	31%	36%
Current maximum allowable rates for:							
AlaskaCare	\$3,873	\$2,200	\$6,000 *	\$140	\$1,400 *	\$316	\$107
Alaska Medicare	\$1,015	\$781	\$1,781	\$61	\$494	\$290	\$88
Alaska Medicaid	\$893	\$678	\$1,558	\$55	\$450	\$253	\$78

* insufficient data for Alaska; uses National data, adjusted



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March 14, 2005

Senator Con Bunde
State Capital, Room 508
Juneau, AK 99801

RE: Senate Bill 130

Dear Senator Bunde,

We do not support Senate Bill 130 or its equivalent, House Bill 180, and we do not want you to support this bill.


There are a number of problems with these proposed bills and the efforts to push them through passage with inadequate analysis of the facts; this is not the kind of behavior we expect from a group of legislators, including those whom we elected and supported as contributing Republicans.

Section 14 of S23.30.041 (c) as presently proposed introduces the option for an injured employee and employer to stipulate for "reemployment benefits at any time." This concept is a red herring for injured workers because the insurance companies, by choosing to stipulate, would bypass the eligibility evaluation process and push the injured worker directly to the job dislocation benefit process as described in the proposed amendment to Section 16 of AS 23.30.041 (g) (2). We have a long history of working with the Workers' Compensation system in Alaska; there is a pattern among some of the carriers where injured workers are cajoled and bullied in to taking settlements rather than pursue vocational training as a means to restore them to gainful employment. They are typically not apprised of their rights, their benefits are arbitrarily terminated and their ability to obtain what is in the best interests of our State economy and their future well-being is aborted. They become disenfranchised from what the law was intended to provide.

The concept of "stipulate" in this instance is not worthy of being characterized as a progressive idea or catchy new "buzz word;" a more appropriate response would be "buzz off" to the insurance companies and their lobbyists. We did not elect them; they are not our representatives. And they do not have the interests of Alaskans in mind, not only injured workers but the employers who are saddled with the costs of the carriers' mismanagement and exorbitant costs. We urge you and your colleagues to reject this legislation.

Respectfully,


Denise Van Der Pol, CRC CCM CDMS


Larry Knickerbocker, MA CRC LPC
Certified Rehabilitation Counselor


Giorgianne Maziarfa, MS CRC
Certified Rehabilitation Counselor

cc: Senator Ralph Seekins
Senator Ben Stevens
Senator Johnny Ellis
Senator Bettye Davia

SB 130 Section 36
Illustration of the effect of
combined PERS and workers' compensation benefits
and the operation of Section 36

2003 workers' compensation		Wages at the time of injury		PERS occupational disability	
Monthly salary (before taxes)	2364	Gross monthly salary	2364	Monthly salary (before taxes)	2364
Weekly salary	545.54	Gross weekly	545.54		
Overtime or premium pay if applicable					
Plus employer pension contribution PERS 7.65% SBS 6.13%	75.17	Less employee contributions 6.75% PERS 6.13% SBS not including other benefit deductions or union dues	70.26		
2005 rates PERS 12.65% SBS 6.13%					
Gross WC weekly wage	620.71		475.28		
Less federal payroll tax (M+7) & FICA	56.68	Less federal payroll tax per EE W-4	7.91		
"Spendable weekly wages"	564.25	Approximate net wage (take home)	466.37		
80% of SWW = Workers Comp TTD rate	451.22	Current combined WC+OD benefits:	799.81	Weekly Occupational Disability benefit	348.19
Proposed offset workers comp TTD payment	216.06	Proposed coordinated benefit	564.25	Unchanged Occupational Disability benefit	348.19

The problem sought to be addressed by Section 36 and the operation of the proposed solution is illustrated by the above table. The table illustrates in columns 1 and 2 how workers compensation benefits were calculated in a claim based on a 2003 injury. The gross Workers' Compensation wage includes employer pension contributions¹ and the payroll tax deductions are not reflective of the employee's

¹ AS 23.30.395(15). There is no provision in the act that addresses what occurs when the employer continues making the employer contributions to a pension plan during a period of disability, such as occurs if the employer continues to make contributions during family and medical leave. The Supreme Court has not ruled on the issue.

SB 130 Section 36
Illustration of the effect of
combined PERS and workers' compensation benefits
and the operation of Section 36

claimed deductions on a W-4. The result is that the "spendable weekly wage" under workers' compensation is an approximation of an ideal net wage – not an actual net wage.²

Row 9 of the table shows that the occupational disability benefit and the workers' compensation benefit (\$799.81) combined significantly exceed the employee's approximate net (\$466.37) or idealized spendable weekly wage (\$564.25). In this case they combine to exceed the actual gross wage, including employer pension contributions (\$620.71).

Section 36 would allow the disability benefit to be offset against worker's compensation owed. No change in payment under PERS is made, but liability for workers' compensation would be reduced to the point that the combined benefits do not exceed the employee's workers' compensation spendable weekly wage. The effect is seen in Row 10 of the table. The employer's liability for workers' compensation would be reduced to \$216.06/week. The workers' compensation payment would still be subject to the minimum workers' compensation rate and the maximum compensation rate otherwise established by law.

This section does not affect the pension plan contribution offset provided under AS 23.30.225(c). That subsection provides that once an employee begins drawing a retirement pension from the employer, the employer's contribution to a pension plan will no longer be included in the calculation of gross earnings. (In the example above, \$75.17 would be subtracted from the gross earnings). This will usually result in a small reduction in workers' compensation payments. (In the example above, the employee's weekly workers' compensation rate (row 9, column 2) would change from \$451.22 to \$402.47). Unlike the social security retirement provision in AS 23.30.225(a), subsection (c) does not create an off-set of one-half the actual pension amount against workers' compensation benefits.

This section does not affect an employee's privately purchased disability insurance policies or disability insurance policies purchased by the employee's election under the Supplemental Benefits System. It would not apply to an employer welfare trust plan providing disability insurance that made an off-set for workers' compensation benefits.

² Increases in the employer contribution rate to PERS (from 7.65 to 12.65%) will be reflected in the employee gross earnings and thus result in an increase in the employee's "spendable weekly wage" and workers' compensation benefits paid.



Marjorie T. Linder, M.A., CRC, CLCP

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March 9, 2005

Senator Con Bunde and
Members of the Senate Labor & Commerce Committee
State Capitol, Room 506
Juneau, AK 99801-1182

Dear Senator Bunde and Members of the Senate Labor & Commerce Committee:

RE SB 130

I do not support SB 130 because the data used to support this bill are not based on facts. In 2002, insurers reported paying me 74% more than they did. The figures reported by the insurers in their annual report are fictional but are treated as fact by the Insurance Commission, the Division Of Workers' Compensation, and the NCCI. These oversight and rate-setting bodies don't seem very interested in finding out the truth. They appear to prefer these figures that provide an excuse to reduce benefits to injured workers and raise rates for employers.

Other problems with this bill involve the so-called job dislocation benefit in Section 15 and 16. This is nothing more than a backdoor settlement of the rehabilitation benefit for a measly sum of money. Keep in mind that the majority of workers have a 10% rating or less and that this will ask workers to trade their vocational and economic future for \$5000. This "benefit" only benefits insurance companies, not workers who like the rest of us have mortgages to pay, children to support, and didn't ask to be injured. These workers actually want to work.

Please don't let this bill pass out of committee before you think how you would feel if you had a 2% impairment rating with tennis elbow that prevented you from returning to a \$54/hour job and were asked to take \$3540 for your impairment plus \$5000 for this benefit? How does that help this worker, his family, or for that matter, society?

Yours truly,

MTL Services



Marjorie T. Linder, M.A., CRC

P.S. Please review my other memos and supporting data that I have sent down by email. Thank you.



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PROPOSED TESTIMONY FOR THE SENATE LABOR & COMMERCE COMMITTEE
FROM: Marjorie T. Linder, M.A., CRC
DATE: March 15, 2005
RE: SB 130

Workers' compensation carriers report data in different cost fields to the Division of Workers' Compensation on an annual basis. The Division of Insurance and the NCCI use this data to make recommendations regarding rate changes. For that reason, you would hope that the data would be collected in a standardized way and accurate, meaningful, and verifiable. After all, it is supposed to inform us on what is really going on.

Unfortunately, it is inaccurate and therefore misleading. The Divisions of Workers' Compensation and Insurance both know there is "fuzzy math" going on and that the data reported isn't accurate but they parade their charts out to you like they are real. Nothing could be further from the truth.

I've brought with me some examples of this misreporting.

- 1. EXHIBIT 1: This chart shows what the carriers reported paying me for eligibility evaluations in 2002 (\$75,761) and what they actually paid me (\$43,478.84). They exaggerated my fees by 74%! Some carriers reported they paid other rehabilitation providers \$26,000 and \$38,000 for eligibility evaluations that typically cost under \$1500. These figures are absurd on their face. They make me distrust not only the rehab figures but also all the other figures reported. Can we trust that the medical costs or PPI data are correct if this many mistakes have been made on rehab?**
- 2. EXHIBITS 2 & 3: This chart shows examples of different reporting practices for sample carriers – 2002 & 2003: There is an incentive in the present law to report settlement inducements as rehabilitation costs in order to avoid paying a 6% assessment into the second injury fund. Note that in 2002, the percentage of 041K (the so-called rehab stipend) that Fremont and Eagle Pacific reported was double and triple what other insurers reported. Eagle Pacific and the Alaska Insurance Guaranty Association, which took over the Fremont claims, reported extraordinarily high percentages of 041K in 2003, also. In both reports, for some unknown reason, Wausau reported no rehab stipend paid claimants and no plan writing expenses. Both Wausau and the Municipality of Anchorage reported paying no rehabilitation specialist fees for**

plan writing. **Wausau** reported high costs for monitoring plans that they paid no one to write.

- 3. EXHIBITS 4 & 5 are summaries of claims costs in different cost fields reported to the Division of Workers' Compensation by all insurers/self-insureds on their annual reports for 2002 & 2003.** If you believe these figures, rehab expenses are declining. In fact, according to the Re-employment Benefits Administrator at the Division of Workers' Compensation, there were almost 100 fewer cases referred to rehab last year.

You will note that the biggest cost field is 041(k) funds and accounts for more than \$10 million in both years. Do not believe that these figures represent legitimate rehab expenses. Thrown into 041(k) are settlement inducements and money paid the claimants while they wait for their settlements to be approved. You will see in another chart that 041K benefits are paid to injured workers with no rehabilitation expenses entered in any other rehabilitation cost fields.

- 4. EXHIBITS 6, 7, and 8 are on one page. The chart in Exhibit 6 was contained in a letter to Kevin Meyer from the Commissioner of Labor.** He found 155 claimants not eligible for the re-employment benefit who had almost \$2 million input into rehab fields including plan costs, monitoring fees, and 041(k). This makes no sense at all.

EXHIBITS 7 & 8 demonstrate a \$10 million discrepancy between the figures the Re-employment Benefits Administrator reported in his annual report and what the carriers reported. Note that the carriers reported \$8 million more than did the RBA for 041K benefits and that the rehab costs the RBA reported were 1/3 of the amount reported by the carriers. This discrepancy has never been adequately explained.

- 5. EXHIBIT 9 shows the distribution of PPI ratings in 2003.** Note that the vast majority of the ratings are below 10% and that more people who are able to return to work without rehab are getting PPI awards than those who have rehab costs reported. When you think of this job dislocation "benefit", please consider that only 8 people would qualify for the \$13,500, only 89 workers would qualify for the \$8500, and 653 claimants would qualify for the \$5000 benefit.

If you want to make a difference for both employers and employees, pass a law requiring meaningful data to be reported in standardized and accurate manner.

Eligibility Evaluation Comparison for 2002 - Actual Charges \$43,478.84 v. \$75,761 in RBA Report

EXHIBIT 1

	A	B	C	D	E	F	G	H	I	J
1	Date Assigned	Name	AWCB #	Insurance Co.	Date Invoiced	Amount Reported Paid	Actual Amount Paid	Date Paid	Amounts Paid Prior to or After 2002	Dates of Amounts Paid Prior to or After 2002
2	9/30/1999				1/16/02 & 3/14/02 & 4/8/02	822.00	821.86	4/10/02 & 4/15/02	-	-
3	2/11/2001		200010411		4/9/2001	8,243.00	-	-	1,357.50	4/18/2001
4	6/13/2001		200007417		7/30/01 & 9/25/01 & 2/12/02	3,828.00	777.50	3/1/2002	1,333.75	9/21/01 & 10/15/01
5	9/5/2001		200027642		10/31/01 & 1/16/2002	6,453.00	1,250.00	1/30/2002	973.75	10/30/2001
6	9/17/2001		200108458		1/16/2002	1,894.00	1,893.75	2/6/2002	-	-
7	9/26/2001		200101942		1/3/2002	Not on report	1,500.00	1/15/2002	-	-
8	10/12/2001		199923253		11/26/01 & 2/12/2002	7,486.00	635.00	3/8/2002	848.75	12/7/2001
9	10/26/2001		200017074		1/3/02 & 3/20/02 & 7/19/02	3,668.00	2,567.50	1/16/02 & 4/10/02 & 8/2/02	-	-
10	11/5/2001		200115469		1/16/02 & 2/12/02	827.00	827.00	3/26/2002	-	-
11	11/8/2001		200103446		2/12/2002	Not on report	898.25	2/12/2002	-	-
12	11/29/2001		200109346		1/16/2002	4,259.00	1,085.00	11/18/2002	-	-
13	12/11/2001		200105534		2/12/2002	Not on report	2,278.75	4/15/2002	-	-

Eligibility Evaluation Comparison for 2002 - Actual Charges \$43,478.84 v. \$75,761 in RBA Report

