Chiropractic Care in Workers Compensation

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After decades of functioning outside the mainstream health-care system, chiropractic care has gained both legitimacy and access to third-party payers. The principal chiropractic treatment modality — spinal manipulation — has been included as one of the options in treatment guidelines for low back pain as possibly helpful in reducing pain and increasing the speed of recovery within the first month of symptoms.[1] Between 1980 and 2000, chiropractic utilization has doubled and is now the largest component in the category of complementary and alternative medicine. It is estimated that by 2010, the number of chiropractors will increase by 100 percent, while the number of physicians is expected to increase by just 16 percent.[2] Competition from massage therapists and

acupuncturists has led some chiropractors to increase their efforts to expand practice beyond traditional methods of chiropractic treatment, despite the fact that the effectiveness and appropriateness of these alternative treatment modalities remain controversial.

In workers compensation, statutes and treatment guidelines govern utilization of health services such as chiropractic care. Previous studies have shown that variations in these statutes affect claims frequency; as benefits become more liberal, workers compensation utilization of chiropractic care increases directly.[3-5] Similar findings have been reported when workers compensation medical costs were used as a measure of severity of occupational injuries.[6] This phenomenon, defined as the *moral hazard*, refers to the incentive that enhanced benefits can create to increase the use of services or indemnity. This phenomenon is not restricted to occupational medicine, and the elasticity of insurance benefits and demands for health care has been demonstrated in the economic literature for the last 40 years.[7] It remains to be seen whether the moral hazard in workers compensation contributed to the recent rise in workers compensation health-care costs, which have been consistently growing as a share of total workers compensation costs.[8-9]

In this report, we focus on chiropractors as a specific provider group that has been linked to medical cost increases, we summarize the available knowledge on the role of chiropractic care in workers compensation, we present measures that selected workers compensation jurisdictions have taken in an attempt to contain utilization and costs of chiropractic care, and we illustrate the potential impact of these measures through an analysis of claims data from a large workers compensation insurer.

Current Trends in Chiropractic Care

Chiropractic care is a form of healing that is based primarily on spinal manipulation.[10] At the core of the practice is a belief that many disorders, in particular musculoskeletal disorders, are caused by joint dysfunction in the spine. Chiropractic adjustment is intended to alleviate such problems. For years, the clinical effectiveness of spinal manipulation, and chiropractic care in general, has been the subject of heated debate; many consider it nonscientific. For the chiropractic profession, proving effectiveness has been a particularly important challenge. While early studies concluded that spinal manipulation is safe and effective, questions were raised about methodological approaches used by the authors of the studies.[11-13]

In 1994, the Agency for Health Care Policy and Research stated that spinal manipulation can be helpful in reducing pain and, perhaps, in

speeding recovery within the first month of symptom onset for patients without radiculopathy.[14] Their assertions were partially based on conclusions from several RAND studies.[15-17] Chiropractors used this statement as the basis for claims that chiropractic care was better than other therapies, although RAND studies did not explicitly address chiropractic care.[18] A recent review of high-quality, randomized, controlled trials concluded that there is no evidence that spinal manipulation is superior to other standard treatments for patients with acute or chronic low back pain.[19]

One argument for chiropractic care focuses on the higher level of patient satisfaction with care than with other forms of treatment, leading to a greater number of repeated visits when the condition worsens.[20-22] The higher level of satisfaction is typically attributed to the nature of chiropractic visits — the so-called "chiropractic encounter" — with the emphasis on patients as individuals and a holistic approach to their health conditions. However, it is argued that because patients who choose chiropractic care typically share the provider's belief system, this might be a placebo effect.[23]

Becoming a Mainstream Modality

One of the indicators that chiropractic care is becoming mainstream can be seen in the steady increase in its utilization, which has tripled in two decades.[24] Furthermore, since the late 1970s, the percentage of out-of-pocket patient payments for chiropractic care has dropped dramatically, from 60 percent in 1977 to 27 percent in 1995, with almost 42 percent of patients using their general health coverage for payment.[25-27] However, most group-health plans require some type of coinsurance, such as dollar limits, deductibles, copayments, or limitations on the number of encounters per incident. These control mechanisms were able to restrict chiropractic utilization quite successfully; unrestricted plans without any form of coinsurance reported nine times more use than plans with limitations.[28] In recent years, some employers dropped chiropractic coverage entirely, which may result in significant shift in the sources of payment for chiropractic care.[29]