EXHIBIT 1

	A	B	C	D	E	F	G	H	I	J
1	Date Assigned	Name	AWCB #	Insurance Co.	Date Invoiced	Amount Reported Paid	Actual Amount Paid	Date Paid	Amounts Paid Prior to or After 2002	Dates of Amounts Paid Prior to or After 2002
14	12/20/2001		200023942		2/12/02 & 3/19/02	10,108.00	2,488.75	3/19/02 & 5/17/02	-	-
15	1/4/2002		200115009		2/12/2002	No amount reported	1,243.75	3/29/2002	-	-
16	1/14/2002		2000014109		3/14/2002	No amount reported	855.00	3/26/2002	-	-
17	1/25/2002		200023568		3/14/2002	1,488.00	1,256.25	4/1/2002	-	-
18	2/11/2002		200005219		3/14/02 & 4/1/02	1,373.00	1,372.50	6/13/2002	-	-
19	2/28/2002		200121311		4/1/2002	1,330.00	1,330.00	4/5/2002	-	-
20	3/13/2002		200022364		4/29/2002	6,485.00	2,050.00	5/4/2002	-	-
21	3/28/2002		200021399		5/22/2002	No amount reported	831.25	6/17/2002	-	-
22	4/10/2002		200110243		6/30/2002	4,993.00	797.50	7/30/2002	-	-
23	5/7/2002		200101570		7/1/2002	1,942.00	754.01	9/10/2002	-	-
24	5/15/2002		200118843		6/7/2002	No amount reported	1,817.22	10/2/2002	-	-
25	5/23/2002		200113520		9/13/2002	949.00	-	-	1,207.50	3/7/2003
26	6/12/2002		200105921		8/16/2002	No amount reported	940.00	11/4/2002	-	-

Eligibility Evaluation Comparison for 2002 - Actual Charges \$43,478.84 v. \$75,761 in RBA Report

EXHIBIT 1

	A	B	C	D	E	F	G	H	I	J
1	Date Assigned	Name	AWCB #	Insurance Co.	Date Invoiced	Amount Reported Paid	Actual Amount Paid	Date Paid	Amounts Paid Prior to or After 2002	Dates of Amounts Paid Prior to or After 2002
27	6/25/2002		200109576		8/20/2002	922.00	922.50	9/10/2002	-	-
28	7/3/2002		200114366			-	-		-	-
29	7/16/2002		200208467		8/16/2002	No amount reported	1,008.75	8/26/2002	-	-
30	8/8/2002		200111688		8/26/2002	806.00	806.25	10/4/2002	-	-
31	8/20/2002		200104269		10/31/02 & 11/22/02 & 12/2/02 & 1/13/03	2,784.00	2,784.25	11/18/02 & 11/22/02 & 12/16/02	128.00	1/27/2003
32	8/28/2002		200205638		10/31/2002	1,683.00	1,682.50	10/9/02 & 11/18/02	-	-
33	9/9/2002		200108382		9/25/2002	No amount reported	1,002.50	12/16/2002	-	-
34	9/19/2002		200017329		12/12/2002	1,486.00	1,486.25	12/27/2002	-	-
35	10/1/2002		199513006		12/2/2002	1,934.00	1,933.75	12/21/2002	-	-
36	10/16/2002		200205154		12/2/2002	No amount reported	1,581.25	12/30/2002	-	-

Eligibility Evaluation Comparison for 2002 - Actual Charges \$43,478.84 v. \$75,761 in RBA Report

EXHIBIT 1

	A	B	C	D	E	F	G	H	I	J
1	Date Assigned	Name	AWCB #	Insurance Co.	Date Invoiced	Amount Reported Paid	Actual Amount Paid	Date Paid	Amounts Paid Prior to or After 2002	Dates of Amounts Paid Prior to or After 2002
37	10/29/2002		200115337		12/12/2002	No amount reported	-	-	1,760.00	2/4/2003
38	11/8/2002		20026570			No eligibility eval - only Voc. Plan	-	-	-	
39	11/21/2002		200122186		1/13/2003	No amount reported	-	-	1,571.75	1/23/2003
40	12/12/2002		200203763		7/11/2003	Not on report	-	-	1,125.00	7/25/2003
41	12/30/2002		200207712		3/20/2003	-	-	-	1,607.50	4/10/2003
42	Totals					75,761.00	43,478.84		11,913.50	

EXAMPLES OF DIFFERENT REPORTING PRACTICES FOR SAMPLE CARRIERS – 2002

EXHIBIT 2

BENEFIT	Fremont	AKNAT	Eagle	AK Mun League	State of Alaska	Muni of Anch	Lumber- man's Mutual	Wausau	All Insurers	Self- Insureds
.041K	11.63%	4.44%	15.94%	2.59%	5%	7.45%	5%	0	5.07%	5.6%
Eligibility Evals	2.16%	0.66%	0.42%	0.048%	0.537%	1.59%	1.32%	0.6%	0.8%	0.075%
RS Fees (Plan Writing	0%	0.709%	0.64%	0.3%	0.46%	0	0	0	0.4%	0.034%
RS Fees Monitoring	0%	0.135%	0.09%	0.06%	0.17%	0	0.09%	5.1%	0.33%	0.016%
Plan Costs	1.64%	1.13%	0.43%	.08%	0.79%	0.67%	0.45%	0.8%	.086%	.082%
TOTAL Rehab w/ .041K	15.45%	7.08%	17.5%	3.53%	7%	9.7%	6.88%	6.57%	7.4%	7.7%
TOTAL Rehab w/o .041K	3.81%	2.64%	1.59%	0.94%	1.966%	2.28%	1.87%	6.57%	2.4%	2.08%
Medical	37.9%	48.9%	45.59%	76%	46.9%	46.79%	51.69%	49.09%	50.6%	50.07%
Employee Atty	1.96%	1%	0.7%	.19%	1.41%	1.42%	0.537%	2.54%	1.27%	1.32%
Employer Atty	5%	3.9%	2%	1.56%	2.5%	2.5%	2.74%	3.29%	3.35%	2.52%
Litigation Costs	1.99%	0.81%	0%	0.02%	0.14%	1.63%	0.14%	0.26%	0.57%	0.456%
Total Legal	8.95%	5.71%	2.70%	1.77%	4.05%	5.6%	3.42%	6.1%	5.19%	4.29%
TTD	13.5%	22%	19.88%	8.78%	4.05%	5.6%	23.24%	12.65%	17.42%	17.58%
PPI	13.55%	10.4%	10.66%	5.10%	10.1%	11.7%	10.4%	9.97%	10.63%	11.83%
PTD	2.68%	0.9%	0.15%	0.38%	4.35%	3.47%	0.42%	6.1%	2.22%	2.79%

EXAMPLES OF DIFFERENT REPORTING PRACTICES FOR SAMPLE CARRIERS – 2003

EXHIBIT 3

BENEFIT	AKNAT	Eagle	Alaska Insurance Guaranty Association	AK Mun League	State of Alaska	Muni of Anch	Lumberman's Mutual	Wausau	All Insurers	Self-Insureds
.041K	4.48	14.98%	12.39%	6.81%	4.31%	7.29%	10.09%	0.00%	4.63%	4.55%
Eligibility Evals	0.59%	.4%	0.24%	0.60%	0.33%	.32%	1.41%	1.70%	0.58%	0.52%
RS Fees (Plan Writing)	0.79%	.53%	1.36%	1.56%	0.80%	0	0.06%	0	0.52%	0.48%
RS Fees Monitoring	0.03%	.07%	1.39%	0.24%	0.27%	0	0.04%	2.35%	0.47%	0.017%
Plan Costs	1.27%	0.48%	0.94%	.16%	0.67%	0.48%	0.31%	0.0%	.085%	.092%
TOTAL Rehab w/ .041K	7.15%	16.47%	16.32%	9.37%	6.37%	8.59%	11.92%	4.05%	7.04%	6.64%
TOTAL Rehab w/o .041K	2.61%	1.48%	3.92%	2.56%	2.06%	1.30%	1.83%	4.05%	2.41%	2.09%
Medical	48.47%	47.83%	44.52%	50.34%	50.77%	52.83%	45.06%	47.75%	51.65%	53.63%
Employee Atty	1.19%	1.22%	2.11%	1.56%	.81%	1.02%	1.32%	1.35%	1.08%	1.18%
Employer Atty	3.63%	2.07%	5.01%	4.97 %	2.93%	0.91%	3.25%	5.17%	3.23%	2.58%
Litigation Costs	1.11%	.10%	.12	.53%	0.14%	1.46%	0.62%	.96%	0.51%	0.43%
Total Legal	5.93%	3.39%	7.25%	7.06%	3.88%	3.39%	5.18%	7.49%	4.82%	4.19%
TTD	17.81%	16.55%	12.11%	15.43%	20.77%	18.86%	23.42%	10.31%	17.15%	18.01%
PPI	11.41%	12.37%	11.20%	11.36%	8.96%	9.72%	11.20%	9.86%	10.64%	10.50%
PTD	1.08%	0.10%	4.32%	0.45%	3.54%	2.88%	0.43%	12.83%	2.28%	2.56%

**Annual Report Summary of Claims Costs Reported by
All Insurers/Self-Insureds for 2002**

EXHIBIT 4

Claims Expense Category	All Insured	Self Insured's
TOTAL:	\$210,611,156	\$46,418,934
Plan costs	\$1,820,918	\$383,460
.041k	\$10,680,160	\$2,603,574
TOTAL in Rehab-Related Expenses Paid to Employee	\$12,501,078.00	\$2,987,034.00
Eligibility Evaluations	\$1,697,589	\$348,489
RS Fees (plan writing)	\$843,839	\$158,502
RS Fees Monitoring	\$706,684	\$75,820
TOTAL Rehab Providers Fees	\$3,248,112.00	\$582,811.00
TOTAL Rehab w/ .041k	\$15,749,190.00	\$3,569,845.00
TOTAL Rehab w/o .041k	\$5,069,030.00	\$966,271.00
Medical	\$106,577,666	\$23,243,138
Employee Atty	\$2,676,574	\$612,878
Employer Atty	\$7,060,476	\$1,170,361
Litigation Costs	\$1,214,530	\$212,071
Total Legal	\$10,951,580.00	\$1,995,310.00
TTD	\$36,690,714	\$8,162,255
TPD	\$1,489,050	\$488,047
PPI	\$22,387,335	\$5,492,032
PTD	\$4,683,971	\$1,298,974

Annual Report Summary of Claims Costs Reported by All Insurers/Self-Insureds for 2003

EXHIBIT 5

Claims Expense Category	All Insured	Self Insured's
TOTAL FOR ALL	\$223,013,145	\$48,571,835
CATEGORIES:		
<i>Other, SIF, 25% Penalty, Death Not Listed Here</i>		
Plan costs	\$1,902,978	\$447,159
.041k	\$10,327,053	\$2,208,910
TOTAL in Rehab-Related Expenses Paid to Employee	\$12,230,031.00	\$2,656,069.00
Eligibility Evaluations	\$1,283,698	\$253,682
RS Fees (plan writing)	\$1,154,202	\$234,358
RS Fees Monitoring	\$1,039,623	\$80,248
TOTAL Rehab Providers Fees	\$3,477,523.00	\$568,288.00
TOTAL Rehab w/ .041k	\$15,707,554.00	\$3,224,357.00
TOTAL Rehab w/o .041k	\$5,380,501.00	\$1,015,447.00
Medical	\$115,176,893.00	\$26,077,913.00
Employee Atty	\$2,399,878	\$574,998
Employer Atty	\$7,200,532	\$1,252,614
Litigation Costs	\$1,139,120	\$208,329
Total Legal	\$10,739,530.00	\$2,035,941.00
TTD	\$38,243,336	\$8,746,103
TPD	\$1,433,701	\$418,198
PPI	\$23,719,242	\$5,098,152
PTD	\$5,085,760	\$1,244,710

**COMMISSIONER O'CLARAY'S TABLE FOR
SETTLEMENT COSTS ASSIGNED TO REHABILITATION IN 2002
EXHIBIT 6**

	RS Fee	Plan Cost	RS Evaluations	RS Monitoring	.041k	Total
Not eligible 155	\$20,863	\$190,770	\$139,976	\$43,911	\$1,537,673	\$1,933,193 (23%)
Eligible 217	\$241,986	\$397,157	\$215,052	\$246,852	\$5,252,299	\$6,353,346
TOTAL	\$262,849.00	\$587,927.00	\$355,028.00	\$290,763.00	\$6,789,972.00	\$8,286,539.00

NOTE: There is no way to know the accuracy of these figures reported for those not eligible or those eligible for the re-employment benefit.

EXHIBIT 7

Re-Employment Benefits Administrator Report vs. Annual Report - 2002		
Benefits	RBA	Annual Report
.041k	\$2,740,633	\$10,860,160
Eligibility Evaluations	\$1,117,265	\$1,697,589
RS Fees (plan writing)	\$432,989	\$843,839
RS Fees Monitoring	\$224,655	\$706,684
Plan costs	\$587,615	\$1,820,918
TOTAL Rehab w/ .041k	\$5,103,177.00	\$15,929,190.00
TOTAL Rehab w/o .041k	\$2,362,544	\$5,069,030

NOTE: This \$10 million discrepancy between the RBA's Report and the Carrier's Annual Report for 2002 cannot be adequately explained.

EXHIBIT 8

Re-Employment Benefits Administrator Report vs. Annual Report - 2003		
Benefits	RBA	Annual Report
.041k	\$2,691,303	\$10,327,053
Eligibility Evaluations	\$845,765	\$1,283,678
RS Fees (plan writing)	\$599,391	1,154,202
RS Fees Monitoring	\$282,620	\$1,039,623
Plan costs	\$577,111	\$1,902,972
TOTAL Rehab w/ .041k	\$4,996,190.00	\$15,707,528.00
TOTAL Rehab w/o .041k	\$2,304,887.00	\$5,380,475.00

NOTE: Again the Annual Report's figures are three times higher than the RBA's Report. This has not been explained adequately.

2003 - PPI Ratings Distribution Approximate Totals

	A	B	C	D	E	F	G
1	PPI %	Number	# Workers w/ PPI but no Rehab Costs Reported	# Workers w/ PPI & Rehab Costs Reported		PPI for Workers W/ No Rehab Costs Reported	PPI for Workers w/ PPI & Rehab Costs Reported
2	64	1	1	0	\$ 1,770.00	\$ 113,280.00	\$ -
3	57	1	0	1	\$ 1,770.00	\$ -	\$ 100,890.00
4	49	1	0	1	\$ 1,770.00	\$ -	\$ 86,730.00
5	44	1	0	1	\$ 1,770.00	\$ -	\$ 77,880.00
6	42	2	1	1	\$ 1,770.00	\$ 74,340.00	\$ 74,340.00
7	40	1	0	1	\$ 1,770.00	\$ -	\$ 70,800.00
8	36	1	0	1	\$ 1,770.00	\$ -	\$ 63,720.00
9	33	1	0	1	\$ 1,770.00	\$ -	\$ 58,410.00
10	32	3	3	0	\$ 1,770.00	\$ 169,920.00	\$ -
11	31	1	0	1	\$ 1,770.00	\$ -	\$ 54,870.00
12	30	1	1	0	\$ 1,770.00	\$ 53,100.00	\$ -
13	TOTAL ABOVE 30%	14	6	8		\$ 410,640.00	\$ 587,640.00
14	29	4	3	1	\$ 1,770.00	\$ 153,990.00	\$ 51,330.00
15	28	30	14	16	\$ 1,770.00	\$ 693,840.00	\$ 792,960.00
16	27	2	1	1	\$ 1,770.00	\$ 47,790.00	\$ 47,790.00
17	26	3	2	1	\$ 1,770.00	\$ 92,040.00	\$ 46,020.00
18	25	10	4	6	\$ 1,770.00	\$ 177,000.00	\$ 265,500.00
19	24	6	2	4	\$ 1,770.00	\$ 84,960.00	\$ 169,920.00
20	23	9	4	5	\$ 1,770.00	\$ 162,840.00	\$ 203,550.00
21	22	9	3	6	\$ 1,770.00	\$ 116,820.00	\$ 233,640.00
22	21	9	5	4	\$ 1,770.00	\$ 185,850.00	\$ 148,680.00
23	20	16	8	8	\$ 1,770.00	\$ 283,200.00	\$ 283,200.00
24	19	11	8	3	\$ 1,770.00	\$ 269,040.00	\$ 100,890.00
25	18	13	7	6	\$ 1,770.00	\$ 223,020.00	\$ 191,160.00
26	17	7	3	4	\$ 1,770.00	\$ 90,270.00	\$ 120,360.00
27	16	23	15	8	\$ 1,770.00	\$ 424,800.00	\$ 226,560.00
28	15	27	11	16	\$ 1,770.00	\$ 292,050.00	\$ 424,800.00
29	TOTAL 15 to 29%	179	90	89		\$ 3,297,510.00	\$ 3,306,360.00
30	14	29	12	17	\$ 1,770.00	\$ 297,360.00	\$ 421,260.00
31	13	44	25	19	\$ 1,770.00	\$ 575,250.00	\$ 437,190.00
32	12	45	28	17	\$ 1,770.00	\$ 594,720.00	\$ 361,080.00
33	11	58	37	21	\$ 1,770.00	\$ 720,390.00	\$ 408,870.00
34	10	112	34	78	\$ 1,770.00	\$ 601,800.00	\$ 1,380,600.00
35	9	78	46	32	\$ 1,770.00	\$ 732,780.00	\$ 509,760.00
36	8	122	79	43	\$ 1,770.00	\$ 1,118,640.00	\$ 608,880.00
37	7	97	67	30	\$ 1,770.00	\$ 830,130.00	\$ 371,700.00
38	6	144	99	45	\$ 1,770.00	\$ 1,051,380.00	\$ 477,900.00
39	5	213	142	71	\$ 1,770.00	\$ 1,256,700.00	\$ 628,350.00
40	4	213	147	66	\$ 1,770.00	\$ 1,040,760.00	\$ 467,280.00
41	3	232	153	79	\$ 1,770.00	\$ 812,430.00	\$ 419,490.00
42	2	206	145	61	\$ 1,770.00	\$ 513,300.00	\$ 215,940.00
43	1	256	182	74	\$ 1,770.00	\$ 322,140.00	\$ 130,980.00
44	TOTAL 1-14%	1849	1196	653		\$ 10,467,780.00	\$ 6,839,280.00
45	TOTAL	2042	1292	750	0	\$ 14,175,930.00	\$ 10,733,280.00

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Chiropractic Research Synopses

Patient Satisfaction
Return to Work/Indirect Costs
Efficacy

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Patient Satisfaction

Carey TS, Garrett J, Jackman A, McLaughlin C, Fryer J, Smucker DR. North Carolina Back Pain Project. New England Journal of Medicine 1995; 333(14): 913-917.

This study sought to compare patients' recovery and satisfaction for those with acute low back pain receiving care from the following six groups: urban primary care physicians, rural primary care physicians, urban doctors of chiropractic (DCs), rural DCs, orthopedic surgeons and primary care providers at a group model HMO. After six months functional recovery, return to work, and complete back pain recovery were similar for all groups. Satisfaction with care was highest for those visiting DCs.

Cherkin DC, MacCornack FA. Patient evaluations of care from family physicians and chiropractors. Western Journal of Medicine 1988; 149: 475-480.

605 family physicians and 299 doctors of chiropractic were surveyed to find their beliefs regarding back pain and to find how they would react to three different hypothetical patient low back problems. The study found that these providers differed not only in treatment method, but also in attitude. Doctors of chiropractic were less likely than family physicians to be frustrated with patients' low back problems and more likely to feel they could help their patients. Family physicians also felt less confident in their ability to make their patient satisfied with the care received.

Sawyer CE, Kassak K. Patient satisfaction with chiropractic care. Journal of Manipulative and Physiological Therapeutics 1993; 16(1): 25-32.

341 new and returning chiropractic patients in Minnesota and Wisconsin completed a patient satisfaction questionnaire. Overall, patients demonstrated a high level of satisfaction with their doctors of chiropractic. 84% of respondents felt their chiropractic care was "just about perfect." 97% agreed or strongly agreed that they would "recommend this doctor to a friend or relative."

Hawk C, Long CR, Boulanger KT. Patient satisfaction with the chiropractic clinical encounter: Report from a practice-based research program. Journal of the Neuromusculoskeletal System 2001; 9(4): 109-117.

2,987 patients completed a data collection survey. Patients came from a variety of both rural and urban locations in the United States and Canada. 85 % stated, "their chiropractor always listened carefully." 85.3% stated "the DC explained things understandably," 88.2% stated "the DC showed respect for what they had to say." Overall, the majority of patients were highly satisfied with their care

Gemmell HA, Hayes BM. Patient satisfaction with chiropractic physicians in an independent physicians association. Journal of Manipulative and Physiological Therapeutics 2001; 24(9): 556-559.

150 chiropractic patients were surveyed. Chiropractic care received "excellent" remarks by percentage, in the following categories: 84.9% time to get an appointment, 57.7% convenience of office, 77.3% access to office by phone, 75.7% length of wait, 74.3% time spent with provider, 72.8% explanation of treatment, 83.3% skill of provider, 92.4% personal manner of the chiropractor. Overall visit was given the "excellent" response by 83.3% of those surveyed.

Wolsko PM, Eisenberg DM, Davis RB, Kessler R, Phillips RS. Patterns and perceptions of care for treatment of back and neck pain: Results of a national survey. Spine 2003; 28(3): 292-298.

A survey was taken of 2055 adults requesting information on their medical conditions, the use of complementary and conventional therapies to deal with those conditions, and the effects of those services. For those who had either back or neck pain in the past year 54% visited complementary medicine providers. Chiropractic care was deemed "very helpful" by 61%. This figure is in stark contrast to the 27% of those visiting conventional providers, which stated that the care received, was "very helpful."

Return to Work/Indirect Costs

Jarvis KB, Phillips RB, Morris EK. Cost per case comparison of back injury claims of chiropractic versus medical management for conditions with ideal diagnostic codes. Journal of Occupational Medicine 1991; 33(8): 847-852.

This study is a comparison of cost between medical doctors and doctors of chiropractic providers for injuries related to the back. The average number of treatments for medical claims was 4.93 as compared to 12.89 for chiropractic claims. The average days of care was 34.25 for medical claims and 54.49 for chiropractic claims. Average compensation cost for work time lost was \$668.39 for medical claims and \$68.38 for chiropractic claims. Average cost of care for medical claims was \$684.15 and \$526.84 for chiropractic claims.

Folsom BL, Holloway RW. Chiropractic care of Florida workers' compensation claimants: Access, costs, and administrative outcome trends from 1994 to 1999. Topics in Clinical Chiropractic 2002; 9(4): 33-53.

When examining specific cases involving low back problems if 50% or more of professional fees went to chiropractic care, the patient reached maximum medical

improvement 28 days sooner than others. Average lower back claim cost for those visiting chiropractors was \$7309, however, for those visiting other providers the figure was nearly double at \$16,998.

Jarvis KB, Phillips RB, Danielson C. Managed care preapproval and its effect on the cost of Utah worker compensation claims. Journal of Manipulative and Physiological Therapeutics 1997; 20(6): 372-376.

5000 claims from 1986 and 5000 from 1989 were examined for injured individuals in the Utah Worker Compensation Fund. The study compared cost for those who received chiropractic care and those who received medical care. From 1986 to 1989 the cost of care for chiropractic increased 12% while medical care increased 71%. The replacement of wages increased 21% for those receiving chiropractic care and 114% for those receiving medical care.

Ebrall PS. Mechanical low-back pain: A comparison of medical and chiropractic management within the Victorian WorkCare scheme. Chiropractic Journal of Australia 1992; 22(2): 47-53

This study reviewed claims made in a twelve-month period involving work related mechanical low-back pain. Management by chiropractic care and medical care were compared. 39% of claims reviewed for individuals visiting chiropractors required compensation days while 78% of claims for those visiting medical doctors required compensation days. The average number of compensation days need for those visiting chiropractors was 6.26 days and 25.56 days for those visiting medical practitioners.

Tuchin PJ, Bonello R. Preliminary findings of analysis of chiropractic utilization in the workers' compensation system of New South Wales, Australia. Journal of Manipulative and Physiological Therapeutics 1995; 18(8): 503-511.

In this study researchers analyzed WorkCover Authority data from New South Wales. Of 1289 cases reviewed 30% had back problems. 12% employed chiropractic care for spinal injury workers compensation claims. The total payments for all cases using chiropractic and physiotherapy care was \$25.2 million which was 2.4% of the total payments. When 20 claims were chosen at random the average chiropractic cost of care was \$299.65, while the average medical cost was \$647.20. A trend in data collected was noticed that when greater than 60% of total cost of treatment came from chiropractic care the number of days missed from work was 9.5. When less than 60% of total cost of treatment came from chiropractic care the number of days missed from work was 50.3.

Johnson WG, Bladwin MJ, Butler R.J. The costs and outcomes of chiropractic and physician care for workers' compensation back claims. Journal of Risk and Insurance 1999; 66(2): 185-205.

This study was an analysis of cost, patterns of care and return to work statistics for workers treated by physicians or doctors of chiropractic. The study found that

"chiropractors and physicians are equally effective in treating back pain and that neither group offers a clear advantage in terms of the costs of care or the total costs of a worker's compensation back claim."

Efficacy of Chiropractic Care

Meade TW, Dyer S, Browne W, Townsend J, Frank AO. Low back pain of mechanical origin: randomized comparison of chiropractic and hospital outpatient treatment. British Medical Journal 1990; 300(2): 1431-1437.

741 patients who had neither been treated in the past month nor had contraindications to spinal manipulation were treated by either doctors of chiropractic or with conventional hospital outpatient treatment for management of low back pain. Using the Oswestry scale, which quantifies pain, patients reported back on their improvement at six weeks, six months, one year and two years. At two years chiropractic care resulted in a 7% benefit over hospital care.

Meade TW, Dyer S, Browne W, Frank AO. Randomized comparison of chiropractic and hospital outpatient management for low back pain: results from extended follow up. British Medical Journal 1995; 311(5):349-351.

As a follow up to the above study the same 741 patients who had neither been treated in the past month nor had contraindications to spinal manipulation were treated by either chiropractors or by conventional hospital outpatient procedures. In this study from 1995 patients completed Oswestry scale forms three years after initial treatment for managing back pain from mechanical origins. After three years Oswestry scores improved 29% more for those who visited chiropractors than those who were treated by hospitals.

Boline PD, Kassem K, Bronfort G, Nelson C, Anderson A. Spinal Manipulation vs. Amitriptyline for the Treatment of Chronic Tension-type Headaches: A Randomized Clinical Trial. Journal of Manipulative and Physiological Therapeutics 1995; 18(3): 148-154).

This study compared the effects of spinal manipulation and pharmaceutical treatments for chronic tension headaches. Four weeks following the cessation of treatment the pharmaceutical group demonstrated no improvement from the baseline. In the spinal manipulation group headache intensity dropped 32% frequency dropped 42% and there was an overall improvement of 16% in functional health status.

Nilsson N, Christensen HW, Harvigsen J. The Effect of Spinal Manipulation in the Treatment of Cervicogenic Headache. Journal of Manipulative and Physiological Therapeutics 1997; 20(5): 326-330.

Of 53 individuals who were diagnosed with cervicogenic headaches 28 individuals in the group received high speed, low amplitude spinal manipulation in the cervical spine two

times a week for three weeks. The rest of the group received low level laser to the upper cervical region and deep friction massage in the lower cervical/ upper thoracic region two times a week for three weeks. For those who received spinal manipulation treatment the amount of headache hours per day decreased 69%, while for those receiving laser treatment the decrease was only 37%. Intensity of headache decreased 36% for those receiving manipulations and 17% for those receiving laser treatment. The use of pain relievers went down 36% for those receiving manipulations and was unchanged for those receiving laser treatment.

Davis TP, Hulbert JR, Kassem KM, Meyer JJ. Comparative Efficacy of Conservative Medical and Chiropractic Treatments for Carpal Tunnel Syndrome: A Randomized Clinical Trial. Journal of Manipulative and Physiological Therapeutics 1998; 21(5): 317-326.

This study sought to compare the effects of chiropractic care and conventional medical care for managing carpal tunnel syndrome. 91 patients with confirmed symptoms of carpal tunnel syndrome were divided into two groups. One group received decreasing amounts of ibuprofen over three weeks. The other group received manipulation of bony joints and soft tissues of the upper extremities and spine. The patients improvement was monitored through self-reports and analyses of the vibrometric sensibility of the hands. There was improvement in comfort, finger sensation and nerve conduction in both groups. For right hands affected by carpal tunnel the group who received medical care improved by 1.37 decibels according to the vibrometric tests. Those receiving chiropractic care improved by 3.05 decibels.

Burton AK, Tillotson KM, Cleary J. Single-blind randomized controlled trial of chemonucleolysis and manipulation in the treatment of symptomatic lumbar disc herniation. European Spine Journal 2000; 9:202-207.

Forty patients with confirmed sciatica were treated with either osteopathic manipulation treatment or chemonucleolysis. The pain endured by the patient was measured at 2 weeks, 6 weeks and one year. After a year patients from both groups were very similar in recovery. However, at 2 and 6 weeks those receiving manipulations reported greater improvement.