In response to increased competition from other complementary and alternative medicine providers and developments in general health insurance, chiropractors mounted a rigorous lobbying effort to expand the scope of their practice and their revenue base.[30] Proponents are currently presenting chiropractic care as a direct substitution for medical care, with the capability of treating a range of conditions outside of musculoskeletal disorders, including such conditions as diabetes and menstrual irregularities.[31] Some argue for chiropractic care as a form of primary care partly due

to physician shortages in certain geographic areas.[32-33] Chiropractors are also targeting specific populations. For example, spinal manipulation is at the core of treatment strategies for childhood and adolescent disorders, despite the fact that no convincing evidence exists about the effectiveness of spinal manipulation for treatment in these domains.[34]

Chiropractic Care in Workers Compensation

The U.S. workers compensation system has been a significant source of payments for chiropractic care since at least the late 1970s.[35-36] In the 1990s, workers compensation accounted for approximately 10 percent of the payments for chiropractic care, with 10 percent of the chiropractic patients using workers compensation as their source of coverage.[37-38] Many industry observers have identified the increased utilization of chiropractic care as one of the primary drivers of workers compensation medical cost increases in recent years. The significant presence of chiropractors in the treatment of work-related injuries and illnesses is not surprising for two reasons. First, musculoskeletal disorders comprise a significant proportion of all compensated occupational injuries and illnesses. Second, it has been shown that chiropractors are more sensitive to cost-sharing than other providers;[39] because workers compensation coverage does not include any direct cost-sharing of medical expenses, it is logical to expect the willingness of chiropractors to take on workers compensation cases.

Consequently, many studies evaluating the effectiveness of chiropractic care have focused on workers compensation populations. Workers compensation data generally form the basis for these studies, primarily because the data afford the opportunity to compare medical and indemnity costs for individuals treated by chiropractors and by other health-care providers. Questions have been raised, however, as to whether the analysis of data gathered for administrative purposes is appropriate for the purpose of evaluating treatment effectiveness due to serious methodological limitations.[40-41]

In a series of studies, Nyiendo et al. found that mean medical and indemnity costs were higher for workers compensation cases treated by chiropractors than cases treated by other providers, but also that median indemnity costs were lower than in the physician-directed cases.[42-44] This finding was attributed to the longer duration of workers compensation claims treated by chiropractors, which is consistent with the nature of chiropractic care. Other study authors found lower costs for chiropractic care, while yet others found that chiropractic care is as cost-effective as physician-directed care.[45-47]

In a study of five workers compensation jurisdictions, the Workers Compensation Research Institute reported that there are significant jurisdictional variations in costs of chiropractic care when compared to physician-directed care.[48] The study showed that three states had higher relative medical and indemnity costs, while costs in two other states were similar or lower. A recent review of studies comparing the costs of medical and chiropractic care for occupational low back pain concluded that both types of care appear to be cost-effective, but noted that a better integration of return-to-work outcomes into the cost-effectiveness methodology is required.[49] This finding is further supported by research suggesting that higher health-care costs may be offset by better return-to-work outcomes.[50]

The Importance of Return to Work

The importance of return-to-work outcomes in the treatment of work-related conditions is significant. Medical treatment of work-related conditions has two objectives: first, to improve injured workers' health status; and second, to allow safe and sustained return to work. Theoretically, the choice of treatment method should be based primarily on its effectiveness in achieving these objectives.

To our knowledge, there is only one study that has explored the views of chiropractors about timely return to work.[51] This study entailed focus-group discussions with chiropractors from three Canadian provinces. Particpating chiropractors expressed the belief that their expertise in the diagnosis and treatment of musculoskeletal disorders contributes to the facilitation of the injured workers' return to work. In particular, these chiropractors felt that their personalized approach and frequent contacts with injured workers could lead to better return-to-work outcomes compared to cases treated by physicians. They also believed that early return to work was often the best option for recovery, but indicated that most injured workers had spent four or five weeks being disabled.