AN EVALUATION OF MEDICAL AND CHIROPRACTIC PROVIDER UTILIZATION AND COSTS: TREATING INJURED WORKERS IN NORTH CAROLINA

Shawn P. Phelan, DC,^a Richard C. Armstrong, DC,^b David G. Knox, DC,^c Michael J. Hubka, DC,^d and Dennis A. Ainbinder, MD^e

ABSTRACT

Objective: To examine utilization, treatment costs, lost workdays, and compensation paid workers with musculoskeletal injuries treated by medical doctors (MDs) and doctors of chiropractic (DCs).

Design: Retrospective review of 96,627 claims between 1975 and 1994.

Results: Average cost of treatment, hospitalization, and compensation payments were higher for patients treated by MDs than for patients treated by DCs. Average number of lost workdays for patients treated by MDs was higher than for those treated by DCs. Combined care patients generated higher costs than patients treated by MDs or DCs alone.

Conclusion: These data, with the acknowledged limitations of an insurance database, indicate lower treatment costs, less workdays lost, lower compensation payments, and lower utilization of ancillary medical services for patients treated by DCs. Despite the lower cost of chiropractic management, the use of chiropractic services in North Carolina appears very low. (*J Manipulative Physiol Ther* 2004;27:442-8)

Key Indexing Terms: Workers' Compensation; Rate Setting; Chiropractic; Cost; Cost Effectiveness

INTRODUCTION

The high cost of work-related injury is well known. Exceeding the treatment costs are the costs of work-related disability.^{1,2} In 1991, \$25.3 billion was spent on wage loss compensation and \$16.8 billion was paid for medical treatment of disabled or deceased workers.³ Sixty percent of disability payments were attributed to only 20% of injured workers who were disabled 4 months or longer.¹ Seventy percent of treatment costs and compensation costs were attributed to 7% to 10% of the cases.^{1,4} However, several authors have reported recent trends toward

lower treatment and disability costs.^{2,5} They attributed this decrease to an increase in high deductible self-insurance and an increase in the use of injury prevention and managed care programs.⁵

A number of attempts have been made to clarify cost-effectiveness and methods of treatment for medical doctors (MDs) and doctors of chiropractic (DCs) in the general patient population and work injury population.⁶⁻⁹ These studies have varied somewhat in their conclusions. A study based in Iowa found that patients treated by MDs had more temporary total disability (TTD) and higher compensation payments compared with patients treated by DCs. However, the same study found that patients treated by DCs had higher treatment costs.¹⁰ A study based in Utah found that patients treated by MDs had more lost workdays, higher treatment costs, and higher compensation costs, but patients treated by DCs tended to be treated for a longer period of time.⁸

A study based in Oregon found there was no significant difference in TTD for acute low back pain patients treated by MDs or DCs. However, for patients with chronic low back problems, there was a significant difference. Medical doctors' patients averaged 34.5 days TTD, whereas chiropractors' patients averaged 9.0 days TTD.¹¹ A follow-up study using the same Oregon database found patients treated by DCs received more treatment over a longer duration and

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This work was funded by a grant from the North Carolina Board of Chiropractic Examiners.

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Paper submitted February 12, 2003; in revised form May 8, 2003.

0161-4754/\$30.00

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doi:10.1016/j.jmpt.2004.06.002

Table 1. Claims, lost workdays, and cost by provider utilization

Provider use (number of claims)	Lost workdays per patient	Costs per patient (\$)							
		MD	DC	Hospital inpatient	Hospital outpatient	Total medical cost	Compensation	Total claim	
MD Only (37,290)	Mean	176	3519	—	2438	2217	8175	17,673	25,848
	SD	356	4978	—	7650	3993	13,623	40,495	48,840
DC Only (370)	Mean	33	—	663	43	51	756	3318	4074
	SD	85	—	433	593	284	817	9932	10,250
MD and DC (2155)	Mean	240	4425	748	2920	2401	10,494	23,106	33,600
	SD	390	5704	643	7537	3891	14,676	38,210	47,909
None (3835)	Mean	133	—	—	3892	763	4655	17,086	21,741
	SD	282	—	—	8934	1911	9219	39,893	42,841
Total (43,650)	Mean	174	3225	43	2570	2080	7917	17,768	25,685
	SD	351	4891	227	7748	3860	13,357	40,210	48,162

n = 43,650.

Claims with compensation costs only purged.

MD, Medical doctor; DC, doctor of chiropractic.

at greater cost than those treated by MDs.¹² In contrast, still another study based in Oregon found the duration of chiropractic treatment was less than medical treatment.⁶

Chiropractic treatment costs were higher than medical doctors' treatment costs in a study from West Virginia. There was no mention of TTD or compensation payments in the West Virginia study.¹³ A previous study from North Carolina found costs of care were the highest for orthopedists and DCs and lowest for primary care MDs, with no difference in outcome.⁹ In a study from California, treatment costs of MDs and DCs were equal, while patients managed by DCs had less TTD.¹⁴

Several studies comparing medical and chiropractic care evaluated patient satisfaction, which appears to be greater for patients treated by DCs.^{9,15-17} Although it is difficult to attach a monetary value on patient satisfaction, a discussion of patient satisfaction impacts perceived health care value. The perception of health care value has been described as the change in patient status plus patient satisfaction divided by the price.¹⁸ Value continues to play a significant role in decision making by employers, carriers, policymakers, and providers. Additionally, it may be reflected in a patient's illness behavior, rate of return to work, index of disability, and tendency to litigate.

$$\frac{\text{Change in Patient Status} + \text{Patient Satisfaction}}{\text{Price}} = \text{Value}$$

The purpose of this study was to evaluate the total cost of medical and chiropractic management of injured workers in North Carolina. By design, this was a comparison study. In such studies, significant cost variation can be introduced through inclusion or exclusion of ancillary costs.^{8,9,12,13} Examples of ancillary costs are surgical procedures, physical therapy, medications, supports, and hospital inpatient or outpatient care. In this study, surgical procedures

were included under the category of hospital costs. All other ancillary costs have been assumed under the treatment costs and were differentiated by provider type.

METHODS

Between the years 1975 and 1994, 96,627 closed injury claims were archived by the North Carolina Industrial Commission (NCIC). Before 1975, claim records were not stored on computers at the NCIC. After 1994, individual insurance carriers assumed responsibility for storing claims. The Office of Technology Services of the North Carolina Department of Commerce extracted the data. This was done by using "nature of injury" and "body part" codes from the patient's first report of injury. International Classification for Disease (ICD) codes were not included in the archives and therefore could not be used. Additional variables included lost workdays, MD treatment cost, DC cost, hospital inpatient cost, hospital outpatient cost, total medical care cost, compensation paid, and total cost of claim (Tables 1 and 2). The claim data did not show the method of provider selection by the injured worker. The data were not stratified for utilization rates; therefore, utilization trends were not identified.

Of the 96,627 total claims, 43,650 claims had values for each variable (Table 3) and thus met the selection criteria and comprised the primary study population. The remaining 52,977 claims had nature of injury or body part data but did not contain the variables in Table 3 necessary for inclusion in the study. Averages and standard deviations were calculated for all continuous variables (TTD, MD cost, DC cost, hospital inpatient cost, hospital outpatient cost, total medical cost, compensation paid, and total cost of claim) for the 43,650 claims. Frequencies and proportions

Table 2. Lumbar/lumbosacral strains: claims, lost workdays, and cost by provider utilization

Provider use (number of claims)		Lost workdays	Costs (\$)						Total claim
			MD	DC	Hospital inpatient	Hospital outpatient	Total medical cost	Compensation	
MD Only (9073)	Mean	175	3425	-	2312	2006	7743	15,819	23,562
	SD	320	4918	-	6725	3510	12,831	30,394	38,943
DC Only (181)	Mean	25	-	634	0	50	685	1912	2597
	SD	56	-	393	0	298	503	4682	4776
MD and DC (958)	Mean	223	4112	752	2845	2141	9850	19,596	29,446
	SD	328	5370	679	7500	3185	14,146	8518	39,237
None (899)	Mean	171	3151	75	2350	1873	7450	15,399	22,849
	SD	319	4831	303	6853	3372	12,660	29,605	37,889
Total (11,111)	Mean	101	-	-	2683	609	3292	9407	12,699
	SD	311	-	-	7919	1700	8518	21,975	23,618

n = 11,111.

Claims with compensation costs only purged.

MD, Medical doctor; DC, doctor of chiropractic.

were calculated for all categorical variables (nature of injury and injured body part) for all 96,627 claims.

Claims were classified into 4 mutually exclusive categories: (1) users of MD services only, (2) users of DC services only, (3) users of MD and DC services, and (4) claims reflecting no use of either MD or DC services. Using these utilization categories, descriptive statistics were computed for all continuous variables by provider use. Examination of the nature of injury and part of body variables suggested investigation of a further subset of the data—lumbar spine and/or lumbosacral spine strains. Frequencies and proportions were then calculated for these data.

The findings were analyzed for statistical significance by using an Independent-Samples T Test procedure and comparing the averages or mean values for both provider groups. With regard to the Table mean values, a reader may notice standard deviations consistently higher than the mean values. This occurs because health care utilization does not usually provide data with a normal or bell shaped curve. A relatively small patient population will often use a majority of the services.^{1,4} Visit rates and cost variables for these individuals are much greater than for the majority of patients. Therefore, this creates very high values for some claims over each variable.

RESULTS

From the total number of work-related injuries (n = 96,627), 43,650 claims met the selection criteria. Of these claims, 85.4% were patients treated by MDs, whereas only 0.8% were patients treated by DCs. Patients seen by both MDs and DCs (crossovers) amounted to 4.9%. Patients treated in a hospital setting accounted for 8.8% (Table 4).

Of the 96,627 closed injury claims administered by the North Carolina Industrial Commission during the time

period 1975 to 1994, 49.5% were reported as strain injuries (Table 5). Of those claims with cost data that included body part injured data (40,140), 37.7% involved injuries to the low back (Table 6). This can be compared with the patient population without cost data but whose claims did include data for the body part injured (48,642). The group without cost data reported a similar rate of low back injury (35.1%) to that of the claims with cost data (Table 7). The remaining 7,845 claims included for analysis contained nature of injury reports only and did not define a body part.

The costs associated with the 43,650 claims that contained cost data were as follows: total cost of care was \$1.1 billion between 1974 and 1994. Dollar values are not stratified or adjusted to current values but reflect the dollar value for the year the claim was closed. Total medical cost (both providers minus compensation payment) was \$346 million and compensation (lost wages) paid to patients was \$775 million. Total cumulative days lost was 7.6 million workdays (Table 1).

The average treatment cost for patients treated by MDs was \$3519, whereas the average treatment cost for chiropractic patients was \$663. For patients treated by both MDs and DCs, the average costs of treatment were \$4425 and \$748, respectively, and \$5173 cumulatively. Compensation paid was \$17,673 for patients treated by MDs, \$3318 for patients treated by DCs, and \$23,106 for patients treated by both. Hospital inpatient care and outpatient care costs for MDs were \$2438 and \$2217, respectively, and \$4653 cumulatively. Hospital inpatient care and outpatient care costs for patients treated by DCs were \$43 and \$51, respectively, and \$94 cumulatively. Average TTD for patients treated by MDs was 176 days, whereas for patients treated by DCs it was 33 days. For patients treated by both, the average TTD was 240 days. The average total cost of claims (including compensation) managed by MDs was \$25,848; for claims managed by DCs it was \$4,074; and for

Table 3. Variable definitions

Variable	Definition
Lost workdays	Days the injured worker spent on Total Temporary Disability
MD cost	Cost of treatment provided by medical doctors
DC cost	Cost of treatment provided by doctors of chiropractic
Hospital inpatient	Hospital admissions
Hospital outpatient	Patients treated in hospitals on an outpatient basis
Total medical	Sum of all treatment costs, including hospital
Compensation paid	Compensation paid to patients for lost work, pain, and suffering
Total cost of claim	The sum of all costs of the claim
Nature of injury	Type of injury, ie, sprain/strain
Body part	Part of body reported as injured by the worker

MD, Medical doctor; DC, doctor of chiropractic.

combined cases it was \$33,600 (Table 1). When restricting the analysis to low back injuries alone (Table 2), we find average values very similar to those found when analyzing the injuries in general (Table 1).

Under the low back injury category, the average costs of care were \$3425 for MDs and \$634 for DCs. Patients that were seen by both MDs and DCs generated average costs of \$4112 and \$752, respectively, and \$4864 cumulatively. Compensation payments averaged \$15,819 for patients treated by MDs, \$1912 for patients treated by DCs, and \$19,596 for patients treated by both. Hospital inpatient and outpatient costs for MDs averaged \$2312 and \$2006 respectively, and \$4318 cumulatively. For DCs, hospital inpatient and outpatient care were \$0 and \$50, respectively. Average lost workdays for patients treated by MDs was 175, while for patients treated by DCs it was 25; patients treated by both yielded 223 lost days. The average total cost of claims (including compensation) managed by MDs was \$23,562; for claims managed by DCs it was \$2597; and for combined care it was \$29,446 (Table 2).

Prevalences of presentation of 18 musculoskeletal injuries by body part were extracted from the data. These data showed the highest presentation rates for lumbar and lumbosacral injuries regardless of provider type. Comparatively, the prevalence rate for these injuries for the MDs was 35.9% and for the DCs it was 68.5% (Table 6). Prevalences of presentation of 7 musculoskeletal injuries by nature of injury were extracted from the data. Again, regardless of provider type, these data showed the highest presentation rates for strain injuries (Table 8).

When reviewing the tables, a reader may become confused by the n values, which differ from table to table. This occurs because the large number of claims (96,627) was divided into multiple subsets to explore injury

Table 4. Utilization rates by provider type

MD	37,290	85.4%
DC	370	0.8%
MD and DC	2155	4.9%
Managed in a hospital setting	3835	8.8%

n = 43,650.

MD, Medical doctor; DC, doctor of chiropractic.

Table 5. Most prevalent presentations by nature of injury

Nature of injury	Frequency	Percentage*
Strain	47,846	49.5
All other cumulative injuries	22,883	23.7
Dislocation	10,817	11.2
Multiple physical injuries only	6498	6.7
Inflammation	2053	2.1
Contusion	1634	1.7
Fracture	1539	1.4
Nature of injury presentations of less than 1% of n	3557	—

n = 96,627.

*Out of all 96,627 claims (no missing values).

prevalence and provider access patterns. The largest set of data is injured workers in general. This is Table 5 with an n of 96,627, titled "Most prevalent presentations by nature of injury." To be in this group, the worker filed a report of injury with the North Carolina Industrial Commission and identified a "nature of injury."

The subsets are composed of individuals that filed with the Industrial Commission and identified a nature of injury, but they may not have noted a specific "body part" and may not have incurred health care costs. Of course, for the purposes of this study, the most significant subsets are those with provider costs associated with them. Those without provider costs are included in tables to show injury demography.

Table 1, titled "Claims, lost workdays, and cost by provider utilization," contains the subset files with the provider costs and has an n of 43,650. Another subset is found in Table 6, titled "Most prevalent presentations for part of body involved by provider utilization." This subset contains the claims that had body part and nature of injury codes, but they may or may not have had provider cost data. The table has an n of 40,140.

Workers with a lumbar injury and provider cost data identified were further analyzed in an additional subset with an n of 11,111 in Table 2, titled "Lumbar/lumbosacral strains, claims, lost workdays, and cost by provider utilization." Finally, in Table 7, titled "Most prevalent presentations by part of body for claims without cost data," we have a subset of those claims identifying a body

Table 6. Most prevalent presentations for part of body involved by provider utilization

Provider use (number of claims)	Part of body	Frequency	Percent
MD (34,594)	Lower back area (lumbar and lumbosacral)	12,406	35.9
	Multiple body parts	4934	14.3
	Knee	2459	7.1
	Shoulder(s)	2382	6.9
	Hip	1865	5.4
	Wrist	1477	4.3
	Upper arm	928	2.7
	Insufficient information	869	2.5
	Elbow	826	2.4
	Neck	768	2.2
	Buttocks	738	2.1
	Upper leg	557	1.6
	Upper arm	516	1.5
	Ankle	466	1.3
	Fingers	452	1.3
	Upper extremities	393	1.1
	Trunk	384	1.1
	DC (356)	Hand	381
Lower back area (lumbar and lumbosacral)		244	68.5
Multiple body parts		38	10.7
Neck		15	4.2
Shoulder(s)		13	3.7
Trunk		8	2.2
Upper leg		6	1.7
Wrist		4	1.1
MD and DC (2058)	Lower back area (lumbar and lumbosacral)	1319	64.1
	Multiple body parts	344	16.7
	Neck	82	4.0
	Shoulder(s)	62	3.0
	Insufficient information	48	2.3
	Buttocks	29	1.4
	Hip	28	1.4
	Trunk	24	1.2
	Knee	22	1.1
	Upper arm	21	1.0
None (3132)	Lower back area (lumbar and lumbosacral)	1164	37.2
	Multiple body parts	454	14.5
	Hip	212	6.8
	Shoulder(s)	209	6.7
	Knee	174	5.6
	Wrist	127	4.1
	Upper arm	92	2.9
	Insufficient information	81	2.6
	Elbow	77	2.5
	Upper leg	73	2.3
	Buttocks	66	2.1
	Neck	56	1.8
	Lower arm	48	1.5
	Trunk	36	1.1
	Disk	29	0.9

n = 40,140.

Claims with compensation costs only were purged; some missing values for body part variable

MD, medical doctor; DC, doctor of chiropractic.

part injured but without any reported health care costs. The table has an n of 48,642. Table 8 contains the most prevalent presentations for nature of injury by provider utilization with an n of 43,650 claims. The overall analysis yielded a P value significant at less than .000.

DISCUSSION

This study captures a data set from a large population of injured workers (96,627) over a relatively long period of time (19 years). The inclusion criteria retained 43,650 claims and encompassed all cost aspects of treatment. In addition to the variables discussed in the Methods section, information was captured on injury type, prevalence, and frequency of presentation for both nature of injury and body part. Additionally, the study defines specific provider utilization for the 18 separate categories of musculoskeletal conditions analyzed. The information was extracted by information technology (IT) specialists for the State of North Carolina under the auspices of the Department of Commerce. The IT specialist who designed the original archival system in 1974 designed and conducted the data extraction for this study. Biostatisticians jointly at the University of California (UCLA) and the Southern California University of Health Sciences (SCUHS) performed the analysis. The authors did not assist with either the extraction or the analysis of the data.

Although these data contain all reported injuries archived during the available 19-year time frame, there is variability to the information contained in the individual files. This may be because of changes in data entry policy, technology, or even staff. Additionally, the data captured may not contain all treated work-related injuries that occurred during this time. Treatments can be rendered without a report of injury to the North Carolina Industrial Commission. It is not the responsibility of the MD or the DC to report the injury. It is instead the responsibility of the employer and/or carrier. This eliminates the possibility of provider reporting bias for the purposes of this study. Without a report to the North Carolina Industrial Commission, the injury would not appear in the study data. Also, there were 52,997 closed claims that contained only compensation payments, because provider type had been purged. These claims were dropped from the study but would have contained additional patients for both provider types. These additional claims may have impacted the findings.

Inherent inaccuracies in insurance databases present challenges of methodology. These challenges include lack or inaccuracy of diagnostic and procedural codes, lack of control for acuity and chronicity, incomparability of groups, absence of information on prognostic indicators, insufficient outcome measures, lack of information on comorbidity, and missing data.^{7,11,19-21} However, these databases are representative of defined populations treated within a defined fee

Table 7. Most prevalent presentations by part of body involved for claims without cost data

Part of body	Frequency	Percentage*
Lower back area (lumbar area and lumbosacral)	17,082	35.1
Multiple body parts	6751	13.9
Knee	3049	6.3
Shoulder(s)	2854	5.9
Hip	2755	5.7
Wrist	2001	4.1
Insufficient information	1894	3.9
Upper leg	1258	2.6
Upper arm	1146	2.4
Neck	1086	2.2
Buttocks	978	2.0
Elbow	968	2.0
Ankle	695	1.4
Fingers	692	1.4
Trunk	644	1.3
Lower arm	633	1.3
Disk	499	1.0
Upper extremities	435	0.9
Insufficient information	3222	6.6

n = 48,642.

*Claims identifying a body part but without costs.

schedule without provider bias. This results in having an excellent ability to generalize the results to a wider population. Despite the limitations, insurance databases provide a stable frame of events and remain a legitimate source for the study of utilization.^{22,23}

CONCLUSION

This study did not elude the methodologic difficulties of previous studies. The most notable limitations are the lack of data on severity of injury and comorbidity. Management costs of injured workers in North Carolina during the years 1975 to 1994 were defined with this study. However, we cannot determine if either provider group treated the more severe or chronic musculoskeletal injuries. If inpatient and outpatient hospital costs are an indicator, then the MDs would seem to have treated the more severe and, hence, the more costly injuries. Unfortunately, this cannot be determined with the available data. Accessing the physical files of this database and manually extracting the information could show additional diagnostic information. Severity, comorbidity, acuity and chronicity, as well as patient's age and sex could then be differentiated. Prospective studies and randomized trials are needed to continue the investigation as well.²¹

The data in the state of North Carolina provide a picture, though incomplete, of utilization rates and management costs of injured workers. Given the results of this study, utilization of DCs for the treatment of injured workers is very low. There are no legislative impediments to injured

Table 8. Most prevalent presentations for nature of injury by provider utilization

Provider use (number of claims)	Nature of injury	Frequency	Percent	
MD (37,290)	Strain	19,037	51.1	
	All other cumulative injuries	8334	22.3	
	Dislocation	3670	9.8	
	Multiple physical injuries only	2752	7.4	
	Inflammation	972	2.6	
	Contusion	696	1.9	
	Fracture	694	1.9	
	DC (370)	Strain	226	61.1
		All other cumulative injuries	75	20.3
		Dislocation	34	9.2
Multiple physical injuries only		19	5.1	
Contusion		7	1.9	
Inflammation		3	0.8	
MD and DC (2155)		Strain	1264	58.7
		All other cumulative injuries	412	19.1
		Dislocation	221	10.3
		Multiple physical injuries only	164	7.6
	Contusion	39	1.8	
	Fracture	15	0.7	
	Inflammation	14	0.6	
	None (3835)	Strain	1766	46.0
		All other cumulative injuries	1100	28.7
		Dislocation	472	12.3
Multiple physical injuries only		229	6.0	
Inflammation		62	1.6	
Contusion		47	1.2	

n = 43,650.

Claims with compensation costs only purged.

MD, Medical doctor; DC, doctor of chiropractic.

workers wishing to access DCs, and the North Carolina Industrial Commission Medical Fee Schedule allows for full scope of practice reimbursement for DCs. A survey of North Carolina patients in the general population suffering acute, severe low back pain found 13% of study respondents initially sought care with a chiropractor.¹⁷ Although a comparison of this population's utilization rates to workers' compensation rates may be inappropriate, it raises questions. A review of a Liberty Mutual Insurance nationwide workers' compensation databank showed a chiropractic utilization rate of 3%.²³ Comparing these rates with the 0.8% utilization rate of chiropractors in our North Carolina data may suggest that barriers to injured worker access to chiropractors exist in North Carolina.

The differences in provider management costs, independent of critical issues such as severity and comorbidity,

suggested by these results indicate lower treatment costs, fewer lost workdays, reduced utilization of ancillary medical services, and reduced compensation payments for patients treated by DCs. Recognizing the study limitations, if indeed the provider subsets are comparable, it seems likely that substantial savings to the workers' compensation system would be possible if chiropractic services were increased in North Carolina.

Combined care patients tended to have significantly higher costs across all categories. Unfortunately, these data do not allow us to determine why their costs were so much higher. It is possible that factors such as symptom chronicity, initial provider selection, potential litigation, or patient satisfaction caused these cost increases.

ACKNOWLEDGMENT

The authors thank the North Carolina Industrial Commission Chairman Mr. Buck Lattimore for arranging access to the archives and the North Carolina Board of Chiropractic Examiners for grant funding. Additionally, the authors would like to acknowledge doctors Reed Phillips and Alan Adams of the Southern California University of Health Sciences, doctors Eric Hurwitz and Frank Kohlbeck of UCLA, and Dr Marc Gottlieb, private practitioner in Raleigh, North Carolina, for their reviews and contributions.

REFERENCES

1. Williams DA, Feuerstein M, Durbin D, Pezzullo J. Health care and indemnity costs across the natural history of disability in occupational low back pain. *Spine* 1998;23:2329-36.
2. Webster BS, Snook SH. The cost of compensable low back pain. *J Occup Med* 1990;32:13-5.
3. Nelson WJ. Workers' compensation: coverage, benefits and costs, 1990-91. *Soc Secur Bull* 1993;56:68-74.
4. Spitzer WO, Le Blank FE, Dupis M. Scientific approach to the assessment and management of activity related spinal disorders. A monograph for MDs: report of the Quebec Task Force on Spinal Disorders. *Spine* 1987;12:1-9.
5. Hashemi L, Webster BS, Clancy E. Trends in disability duration and cost of workers' compensation low back claims (1988-1996). *J Occup Environ Med* 1998;40:110-9.
6. Bergemann BW, Chichoke AJ. Cost effectiveness of MDs vs. chiropractic treatment of low-back injuries. *J Manipulative Physiol Ther* 1980;3:1143-7.
7. Assendelft WJ, Bouter LM. Does the goose really lay golden eggs? A methodological review of workmen's compensation studies. *J Manipulative Physiol Ther* 1993;16:161-8.
8. Jarvis KB, Phillips RB, Morris EK. Cost per case comparison of back injury claims of chiropractic versus MDs management for conditions with identical diagnostic codes. *J Occup Med* 1991;33:847-52.
9. Carey TS, Garrett J, Jackman A, McLaughlin C, Fryer J, Smucker DR. The outcomes and costs of care for acute low back pain among patients seen by primary care practitioners, DCs and orthopedic surgeons. *N Engl J Med* 1995;333:913-7.
10. Johnson MR, Schultz MK, Ferguson AC. A comparison of chiropractic, MDs and osteopathic care for work-related sprains and strains. *J Manipulative Physiol Ther* 1989;12:335-44.
11. Nyiendo J. Disabling low back Oregon workers' compensation claims. Part II: time loss. *J Manipulative Physiol Ther* 1991;14:231-9.
12. Nyiendo J. Disabling low back Oregon workers' compensation claims Part III: diagnostic and treatment procedures and associated costs. *J Manipulative Physiol Ther* 1991;14:287-97.
13. Greenwood JG. Work-related back and neck injury cases in West Virginia. *Orthop Rev* 1985;XIV:51-63.
14. Johnson WG, Baldwin ML, Butler RJ. The costs and outcomes of chiropractic and physician care for workers' compensation back claims. *J Risk Insur* 1999;66:185-205.
15. Deyo RA, Cherkin D, Conrad D. Cost, controversy, crisis: low back pain and the health of the public. *Annu Rev Public Health* 1991;12:141-56.
16. Smith M, Stano M. Costs and recurrences of chiropractic and MDs episodes of low-back care. *J Manipulative Physiol Ther* 1997;20:5-12.
17. Carey TS, Evans AT, Hadler NM. Acute severe low back pain. A population-based study of prevalence and care seeking. *Spine* 1996;21:339-44.
18. Triano JJ, Hansen DT. Chiropractic and quality care, are they mutually exclusive? *J Neuromusculo Sys* 1999;7:25-33.
19. Faciszewski T, Broste SK, Fardon D. Quality of data diagnoses of spinal disorders in administrative databases. A multicenter study. *J Bone Joint Surg Am* 1997;79:1481-8.
20. Jarvis KB, Phillips RB, Danielson D. Managed care pre-approval and its effect on the cost of Utah worker compensation claims. *J Manipulative Physiol Ther* 1997;20:372-6.
21. Deyo RA, Taylor VM, Diehr P, Conrad D, Cherkin DC, Ciol M, et al. Analysis of automated administrative and survey databases to study patterns and outcomes of care. *Spine* 1994;15(Suppl 18):2053S-91S.
22. Faciszewski T. Spine update. Administrative databases in spine research. *Spine* 1997;22:1270-5.
23. Tacci JA, Webster BS, Hashemi L, Christiani DC. Health care utilization and referral patterns in the initial management of new-onset, uncomplicated, low back workers' compensation disability claims. *J Occup Environ Med* 1998;40:958-63.

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Southeast Rehabilitation Services

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March 9, 2005

Senator Con Bunde
State Capital, Room 506
Juneau, AK 99801

RE: Senate Bill 130

Dear Senator Bunde,

I am writing to offer my point of view regarding proposed Senate Bill 130. I have been a practicing rehabilitation counselor for 28 years. I have also been self-employed and understand the need to remedy the burgeoning cost of workers' compensation in Alaska, and I support careful and measured efforts to do so.