A common theme in the Canadian focus-group discussions was the apparent bias of the medical community and other participants in the workers compensation system against chiropractors.[52] Although the study evaluated the opinions of Canadian chiropractors, this view can probably be extended to include the opinions of chiropractors in the United States. Some of the specific complaints expressed by the Canadian chiropractors included the bureaucratic demands placed on providers (a common complaint among all health-care providers[53]) and restrictions by compensation systems on utilization of chiropractic care. These restrictions were viewed as interfering with the chiropractor's ability to build a provider-patient

Exhibit 1

Frequency and Intensity of Chiropractic Care for Work-Related Low Back Pain

		CA	CT	FL	ID	IL	MA	MD	NH	NY	PA	TX
Frequency of chiropractic involvement		11.3%	5.5%	3.6%	12.5%	9.3%	9.5%	4.5%	10.3%	20.7%	9.1%	16.1%
Visits per claim	Median	20.6	12.5	9.6	5.8	11.6	12.0	12.7	6.8	20.2	9.2	24.4
	Average	41.6	17.6	11.2	9.5	16.6	16.2	23.1	13.2	44.7	19.9	32.5
Services per claim	Median	53.0	33.6	23.8	16.9	27.6	30.8	34.5	14.5	21.6	21.2	68.9
	Average	119.7	48.5	32.3	25.1	43.6	42.4	68.2	28.1	47.4	52.3	93.8
Services per visit	Median	2.8	2.9	2.8	2.9	2.6	2.7	2.9	2.0	1.0	2.3	2.9

(5-year averages, 1997-2001)

Exhibit 2

Trends in Chiropractic Care Utilizations (1997-2000)

		CA	CT	FL	ID	IL	MA	MD	NH	NY	PA	TX
Frequency of chiropractic involvement	1997-2001	0.2	-1.3	-1.1	0.9	2.3	1.2	-0.5	-2.8	1.4	0.6	7.3
Visits per claim	Median	27.8%	16.7%	10.0%	20.0%	8.3%	9.1%	-18.5%	7.1%	-9.1%	0.0%	22.7%
	Average	1.5%	18.3%	2.2%	34.8%	1.0%	-8.3%	-24.9%	7.0%	-17.8%	-13.6%	13.0%
Services per claim	Median	14.3%	15.0%	20.8%	6.3%	7.1%	0.0%	-35.9%	7.1%	-8.7%	-4.2%	28.2%
	Average	3.4%	0.9%	19.6%	32.9%	14.6%	-9.3%	-29.6%	-4.9%	-16.5%	-10.9%	19.8%
Services per visit		-1.5%	-4.5%	28.6%	-8.9%	6.7%	-3.1%	-11.7%	0.0%	-0.5%	3.7%	2.6%

relationship and plan a flexible return-to-work process. The assertions of compensation-system bias against chiropractors seems to conflict with assertions about the cost-effectiveness of chiropractic care relative to other treatment options for the care of work-related injuries.

Measuring the Frequency and Intensity of Chiropractic Involvement

Chiropractic utilization is currently commonplace in workers compensation. To assess the frequency and intensity of chiropractic involvement in workers compensation claims, we have investigated low back claims filed with a large disability insurer in 11 workers compensation jurisdictions during the period of 1997 to 2001. The low back claims included both those with lost time and those with medical-only costs. Frequency was evaluated by measuring the percentage of low back claims with at least one chiropractic visit for treatment of the low back pain against the universe of claims. Intensity of chiropractic involvement was evaluated tracking three variables: visits per claim, services per claim, and services per visit. The study defined a "visit" as consisting of all services performed during the same day; a "service" as all distinct bills with a unique Current Procedural Terminology (CPT) code and a unique date of service; and "services per visit" as the number of unique CPT codes with the same date of service.

Exhibit 1 reports on frequency and intensity of chiropractic care using these measures as five-year averages of annual median or average values. Several general observations about the data can be made. The frequency of chiropractic involvement in treatment of work-related low back injuries varied significantly across jurisdictions. Five states had chiropractic penetration into treatment of work-related low back injuries exceeding 10 percent, with New York and Texas leading the way. The intensity of chiropractic care also varied across states, regardless of the measure used. Average utilization values were always higher than median values, indicating that the distribution of utilization of chiropractic care is skewed by claims with a very high number of visits or services.

Several recent studies reported significant growth in chiropractic utilization.[54-55] Exhibit 2 presents utilization trends during the 1997 to 2000 period. Once again, findings indicate substantial jurisdictional variation. Only two states experienced a rise in the share of low back claims with chiropractic by more than two percentage points, while four states had a decrease in the frequency of cases with chiropractic involvement. The five-year trend of the intensity of chiropractic involvement indicates two divergent paths: some states with significant growth in the number of visits and services per claim; others with significant declines in those measures.