Unfortunately, the good intentions of the Governor and others to gain control over the rising cost of Workers' Compensation (WC) to employers while providing efficacious services to injured workers is not yet covered in the proposed legislation.

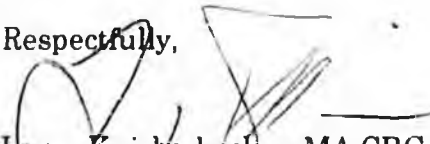
First and foremost, the data that was presented by Commissioner O'Claray depicting the distribution of WC costs for 2003 was not based upon valid and verifiable data. It is my understanding that the Division of Workers' Compensation relies solely upon the insurance industry to obtain this data. They certainly did not ask me or other persons providing vocational rehabilitation to injured workers to submit data relative to our contribution to WC cost distribution. That being the case, how can anyone assume that other depicted cost ratios are accurate? Any analysis of an issue of this importance demands scrutiny that is beyond reproach.

I am also not convinced that the WC process and injured workers in particular will be best served by the proposed buy out of injured workers in lieu of vocational retraining. Implied in this is the notion that substantial cost reduction would occur to WC and our state economy.

More likely, injured workers' who are financially desperate, most likely after their benefits have been terminated, will be compelled to take what they can get rather than fight an uphill battle and seek training to return to gainful employment. Efforts to streamline the WC process and avoid unnecessary delays would be a better use of time and resources. I would also suggest that the insurance carriers are a major contributor to the burgeoning cost of WC due to, in part, very poor claims management. Unfortunately, these costs are passed on to employers who have no say in the WC process.

These factors, in part, prompt me to urge you to reject bill 130 as it is presently composed.

Respectfully,



Larry Knickerbocker, MA CRC LPC
Certified Rehabilitation Counselor

From: Marjorie Linder [mtlservices@gci.net]
Sent: Tuesday, March 08, 2005 12:08 PM
To: Sen. Con Bunde
Subject: Workers' Compensation SB 130



Examples of
Different Reportin...



Summary of



Commissioner



041K totals for
2003 Annual Re...



Eligibility Eval
Comparisons f...



2003 Annual Report PPI distribution.xls
sorted by P...
(30 KB)



Dear

Senator Bunde:

I am a vocational rehabilitation counselor who sat on the rehab committee for WCCA in 1988 when there were major law changes made. I have probably looked at the statistics reported to the Division of Workers' Compensation more critically than anyone.

I am attaching a speech that I presented to the ad hoc committee. I plan to provide testimony today that comments specifically on the governor's bill but I want to send down to you handouts that accompany the other speech that demonstrate that we are dealing with poor statistics, "fuzzy math" if you will, that the statistics are enormously inflated for the re-employment benefit (vocational rehabilitation) in the comp system and that there are other ways to tackle this problem.

For instance, I put before the ad hoc committee a way to save two million dollars simply by reducing by 20% the lump sums paid for PPI ratings to those who can return to work and increasing by 20% the PPI ratings for those who complete their vocational plans and pay that increase in a lump sum at the end of the training plans so taht they can receive some support during the job search. Those who qualify for the re-employment benefit but don't choose to complete their plans should have no increase in PPI ratings.

Please print these and distribute these to fellow committee members. Thank you very much.

Marjorie T. Linder, M.A., CRC, CLCP
MTL Services
PO Box 230029
Anchorage, AK 99523-0029
mtlservices@gci.net
(907) 346-2474

PERMANENT PARTIAL IMPAIRMENT

2003 - PPI Ratings Distribution Approximate Totals

	A	B	C	D	E	F	G
1	PPI %	Number	# Workers w/ PPI but no Rehab Costs Reported	# Workers w/ PPI & Rehab Costs Reported		PPI for Workers W/ No Rehab Costs Reported	PPI for Workers w/ PPI & Rehab Costs Reported
2	64	1	1	0	\$ 1,770.00	\$ 113,280.00	\$ -
3	57	1	0	1	\$ 1,770.00	\$ -	\$ 100,890.00
4	49	1	0	1	\$ 1,770.00	\$ -	\$ 86,730.00
5	44	1	0	1	\$ 1,770.00	\$ -	\$ 77,880.00
6	42	2	1	1	\$ 1,770.00	\$ 74,340.00	\$ 74,340.00
7	40	1	0	1	\$ 1,770.00	\$ -	\$ 70,800.00
8	36	1	0	1	\$ 1,770.00	\$ -	\$ 63,720.00
9	33	1	0	1	\$ 1,770.00	\$ -	\$ 58,410.00
10	32	3	3	0	\$ 1,770.00	\$ 169,920	\$ -
11	31	1	0	1	\$ 1,770.00	\$ -	\$ 54,870.00
12	30	1	1	0	\$ 1,770.00	\$ 53,100.00	\$ -
13	29	4	3	1	\$ 1,770.00	\$ 153,990.00	\$ 51,330.00
14	28	16	8	8	\$ 1,770.00	\$ 396,480.00	\$ 396,480.00
15	27	2	1	1	\$ 1,770.00	\$ 47,790.00	\$ 47,790.00
16	26	3	2	1	\$ 1,770.00	\$ 92,040.00	\$ 46,020.00
17	25	10	4	6	\$ 1,770.00	\$ 177,000.00	\$ 265,500.00
18	24	6	2	4	\$ 1,770.00	\$ 84,960.00	\$ 169,920.00
19	23	9	4	5	\$ 1,770.00	\$ 162,840.00	\$ 203,550.00
20	22	9	3	6	\$ 1,770.00	\$ 116,820.00	\$ 233,640.00
21	21	9	5	4	\$ 1,770.00	\$ 185,850.00	\$ 148,680.00
22	20	16	8	8	\$ 1,770.00	\$ 283,200.00	\$ 283,200.00
23	19	11	8	3	\$ 1,770.00	\$ 269,040.00	\$ 100,890.00
24	18	13	7	6	\$ 1,770.00	\$ 223,020.00	\$ 191,160.00
25	17	7	3	4	\$ 1,770.00	\$ 90,270.00	\$ 120,360.00
26	16	23	15	8	\$ 1,770.00	\$ 424,800.00	\$ 226,560.00
27	15	27	11	16	\$ 1,770.00	\$ 292,050.00	\$ 424,800.00
28	14	29	12	17	\$ 1,770.00	\$ 297,360.00	\$ 421,260.00
29	13	44	25	19	\$ 1,770.00	\$ 575,250.00	\$ 437,190.00
30	12	45	28	17	\$ 1,770.00	\$ 594,720.00	\$ 361,080.00
31	11	58	37	21	\$ 1,770.00	\$ 720,390.00	\$ 408,870.00
32						\$ 5,598,510.00	\$ 5,125,920.00
33	10	112	34	78	\$ 1,770.00	\$ 601,800.00	\$ 1,380,600.00
34	9	78	46	32	\$ 1,770.00	\$ 732,780.00	\$ 509,760.00
35	8	122	79	43	\$ 1,770.00	\$ 1,118,640.00	\$ 608,880.00
36	7	97	67	30	\$ 1,770.00	\$ 830,130.00	\$ 371,700.00
37	6	144	99	45	\$ 1,770.00	\$ 1,051,380.00	\$ 477,900.00
38	5	213	142	71	\$ 1,770.00	\$ 1,256,700.00	\$ 628,350.00
39	4	213	147	66	\$ 1,770.00	\$ 1,040,760.00	\$ 467,280.00
40	3	232	153	79	\$ 1,770.00	\$ 812,430.00	\$ 419,490.00
41	2	206	145	61	\$ 1,770.00	\$ 513,300.00	\$ 215,940.00
42	1	256	182	74	\$ 1,770.00	\$ 322,140.00	\$ 130,980.00
43						\$ 8,280,060.00	\$ 5,210,880.00
44	TOTAL	1994	1269	725		\$ 13,878,570.00	\$ 10,336,800.00

EXAMPLES OF DIFFERENT REPORTING PRACTICES - Annual Report 2003

	A	P	Q	R	S	T	U
1	BENEFIT	Wausau	%	All Insurers	%	Self-Insureds	%
2	TOTAL	\$ 709,961.00	100.00%	\$ 223,013,145.00	100.00%	\$ 48,571,835.00	100.00%
3	.041K	\$ -	0.00%	\$ 10,327,053.00	4.63%	\$ 2,208,910.00	4.55%
4	Elig. Evals	\$ 12,100.00	1.70%	\$ 1,283,698.00	0.58%	\$ 253,692.00	0.52%
5	RS Fees	\$ -		\$ 1,154,202.00	0.52%	\$ 234,358.00	0.48%
6	RS Mon	\$ 16,650.00	2.35%	\$ 1,039,623.00	0.47%	\$ 80,248.00	0.17%
7	Plan Costs	\$ -	0.00%	\$ 1,902,978.00	0.85%	\$ 447,159.00	0.92%
8	Total Rehab w/ .041K	\$ 28,750.00	4.05%	\$ 15,707,554.00	7.04%	\$ 3,224,357.00	6.64%
9	TOTAL Rehab w/o .041K	\$ 28,750.00	4.05%	\$ 5,380,501.00	2.41%	\$ 1,015,447.00	2.09%
10	Medical	\$ 338,998.00	47.75%	\$ 115,176,893.00	51.65%	\$ 26,077,913.00	53.69%
11	Employee Atty	\$ 9,613.00	1.35%	\$ 2,399,878.00	1.08%	\$ 574,998.00	1.18%
12	Employer Atty	\$ 36,714.00	5.17%	\$ 7,200,532.00	3.23%	\$ 1,252,614.00	2.58%
13	Litigation Costs	\$ 6,841.00	0.96%	\$ 1,139,120.00	0.51%	\$ 208,329.00	0.43%
14	Total Legal	\$ 53,168.00	7.49%	\$ 10,739,530.00	4.82%	\$ 2,035,941.00	4.19%
15	TTD	\$ 73,210.00	10.31%	\$ 38,243,336.00	17.15%	\$ 8,746,103.00	18.01%
16	PPI	\$ 70,030.00	9.86%	\$ 23,719,242.00	10.64%	\$ 5,098,152.00	10.50%
17	PTD	\$ 91,106.00	12.83%	\$ 5,085,760.00	2.28%	\$ 1,244,710.00	2.56%

EXAMPLES OF DIFFERENT REPORTING PRACTICES - Annual Report 2003

	A	B	C	D	E	F	G	H
1	BENEFIT	AKNAT	%	Eagle	%	AK Guaranty Asso.	%	AK Mun League
2	TOTAL	\$ 51,764,454.00	100.00%	\$ 6,020,502.00	100.00%	\$ 14,049,080.00	100.00%	\$ 3,029,603.00
3	.041K	\$ 2,317,719.00	4.48%	\$ 902,370.00	14.99%	\$ 1,740,767.00	12.39%	\$ 206,319.00
4	Elig. Evals	\$ 307,937.00	0.59%	\$ 23,802.00	0.40%	\$ 33,158.00	0.24%	\$ 18,170.00
5	RS Fees	\$ 409,563.00	0.79%	\$ 31,631.00	0.53%	\$ 191,137.00	1.36%	\$ 47,404.00
6	RS Mon	\$ 160,304.00	0.31%	\$ 4,339.00	0.07%	\$ 194,660.00	1.39%	\$ 7,178.00
7	Plan Costs	\$ 409,563.00	0.79%	\$ 29,168.00	0.48%	\$ 132,431.00	0.94%	\$ 4,765.00
8	Total Rehab w/ .041K	\$ 3,605,086.00	6.96%	\$ 991,310.00	16.47%	\$ 2,292,153.00	16.32%	\$ 283,836.00
9	TOTAL Rehab w/o .041K	\$ 1,287,367.00	2.49%	\$ 88,940.00	1.48%	\$ 551,386.00	3.92%	\$ 77,517.00
10	Medical	\$ 25,090,680.00	48.47%	\$ 2,879,325.00	47.83%	\$ 6,254,665.00	44.52%	\$ 1,525,049.00
11	Employee Atty	\$ 618,576.00	1.19%	\$ 73,397.00	1.22%	\$ 296,856.00	2.11%	\$ 47,247.00
12	Employer Atty	\$ 1,883,799.00	3.64%	\$ 124,858.00	2.07%	\$ 704,452.00	5.01%	\$ 150,486.00
13	Litigation Costs	\$ 572,003.00	1.11%	\$ 5,836.00	0.10%	\$ 16,554.00	0.12%	\$ 16,109.00
14	Total Legal	\$ 3,074,378.00	5.94%	\$ 204,091.00	3.39%	\$ 1,017,862.00	7.25%	\$ 213,842.00
15	TTD	\$ 9,219,262.00	17.81%	\$ 996,577.00	16.55%	\$ 1,701,340.00	12.11%	\$ 467,586.00
16	PPI	\$ 5,905,926.00	11.41%	\$ 744,646.00	12.37%	\$ 1,572,926.00	11.20%	\$ 344,183.00
17	PTD	\$ 561,056.00	1.08%	\$ 5,721.00	0.10%	\$ 607,595.00	4.32%	\$ 13,678.00

EXAMPLES OF DIFFERENT REPORTING PRACTICES - Annual Report 2003

	A	I	J	K	L	M	N	O
1	BENEFIT	%	State of Alaska	%	Muni of Anch	%	Lumberman's Mutual	%
2	TOTAL	100.00%	\$ 16,119,549.00	100.00%	\$ 4,996,747.00	100.00%	\$ 5,825,555.00	100.00%
3	.041K	6.81%	\$ 694,645.00	4.31%	\$ 364,177.00	7.29%	\$ 587,769.00	10.09%
4	Elig. Evals	0.60%	\$ 52,960.00	0.33%	\$ 40,751.00	0.82%	\$ 82,272.00	1.41%
5	RS Fees	1.56%	\$ 128,162.00	0.80%	\$ -	0.00%	\$ 3,646.00	0.06%
6	RS Mon	0.24%	\$ 43,724.00	0.27%	\$ -	0.00%	\$ 2,208.00	0.04%
7	Plan Costs	0.16%	\$ 107,669.00	0.67%	\$ 24,110.00	0.48%	\$ 18,290.00	0.31%
8	Total Rehab w/ .041K	9.37%	\$ 1,027,160.00	6.37%	\$ 429,038.00	8.59%	\$ 694,185.00	11.92%
9	TOTAL Rehab w/o .041K	2.56%	\$ 332,515.00	2.06%	\$ 64,861.00	1.30%	\$ 106,416.00	1.83%
10	Medical	50.24%	\$ 8,184,082.00	50.77%	\$ 2,639,704.00	52.83%	\$ 2,624,952.00	45.06%
11	Employee Atty	1.56%	\$ 130,282.00	0.81%	\$ 51,005.00	1.02%	\$ 76,681.00	1.32%
12	Employer Atty	4.97%	\$ 472,719.00	2.93%	\$ 45,484.00	0.91%	\$ 189,277.00	3.25%
13	Litigation Costs	0.53%	\$ 22,788.00	0.14%	\$ 72,894.00	1.46%	\$ 35,880.00	0.62%
14	Total Legal	7.06%	\$ 625,789.00	3.88%	\$ 169,383.00	3.39%	\$ 301,838.00	5.18%
15	TTD	15.43%	\$ 3,347,915.00	20.77%	\$ 942,335.00	18.36%	\$ 1,364,155.00	23.42%
16	PPI	11.36%	\$ 1,444,064.00	8.96%	\$ 485,734.00	9.72%	\$ 652,365.00	11.20%
17	PTD	0.45%	\$ 570,050.00	3.54%	\$ 143,668.00	2.88%	\$ 24,911.00	0.43%

EXAMPLES OF DIFFERENT REPORTING PRACTICES FOR SAMPLE CARRIERS - 2002

BENEFIT	Fremont	AKNAT	Eagle	AK Mun League	State of Alaska	Muni of Anch	Lumber- man's Mutual	Wausau	All Insurers	Self- Insureds
.041K	11.67%	4.44%	15.94%	2.59%	5%	7.45%	5%	0	5.07%	5.6%
Eligibility Evals	2.16%	0.66%	0.42%	0.048%	0.537%	1.59%	1.32%	0.6%	0.8%	0.075%
RS Fees (Plan Writing	0%	0.709%	0.64%	0.3%	0.46%	0	0	0	0.4%	0.034%
RS Fees Monitoring	0%	0.35%	0.09%	0.06%	0.17%	0	0.09%	5.1%	0.33%	0.016%
Plan Costs	1.64%	1.13%	0.43%	.08%	0.79%	0.67%	0.45%	0.8%	.086%	.082%
TOTAL Rehab w/ .041K	15.45%	7.08%	17.5%	3.53%	7%	9.7%	6.88%	6.57%	7.4%	7.7%
TOTAL Rehab w/o .041K	3.81%	2.64%	1.59%	0.94%	1.966%	2.28%	1.87%	6.57%	2.4%	2.08%
Medical	37.9%	48.9%	45.59%	76%	46.9%	46.79%	51.69%	49.09%	50.6%	50.07%
Employee Atty	1.96%	1%	0.7%	.19%	1.41%	1.42%	0.537%	2.54%	1.27%	1.32%
Employer Atty	5%	3.9%	2%	1.56%	2.5%	2.5%	2.74%	3.29%	3.35%	2.52%
Litigation Costs	1.99%	0.81%	0%	0.02%	0.14%	1.63%	0.14%	0.26%	0.57%	0.456%
Total Legal	8.95%	5.71%	2.70%	1.77%	4.05%	5.6%	3.42%	6.1%	5.19%	4.29%
TTD	13.5%	22%	19.88%	8.78%	4.05%	5.6%	23.24%	12.65%	17.42%	17.58%
PPI	13.55%	10.4%	10.66%	5.10%	10.1%	11.7%	10.4%	9.97%	10.63%	11.83%
PTD	2.68%	0.9%	0.15%	0.38%	4.35%	3.47%	0.42%	6.1%	2.22%	2.79%

Eligibility Evaluation Comparison for 2002 - Actual Charges \$43,478.84 v. \$75,761 in RBA Report

	A	B	C	D	E	F	G	H	I	J
1	Date Assigned	Name	AWCB #	Insurance Co.	Date Invoiced	Amount Reported Paid	Actual Amount Paid	Date Paid	Amounts Paid Prior to or After 2002	Dates of Amounts Paid Prior to or After 2002
2	9/30/1999				1/16/02 & 3/14/02 & 4/8/02	822.00	821.86	4/10/02 & 4/15/02	-	-
3	2/11/2001		200010411		4/9/2001	8,243.00	-	-	1,357.50	4/18/2001
4	6/13/2001		200007417		7/30/01 & 9/25/01 & 2/12/02	3,828.00	777.50	3/1/2002	1,333.75	9/21/01 & 10/15/01
5	9/5/2001		200027642		10/31/01 & 1/16/2002	6,453.00	1,250.00	1/30/2002	973.75	10/30/2001
6	9/17/2001		200108458		1/16/2002	1,894.00	1,893.75	2/6/2002	-	-
7	9/26/2001		200101942		1/3/2002	Not on report	1,500.00	1/15/2002	-	-
8	10/12/2001		199923253		11/26/01 & 2/12/2002	7,486.00	635.00	3/8/2002	848.75	12/7/2001
9	10/26/2001		200017074		1/3/02 & 3/27/02 & 7/19/02	3,668.00	2,567.50	1/16/02 & 4/10/02 & 8/2/02	-	-
10	11/5/2001		200115469		1/16/02 & 2/12/02	827.00	827.00	3/26/2002	-	-
11	11/8/2001		200103446		2/12/2002	Not on report	898.25	2/12/2002	-	-
12	11/29/2001		200109346		1/16/2002	4,259.00	1,085.00	11/18/2002	-	-

Eligibility Evaluation Comparison for 2002 - Actual Charges \$43,478.84 v. \$75,761 in RBA Report

	A	B	C	D	E	F	G	H	I	J
1	Date Assigned	Name	AWCB #	Insurance Co.	Date Invoiced	Amount Reported Paid	Actual Amount Paid	Date Paid	Amounts Paid Prior to or After 2002	Dates of Amounts Paid Prior to or After 2002
13	12/11/2001		200105534		2/12/2002	Not on report	2,278.75	4/15/2002	-	-
14	12/20/2001		200023942		2/12/02 & 3/19/02	10,108.00	2,488.75	3/19/02 & 5/17/02	-	-
15	1/4/2002		200115009		2/12/2002	No amount reported	1,243.75	3/29/2002	-	-
16	1/14/2002		2000014109		3/14/2002	No amount reported	855.00	3/26/2002	-	-
17	1/25/2002		200023568		3/14/2002	1,488.00	1,256.25	4/1/2002	-	-
18	2/11/2002		200005219		3/14/02 & 4/1/02	1,373.00	1,372.50	6/13/2002	-	-
19	2/28/2002		200121311		4/1/2002	1,330.00	1,330.00	4/5/2002	-	-
20	3/13/2002		200022364		4/29/2002	6,483.00	2,050.00	5/4/2002	-	-
21	3/28/2002		200021399		5/22/2002	No amount reported	831.25	6/17/2002	-	-
22	4/10/2002		200110243		6/30/2002	4,993.00	797.50	7/30/2002	-	-
23	5/7/2002		200101570		7/1/2002	1,942.00	754.01	9/10/2002	-	-
24	5/15/2002		200118843		6/7/2002	No amount reported	1,817.22	10/2/2002	-	-
25	5/23/2002	200113520	9/13/2002	949.00	-	-	1,207.50	3/7/2003		

Eligibility Evaluation Comparison for 2002 - Actual Charges \$43,478.84 v. \$75,761 in RBA Report

	A	B	C	D	E	F	G	H	I	J
1	Date Assigned	Name	AWCB #	Insurance Co.	Date Invoiced	Amount Reported Paid	Actual Amount Paid	Date Paid	Amounts Paid Prior to or After 2002	Dates of Amounts Paid Prior to or After 2002
26	6/12/2002		200105921		8/16/2002	No amount reported	940.00	11/4/2002	-	-
27	6/25/2002		200109576		8/20/2002	922.00	922.50	9/10/2002	-	-
28	7/3/2002		200114366			-	-		-	-
29	7/16/2002		200208467		8/16/2002	No amount reported	1,008.75	8/26/2002	-	-
30	8/8/2002		200111688		8/26/2002	806.00	806.25	10/4/2002	-	-
31	8/20/2002		200104269		10/31/02 & 11/22/02 & 12/2/02 & 1/13/03	2,784.00	2,784.25	11/18/02 & 11/22/02 & 12/16/02	128.00	1/27/2003
32	8/28/2002		200205638		10/31/2002	1,683.00	1,682.50	10/9/02 & 11/18/02	-	-
33	9/9/2002		200108382		9/25/2002	No amount reported	1,002.50	12/16/2002	-	-
34	9/19/2002		200017329		12/12/2002	1,486.00	1,486.25	12/27/2002	-	-
35	10/1/2002		199513006		12/2/2002	1,934.00	1,933.75	12/21/2002	-	-
36	10/16/2002		200205154		12/2/2002	No amount reported	1,581.25	12/30/2002	-	-

Eligibility Evaluation Comparison for 2002 - Actual Charges \$43,478.84 v. \$75,761 in RBA Report

	A	B	C	D	E	F	G	H	I	J
	Date Assigned	Name	AWCB #	Insurance Co.	Date Invoiced	Amount Reported Paid	Actual Amount Paid	Date Paid	Amounts Paid Prior to or After 2002	Dates of Amounts Paid Prior to or After 2002
37	10/29/2002		200115337		12/12/2002	No amount reported	-	-	1,760.00	2/4/2003
38	11/8/2002		20026570			No eligibility eval - only Voc. Plan	-	-	-	
39	11/21/2002		200122186		1/13/2003	No amount reported	-	-	1,571.75	1/23/2003
40	12/12/2002		200203763		7/11/2003	Not on report	-	-	1,125.00	7/25/2003
41	12/30/2002		200207712		3/20/2003	-	-	-	1,607.50	4/10/2003
42	Totals					75,761.00	43,478.84		11,913.50	

EXAMPLES OF DIFFERENT REPORTING PRACTICES - Annual Report 2003

	A	B	C	D	E	F	G	H
1	BENEFIT	AKNAT	%	Eagle	%	AK Guaranty Asso.	%	AK Mun League
2	TOTAL	\$ 51,764,454.00	100.00%	\$ 6,020,502.00	100.00%	\$ 14,049,080.00	100.00%	\$ 3,029,603.00
3	.041K	\$ 2,317,719.00	4.48%	\$ 902,370.00	14.99%	\$ 1,740,767.00	12.39%	\$ 206,319.00
4	Elig. Evals	\$ 307,937.00	0.59%	\$ 23,802.00	0.40%	\$ 33,158.00	0.24%	\$ 18,170.00
5	RS Fees	\$ 409,563.00	0.79%	\$ 31,631.00	0.53%	\$ 191,137.00	1.36%	\$ 47,404.00
6	RS Mon	\$ 160,304.00	0.31%	\$ 4,339.00	0.07%	\$ 194,660.00	1.39%	\$ 7,178.00
7	Plan Costs	\$ 409,563.00	0.79%	\$ 29,168.00	0.48%	\$ 132,431.00	0.94%	\$ 4,765.00
8	Total Rehab w/ .041K	\$ 3,605,086.00	6.96%	\$ 991,310.00	16.47%	\$ 2,292,153.00	16.32%	\$ 283,836.00
9	TOTAL Rehab w/o .041K	\$ 1,287,367.00	2.49%	\$ 88,940.00	1.48%	\$ 551,386.00	3.92%	\$ 77,517.00
10	Medical	\$ 25,090,680.00	48.47%	\$ 2,879,325.00	47.83%	\$ 6,254,665.00	44.52%	\$ 1,525,049.00
11	Employee Atty	\$ 618,576.00	1.19%	\$ 73,397.00	1.22%	\$ 296,856.00	2.11%	\$ 47,247.00
12	Employer Atty	\$ 1,883,799.00	3.64%	\$ 124,858.00	2.07%	\$ 704,452.00	5.01%	\$ 150,486.00
13	Litigation Costs	\$ 572,003.00	1.11%	\$ 5,836.00	0.10%	\$ 16,554.00	0.12%	\$ 16,109.00
14	Total Legal	\$ 3,074,378.00	5.94%	\$ 204,091.00	3.39%	\$ 1,017,862.00	7.25%	\$ 213,842.00
15	TTD	\$ 9,219,262.00	17.81%	\$ 996,577.00	16.55%	\$ 1,701,340.00	12.11%	\$ 467,586.00
16	PPI	\$ 5,905,926.00	11.41%	\$ 744,646.00	12.37%	\$ 1,572,926.00	11.20%	\$ 344,183.00
17	PTD	\$ 561,056.00	1.08%	\$ 5,721.00	0.10%	\$ 607,595.00	4.32%	\$ 13,678.00

EXAMPLES OF DIFFERENT REPORTING PRACTICES - Annual Report 2003

	A	I	J	K		M	N	O
1	BENEFIT	%	State of Alaska	%	Muni of Anch	%	Lumberman's Mutual	%
2	TOTAL	100.00%	\$ 16,119,549.00	100.00%	\$ 4,996,747.00	100.00%	\$ 5,825,555.00	100.00%
3	.041K	6.81%	\$ 694,645.00	4.31%	\$ 364,177.00	7.29%	\$ 587,769.00	10.09%
4	Elig. Evals	0.60%	\$ 52,960.00	0.33%	\$ 40,751.00	0.82%	\$ 82,272.00	1.41%
5	RS Fees	1.56%	\$ 128,162.00	0.80%	\$ -	0.00%	\$ 3,646.00	0.06%
6	RS Mon	0.24%	\$ 43,724.00	0.27%	\$ -	0.00%	\$ 2,208.00	0.04%
7	Plan Costs	0.16%	\$ 107,669.00	0.67%	\$ 24,110.00	0.48%	\$ 18,290.00	0.31%
8	Total Rehab w/ .041K	9.37%	\$ 1,027,160.00	6.37%	\$ 429,038.00	8.59%	\$ 694,185.00	11.92%
9	TOTAL Rehab w/o .041K	2.56%	\$ 332,515.00	2.06%	\$ 64,861.00	1.30%	\$ 106,416.00	1.83%
10	Medical	50.34%	\$ 8,184,082.00	50.77%	\$ 2,639,704.00	52.93%	\$ 2,624,952.00	45.06%
11	Employee Atty	1.56%	\$ 130,282.00	0.81%	\$ 51,005.00	1.02%	\$ 76,681.00	1.32%
12	Employer Atty	4.97%	\$ 472,719.00	2.93%	\$ 45,484.00	0.91%	\$ 189,277.00	3.25%
13	Litigation Costs	0.53%	\$ 22,788.00	0.14%	\$ 72,894.00	1.46%	\$ 35,880.00	0.62%
14	Total Legal	7.06%	\$ 625,789.00	3.88%	\$ 169,383.00	3.39%	\$ 301,838.00	5.18%
15	TTD	15.43%	\$ 3,347,915.00	20.77%	\$ 942,335.00	18.86%	\$ 1,364,155.00	23.42%
16	PPI	11.36%	\$ 1,444,064.00	8.96%	\$ 485,734.00	9.72%	\$ 652,365.00	11.20%
17	PTD	0.45%	\$ 570,050.00	3.54%	\$ 143,668.00	2.88%	\$ 24,911.00	0.43%