The experience of several jurisdictions stands out. Texas and California rank high in all measures of frequency and utilization, which is consistent with other reports from these states.[56-57] In both states, the intensity of chiropractic involvement in treatment of work-related low back injuries increased significantly, although in somewhat different ways. In Texas, in addition to more cases being treated with chiropractic care, both the median and the average values for visits and services per claim grew by double-digits. On the other hand, in California, the percentage of claims with chiropractic involvement remained stable, and the average number of visits and services increased only slightly. However, the median number of visits and services per claim increased by 28 percent and 14 percent, respectively, implying that the growth of utilization was unlikely to be the result of several cases with very high utilization; rather, it was likely due to more cases with smaller number of chiropractic visits and services.

New York had the highest share of low back claims with chiropractic care — almost 23 percent in 2001 —and one of the highest numbers of visits per claim. However, New York ranked lowest in the number of chiropractic services performed during a visit; furthermore, all utilization measures decreased during the four-year period, with average values dropping by more than 15 percent.

Maryland was on the other end of the chiropractic-care frequency spectrum, with the second lowest frequency of chiropractic care involvement but relatively high utilization. In order to avoid misinterpretations, it should be noted that data from Exhibit 1 must be evaluated together with trend analyses from Exhibit 2. These indicate that, in Maryland, the intensity of chiropractic involvement in treatment of work-related low back pain declined significantly. Finally, in Florida the frequency of chiropractic involvement was very low and accompanied by relatively low utilization levels. Although the Florida share of claims with chiropractic care declined during the study period, its intensity increased, particularly for the services-per-claim and services-per-visit measures.

Workers Compensation Cost Containment and Chiropractic Care

Recent double-digit growth in U.S. health-care costs may explain the increased attention toward various cost-containment policies.[58] Although general health-care costs garner most of the public and media attention, the workers compensation system has seen a similar or higher rise in medical expenditure.[59] Medical costs continue to grow in the share of overall workers compensation costs that they represent, recently eclipsing wage replacement as the largest expenditure.[60] Consequently, health-services

research in workers compensation populations have gained importance and recognition, with recent studies focusing on patient satisfaction with care, and the impact of provider networks and practice guidelines on costs and utilization.[61-67]

In some workers compensation jurisdictions, chiropractic care has been heavily linked to health-care cost increases due to reported spikes in utilization for work-related injuries. Our analysis in the previous section confirmed the utilization growth in some jurisdictions, California and Texas in particular, but found relatively small growth or even declines in other states. However, utilization growth is only one reason for cost increases.

Exhibit 3 presents nominal growth of chiropractic care costs associated with treatment of work-related low back injuries between 1997 and 2000 and relates it to the growth of the medical care component of the Consumer Price Index (CPI). In addition to California and Texas, substantial increases were found in Idaho and Illinois. During the same period, nominal chiropractic costs declined in New York and Maryland, which must have

EXHIBIT 3
NOMINAL GROWTH OF MEDIAN AND AVERAGE COSTS OF CHIROPRACTIC CARE FOR WORK-RELATED LOW BACK INJURIES (1997-2000)

	MEDIAN	AVERAGE
CA	36.1%	18.8%
CT	6.6%	3.7%
FL	3.5%	5.5%
ID	35.4%	55.6%
IL	33.2%	40.1%
MA	11.3%	0.6%
MD	-17.6%	-19.4%
NH	23.2%	9.5%
NY	-14.0%	-15.6%
PA	5.6%	-3.4%
TX	48.4%	59.1%
Medical CPI	10.1%	

been driven by utilization trends, given our earlier findings. In other states, the growth was either close to or below the medical price level changes.

Cost Control Measures

Because we failed to find a uniform pattern of chiropractic care utilization and costs across the analyzed jurisdictions, we believe that our findings point to the influence of other factors on these trends. Workers compensation health-care costs cannot be controlled through explicit coinsurance measures such as co-pays, deductibles, or cost sharing, therefore, other cost-containment measures evolved. These methods include limitations on health-care utilization and allowable charges. Some of these measures target all providers uniformly; others focus on particular services.