EXAMPLES OF DIFFERENT REPORTING PRACTICES - Annual Report 2003

	A	P	Q	R	S	T	U
1	BENEFIT	Wausau	%	All Insurers	%	Self-Insureds	%
2	TOTAL	\$ 709,961.00	100.00%	\$ 223,013,145.00	100.00%	\$ 48,571,835.00	100.00%
3	.041K	\$ -	0.00%	\$ 10,327,053.00	4.63%	\$ 2,208,910.00	4.55%
4	Elig. Evals	\$ 12,100.00	1.70%	\$ 1,283,698.00	0.58%	\$ 253,682.00	0.52%
5	RS Fees	\$ -		\$ 1,154,202.00	0.52%	\$ 234,358.00	0.48%
6	RS Mon	\$ 16,650.00	2.35%	\$ 1,039,623.00	0.47%	\$ 80,248.00	0.17%
7	Plan Costs	\$ -	0.00%	\$ 1,902,978.00	0.85%	\$ 447,159.00	0.92%
8	Total Rehab w/ .041K	\$ 28,750.00	4.05%	\$ 15,707,554.00	7.04%	\$ 3,224,357.00	6.64%
9	TOTAL Rehab w/o .041K	\$ 28,750.00	4.05%	\$ 5,380,501.00	2.41%	\$ 1,015,447.00	2.09%
10	Medical	\$ 338,998.00	47.75%	\$ 115,176,893.00	51.65%	\$ 26,077,913.00	53.69%
11	Employee Atty	\$ 9,613.00	1.35%	\$ 2,399,878.00	1.08%	\$ 574,998.00	1.18%
12	Employer Atty	\$ 36,714.00	5.17%	\$ 7,200,532.00	3.23%	\$ 1,252,614.00	2.58%
13	Litigation Costs	\$ 6,841.00	0.96%	\$ 1,139,120.00	0.51%	\$ 208,329.00	0.43%
14	Total Legal	\$ 53,168.00	7.49%	\$ 10,739,530.00	4.82%	\$ 2,035,941.00	4.19%
15	TTD	\$ 73,210.00	10.31%	\$ 38,243,336.00	17.15%	\$ 8,746,103.00	18.01%
16	PPI	\$ 70,030.00	9.86%	\$ 23,719,242.00	10.64%	\$ 5,098,152.00	10.50%
17	PTD	\$ 91,106.00	12.83%	\$ 5,085,760.00	2.28%	\$ 1,244,710.00	2.56%

EXAMPLES OF DIFFERENT REPORTING PRACTICES FOR SAMPLE CARRIERS - 2002

BENEFIT	Fremont	AKNAT	Eagle	AK Mun League	State of Alaska	Muni of Anch	Lumber- man's Mutual	Wausau	All Insurers	Self- Insureds
.041K	11.63%	4.44%	15.94%	2.59%	5%	7.45%	5%	0	5.07%	5.6%
Eligibility Evals	2.16%	0.66%	0.42%	0.048%	0.537%	1.59%	1.32%	0.6%	0.8%	0.075%
RS Fees (Plan Writing	0%	0.709%	0.64%	0.3%	0.46%	0	0	0	0.4%	0.034%
RS Fees Monitoring	0%	0.135%	0.09%	0.06%	0.17%	0	0.09%	5.1%	0.33%	0.016%
Plan Costs	1.64%	1.13%	0.43%	.08%	0.79%	0.67%	0.45%	0.8%	.086%	.082%
TOTAL Rehab w/ .041K	15.45%	7.08%	17.5%	3.53%	7%	9.7%	6.88%	6.57%	7.4%	7.7%
TOTAL Rehab w/o .041K	3.81%	2.64%	1.59%	0.94%	1.966%	2.28%	1.87%	6.57%	2.4%	2.08%
Medical	37.9%	48.9%	45.59%	76%	46.9%	46.79%	51.69%	49.09%	50.6%	50.07%
Employee Atty	1.96%	1%	0.7%	.19%	1.41%	1.42%	0.537%	2.54%	1.27%	1.32%
Employer Atty	5%	3.9%	2%	1.56%	2.5%	2.5%	2.74%	3.29%	3.35%	2.52%
Litigation Costs	1.99%	0.81%	0%	0.02%	0.14%	1.63%	0.14%	0.26%	0.57%	0.456%
Total Legal	8.95%	5.71%	2.70%	1.77%	4.05%	5.6%	3.42%	6.1%	5.19%	4.29%
TTD	13.5%	22%	19.88%	8.78%	4.05%	5.6%	23.24%	12.65%	17.42%	17.58%
PPI	13.55%	10.4%	10.66%	5.10%	10.1%	11.7%	10.4%	9.97%	10.63%	11.83%
PTD	2.68%	0.9%	0.15%	0.38%	4.35%	3.47%	0.42%	6.1%	2.22%	2.79%

**COMMISSIONER O'CLARAY'S TABLE FOR
SETTLEMENT COSTS ASSIGNED TO REHABILITATION IN 2002**

	RS Fee	Plan Cost	RS Evaluations	RS Monitoring	.041k	Total
Not eligible 155	\$20,863	\$190,770	\$139,976	\$43,911	\$1,537,673	\$1,933,193 (23%)
Eligible 217	\$241,986	\$397,157	\$215,052	\$246,852	\$5,252,299	\$6,353,346
TOTAL	\$262,849.00	\$587,927.00	\$355,028.00	\$290,763.00	\$6,789,972.00	\$8,286,539.00

NOTE: There is no way to know the accuracy of these figures reported for those not eligible or those eligible for the re-employment benefit.

Re-Employment Benefits Administrator Report vs. Annual Report - 2002		
Benefits	RBA	Annual Report
.041k	\$2,740,633	\$10,860,160
Eligibility Evaluations	\$1,117,285	\$1,697,589
RS Fees (plan writing)	\$432,989	\$843,839
RS Fees Monitoring	\$224,655	\$706,684
Plan costs	\$587,615	\$1,820,918
TOTAL Rehab w/ .041k	\$5,103,177.00	\$15,929,190.00
TOTAL Rehab w/o .041k	\$2,362,544	\$5,069,030

NOTE: This \$10 million discrepancy between the RBA's Report and the Carrier's Annual Report for 2002 cannot be adequately explained.

Re-Employment Benefits Administrator Report vs. Annual Report - 2003		
Benefits	RBA	Annual Report
.041k	\$2,691,303	\$10,327,053
Eligibility Evaluations	\$845,765	\$1,283,678
RS Fees (plan writing)	\$599,391	1,154,202
RS Fees Monitoring	\$282,620	\$1,039,623
Plan costs	\$577,111	\$1,902,972
TOTAL Rehab w/ .041k	\$4,996,190.00	\$15,707,528.00
TOTAL Rehab w/o .041k	\$2,304,887.00	\$5,380,475.00

NOTE: Again the Annual Report's figures are three times higher than the RBA's Report. This has not been explained adequately.

041K Funds Reported in 2003 Annual Report

Cost in 2003 Annual Report	No. of Cases	Data in Other Rehab Fields
\$ 10,370,518.00	589	TOTAL
\$ 8,171,047.00	419	Reported
\$ 2,199,471.00	161	Not Reported

2003 - PPI Ratings Distribution Approximate Totals

	A	B	C	D	E	F	G
1	PPI %	Number	# Workers w/ PPI but no Rehab Costs Reported	# Workers w/ PPI & Rehab Costs Reported		PPI for Workers W/ No Rehab Costs Reported	PPI for Workers w/ PPI & Rehab Costs Reported
2	64	1	1	0	\$ 1,770.00	\$ 113,280.00	\$ -
3	57	1	0	1	\$ 1,770.00	\$ -	\$ 100,890.00
4	49	1	0	1	\$ 1,770.00	\$ -	\$ 86,730.00
5	44	1	0	1	\$ 1,770.00	\$ -	\$ 77,880.00
6	42	2	1	1	\$ 1,770.00	\$ 74,340.00	\$ 74,340.00
7	40	1	0	1	\$ 1,770.00	\$ -	\$ 70,800.00
8	36	1	0	1	\$ 1,770.00	\$ -	\$ 63,720.00
9	33	1	0	1	\$ 1,770.00	\$ -	\$ 58,410.00
10	32	3	3	0	\$ 1,770.00	\$ 169,920.00	\$ -
11	31	1	0	1	\$ 1,770.00	\$ -	\$ 54,870.00
12	30	1	1	0	\$ 1,770.00	\$ 53,100.00	\$ -
13	29	4	3	1	\$ 1,770.00	\$ 153,990.00	\$ 51,330.00
14	28	16	8	8	\$ 1,770.00	\$ 396,480.00	\$ 396,480.00
15	27	2	1	1	\$ 1,770.00	\$ 47,790.00	\$ 47,790.00
16	26	3	2	1	\$ 1,770.00	\$ 92,040.00	\$ 46,020.00
17	25	10	4	6	\$ 1,770.00	\$ 177,000.00	\$ 265,500.00
18	24	6	2	4	\$ 1,770.00	\$ 84,960.00	\$ 169,920.00
19	23	9	4	5	\$ 1,770.00	\$ 162,840.00	\$ 203,550.00
20	22	9	3	6	\$ 1,770.00	\$ 116,820.00	\$ 233,640.00
21	21	9	5	4	\$ 1,770.00	\$ 185,850.00	\$ 148,680.00
22	20	16	8	8	\$ 1,770.00	\$ 283,200.00	\$ 283,200.00
23	19	11	8	3	\$ 1,770.00	\$ 269,040.00	\$ 100,890.00
24	18	13	7	6	\$ 1,770.00	\$ 223,020.00	\$ 191,160.00
25	17	7	3	4	\$ 1,770.00	\$ 90,270.00	\$ 120,360.00
26	16	23	15	8	\$ 1,770.00	\$ 424,800.00	\$ 226,560.00
27	15	27	11	16	\$ 1,770.00	\$ 292,050.00	\$ 424,800.00
28	14	29	12	17	\$ 1,770.00	\$ 297,360.00	\$ 421,260.00
29	13	44	25	19	\$ 1,770.00	\$ 575,250.00	\$ 437,190.00
30	12	45	28	17	\$ 1,770.00	\$ 594,720.00	\$ 361,080.00
31	11	58	37	21	\$ 1,770.00	\$ 720,390.00	\$ 408,870.00
32	10	112	34	78	\$ 1,770.00	\$ 601,800.00	\$ 1,380,600.00
33	9	78	46	32	\$ 1,770.00	\$ 732,780.00	\$ 509,760.00
34	8	122	79	43	\$ 1,770.00	\$ 1,118,640.00	\$ 608,880.00
35	7	97	67	30	\$ 1,770.00	\$ 830,130.00	\$ 371,700.00
36	6	144	99	45	\$ 1,770.00	\$ 1,051,380.00	\$ 477,900.00
37	5	213	142	71	\$ 1,770.00	\$ 1,256,700.00	\$ 628,350.00
38	4	213	147	66	\$ 1,770.00	\$ 1,040,760.00	\$ 467,280.00
39	3	232	153	79	\$ 1,770.00	\$ 812,430.00	\$ 419,490.00
40	2	206	145	61	\$ 1,770.00	\$ 513,300.00	\$ 215,940.00
41	1	256	182	74	\$ 1,770.00	\$ 322,140.00	\$ 130,980.00
42	TOT AL	1994	1269	725		\$ 13,878,570.00	\$ 10,336,800.00

Analysis of ACOEM Occupational Medicine Practice Guidelines with Recommendations for Improvement

By Gary N. Lewkovich, DC, QME, DAAPM, Michael T. Haneline, DC, MPH, Eric Mumbauer, DC, QME, and Michael Sackett, DC, QME, DABCO

Preface

It has happened in California and it may happen in other states in the near future. Under tremendous pressure to rapidly reform California's out-of-control workers' compensation system, the legislature passed Senate Bill 899. Among other draconian changes in this legislation was the adoption of guidelines from the American College of Occupational and Environmental Medicine (ACOEM). The controversy surrounding the interpretation and application of these "evidence-based" recommendations hit its zenith when these guidelines were deemed "presumptively correct" for the evaluation, management and treatment of injured workers. While most health care professions have felt the bite of these restrictive protocols, doctors of chiropractic in California have been especially hard hit. The following analysis addresses a variety of reasons why the ACOEM Guidelines require immediate modification before they are adopted elsewhere in the nation.

Introduction

ACOEM currently claims more than 6,000 physicians and other health care professionals in the field of occupational and environmental medicine.¹ Founded in 1916 as the American Association of Industrial Physicians and Surgeons, this organization went through 3 name changes before adopting its current title in 1992. After reviewing research extracted by the Work Loss Data Institute, ACOEM developed Occupational Medicine Practice Guidelines (OMPG), hereafter referred to as the "ACOEM Guidelines."²

The first edition of the ACOEM Guidelines was published in 1997, followed by a second edition in 2004. The latter is a 516-page, hard cover book ACOEM calls the "gold standard for effective OEM practice."¹ That should come as no surprise since this same organization envisions itself as the "pre-eminent organization of physicians who champion the health and safety of workers, workplaces, and environments."¹ Lee S. Glass, MD, the current chairperson of the ACOEM Practice Guidelines Committee, says the goal of both editions was to improve the efficiency of the diagnostic process and the efficacy of treatment in relieving symptoms and achieving a cure.

For its effort to establish evidence-based guidelines, ACOEM should be applauded. A closer analysis of its guidelines, however, raises questions. The scope of this book is monumental and beyond comprehensive review here. The focus of this analysis is on selected elements that require explanation and/or revision. The only health care profession specifically referenced is chiropractic.

General Concerns