Fee Schedules and Reimbursement Schemes

There appears to be a certain chronology in the progression of cost-containment measures that have been introduced. Fee schedules were among the earliest tools to be implemented and have become increasingly utilized in recent years.[68] The basic logic behind the introduction of fee schedules was an attempt to control the supply-side of the market for medical services by adjusting payments to health-care providers and institutions. By introducing a ceiling on reimbursement rates, policymakers hoped to reduce unit costs. They also hoped that the price limits would have an indirect effect on utilization amounts. However, providers responded by adjusting utilization and billing patterns to exploit ambiguities under the fee schedule.[69] Reported work-around practices included charging for more services during a single visit, shorter visits, double billing, upcoding and miscoding of provided services, and self-referrals.[70-73] Evidence of workers compensation fee schedule effectiveness is lacking because prior studies investigated whether fee schedules exist and not how they are implemented; furthermore, these studies focused on a range of health-care providers with different patterns of care and ways to adjust to rate restrictions.[74-77]

Unless certain chiropractic services and procedures are under- or over-valued relative to services and procedures offered by other providers in treatment of similar conditions, fee schedules cannot target chiropractors explicitly. Therefore, medical fee schedules by themselves may not be the best tool to lower the amount and cost of chiropractic care. However, if fee schedules are restrictive — for example, by setting the maximum allowable amounts relatively low — payments for chiropractic and other care will likely be low, as well. The question of implementation of fee schedules to

control costs remains unanswered. The level of workers compensation fees in the most generous state is nearly two and a half times greater than that in the least generous state fee schedule, but the cost of producing medical care differs by less than one-third.[78]

In workers compensation, fee schedules are only one-half of the state's payment policies, reimbursement policies being the other.[79] How fee schedules are administered may have as much bearing on cost control as fee schedules. States can specify whether a provider is reimbursed at a full fee schedule amount, at a usual amount (typically determined by the average or median charge), or at a customary amount (most often set at the 90th percentile of all charges). A combination approach can also be used in determining the actual payment; for instance, it is possible that two states with similar fee schedules but different reimbursement policies will have very different cost levels.

Provider Choice

Limiting an injured worker's selection of a treating health-care provider is another of the first generation cost-containment measures. In comparison to fee schedules, which focused on price restrictions, limiting the initial or ongoing provider choice targets utilization of care by directing injured workers to preferred providers. In theory, this should reduce overall utilization associated with a workers compensation claim because the preferred providers are more experienced with managing the often competing objectives of return to work and improving the worker's condition. However, evidence on the effectiveness of provider choice laws is scarce and conflicting.[80-81]

Given the previously discussed "bias" against chiropractors in the medical profession and the workers compensation system, it is logical to expect that chiropractors will not be on the list of preferred providers.[82] Additionally, it is likely that physicians will also shy away from referring their patients to chiropractors and opt for other options such as physical therapy.[83-84] For acute low-back cases, which typically have short episodes of care and time away from work (often not reaching the waiting period), limitations on the provider choice would be evidenced by a smaller share of low-back injuries with chiropractic involvement. For sub-acute and chronic cases, limiting provider change would most likely delay the timing of the first chiropractic visit and reduce the overall number of visits and services.

Managed Care Arrangements

Another generation of cost-containment measures include managed care arrangements, utilization reviews, and bill reviews. In workers com-

EXHIBIT 4

COST CONTAINMENT MEASURES IN SELECTED WORKERS COMPENSATION JURISDICTIONS

WC jurisdiction	Fee schedule	Provider choice		Chiro as treating provider	Utilization review	Bill review	Managed care	Back pain treatment guidelines	Chiropractic visit limits
		Initial	Change						
CA	Yes	Limited	Limited	Yes	Mandated		Regulated	Yes	Yes**
CT	Yes	Limited	Limited	Yes	Mandated for MCO		Regulated	Yes	No
FL	Yes	Limited	Limited	Yes	Mandated	Mandated	Allowed***	Yes	Yes
ID	No*	Limited	Limited	Yes			Allowed	No	No
IL	No	Free	Limited	Not defined			Allowed	No	No
MA	Yes	Free	Limited	Not defined	Mandated for private payers		Regulated	Yes	No
MD	Yes	Free	Free	Not defined			Allowed	No	No
NH	No	Free	Free	Not defined			Regulated	No	No
NY	Yes	Free	Free	Yes	Mandated for MCO		Regulated	No	No
PA	Yes	Limited	Limited	Not defined	Mandated for MCO		Regulated	No	No
TX	Yes	Free	Limited	Yes	Mandated for private payers	Mandated	Allowed	Yes	No

MCO = managed care organization
* fee schedule exists but is not set administratively
** introduced in 2004
*** regulated prior to 2001

pensation, managed care organizations (MCOs) can vary in form, as state-mandated arrangements for the employer and insurer; as state regulations with respect to certification and ownership of MCOs; or simply allowed as one of the options of organizing care. In the latter two cases, whether or not employees must seek care from such organizations is typically a function of provider choice laws previously discussed. By design, MCOs have the ability to restrict the providers that are included as part of their network. Therefore, one option for jurisdictions with mandated or high penetration of managed care is to use MCO arrangements to limit the number of chiropractors within such organizations, thereby restricting injured workers access to chiropractic care.

Utilization reviews and bill reviews are among the managed care measures used to enforce other cost-containment measures or treatment standards. Utilization reviews, if allowed and enforceable, focus on the appropriateness and necessity of care. They can be prospective, concurrent, and retrospective. Bill reviews examine whether charges for services are consistent with levels allowed by law. The purpose of both types of reviews is to ensure that the treatment was necessary, either through preauthorization, or through a postcare examination of the entire course of treatment. Utilization review has been shown to reduce workers compensation costs; strategies aimed at targeting specific providers appear to be the most effective.[85-87] Given such findings, adapting these cost-control measures to chiropractic care might help to contain utilization and costs. Strategies could include requirements for preauthorization after reaching a specific number of chiropractic visits or historic reviews of claims that have chiropractic involvement to establish appropriateness of treatment. Bill reviews could potentially have a utilization review component; however, most jurisdictions do not require bill reviews explicitly, as they have become a routine insurance mechanism to enforce fee schedules.

Treatment Guidelines and Visit Limits

The latest generation of cost-containment measures includes treatment guidelines and visit limits. Treatment guidelines generally attempt to define treatment standards and ranges of appropriate utilization for specific injuries. In workers compensation, several types of treatment guidelines exist, with guidelines for low back injuries being the most common. MCOs and other organizations use guidelines as part of their utilization review; in a sense, treatment guidelines can be considered as implicit restrictions on utilization, but, as any guides, they cannot be effectively enforced. Explicit visit limits constitute a more rigorous way to restrict use and are the newest

type of cost-containment measures. They target specific types of providers or services by imposing a ceiling on utilization. By design, visit limits typically target individuals with highest utilization levels. In theory, a direct impact of visit limits should be measurable by a reduction in the median and average number of visits in a jurisdictions and, therefore, an associated reduction in costs; however, reductions may be offset by provider adjustments, such as increases in the number of services performed during a single visit.[88]

Exhibit 4 summarizes cost-containment measures for the workers compensation jurisdictions included in our analysis. When evaluated with our findings on trends and levels of utilization and costs of chiropractic care, we were unable to attribute any particular method to the ability to control chiropractic utilization and costs. It is most likely a specific combination of cost-containment measures that determines what are the trends in chiropractic care. For instance, with the exception of visit limits, California and Florida had similar cost-containment measures, but vastly different trends and levels of chiropractic utilization and costs. In California, the ineffectiveness of previously existing strategies led to the introduction of explicit visit limits on chiropractic utilization in 2004. The visit limit in Florida was recently increased from 18 to 24. Since the number of services per visit and the number of services per claim was relatively high in Florida, the visit limit may have led to a specific adjustment by chiropractors and its increase represents an attempt to establish the sensitivity of such adjustment to a specific visit limit level.

A very low level of frequency of chiropractic involvement is often associated with the introduction of managed care arrangements as occurred in Florida in the early 1990s. New York had the highest number of median visits per individual, yet the lowest services per visit ratio. This represented a specific utilization adjustment by chiropractors treating work-related low back pain in that state since they are reimbursed for three CPT codes only and these codes exclude multiple services during each visit. A very high level of chiropractic penetration into treatment of work-related low back injuries in New York may be explained by the lack of limits on provider choice, or by local philosophy and culture.

Many Questions Remain

Chiropractic care has become common in the treatment of work-related injuries, yet many aspects of chiropractic care in workers compensation continue to be under-investigated. The efficacy of chiropractic care with respect to duration of work disability and return to work remains unknown.

Although chiropractic service is one of the few treatments recommended in clinical practice guidelines for the care of adults with low back pain in the United States, it has been suggested that its use should be limited to only a short period of time, approximately one month.[89] Despite such recommendations, research has shown that chiropractors have more visits and services per patient than other health-care providers, but these treatments are sometimes more cost-efficient.[90-96] How the pattern of chiropractic care relates to return-to-work outcomes, including failed return to work, is unknown, despite assertions by the chiropractic lobby that the nature of chiropractic care (i.e., frequent visits to "maintain health") reduces the likelihood of negative outcomes. Future research should address these unresolved issues to achieve a more accurate evaluation of the usefulness of chiropractic care in the treatment of work-related conditions.

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