

Managing Low Back Pain: Attitudes and Treatment Preferences of Physical Therapists

Background and Purpose. We surveyed physical therapists about their attitudes, beliefs, and treatment preferences in caring for patients with different types of low back pain problems. **Subjects and Methods.** Questionnaires were mailed to all 71 therapists employed by a large health maintenance organization in western Washington and to a random sample of 331 other therapists licensed in the state of Washington. **Results.** Responses were received from 293 (74%) of the therapists surveyed, and 186 of these claimed to be practicing in settings in which they treat patients who have back pain. Back pain was estimated to account for 45% of patient visits. The McKenzie method was deemed the most useful approach for managing patients with back pain, and education in body mechanics, stretching, strengthening exercises, and aerobic exercises were among the most common treatment preferences. There were significant variations among therapists in private practice, hospital-operated, and health maintenance organization settings with respect to treatment preferences, willingness to take advantage of the placebo effect, and mean number of visits for patients with back pain. **Conclusions and Discussion.** These variations emphasize the need for more outcomes research to identify the most effective treatment approaches and to guide clinical practice. [Battié MC, Cherkin DC, Dunn R, et al. Managing low back pain: attitudes and treatment preferences of physical therapists. *Phys Ther.* 1994;74:219–226.]

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Most physical therapists regularly face the challenge of caring for patients with low back symptoms, and are doing so with greater frequency as utilization of physical therapy and other health care services for back problems increase.¹ Despite this increased use of health care services, back-related work intolerance, disability awards, and associated costs have risen.^{1,2}

Limited knowledge of the specific conditions underlying most back symptoms and their risk factors has contributed to the failure to develop effective, widely accepted treatment practices.³ Moreover, the absence of adequate clinical trials to evaluate the

effectiveness of most available treatments has further hindered the development of optimal standards of care.⁴ Thus, there is little agreement regarding the management of back symptoms,⁵ and current treatment practices are driven, in great part, by the attitudes and beliefs of individual practitioners.

Despite the major role physical therapists play in the treatment of patients with low back pain, we found no published reports of how therapists perceive and approach this problem.* Jette and Davis⁶ have suggested that the dearth of reliable data on the delivery of physical therapy services in general has limited the profession's ability to contribute to policy debates and to assess the impact of regulatory restrictions. These concerns have prompted a 3-year research effort to study physical therapy practice patterns, sponsored by the American Physical Therapy Association.⁶

To begin to fill the gap in knowledge about the care of patients with low back pain, we surveyed a representative sample of therapists in the state of Washington. Our survey, modeled after previous surveys used for family physicians and chiropractors,⁷ collected information about provider and practice characteristics, as well as therapists' beliefs about the causes of back symptoms, the efficacy of various treatments, and patient satisfaction. A second objective was to gather information that would be helpful in directing plans for outcomes research in physical therapy. The most commonly selected treatment practices identified through the survey would be natural targets for future outcomes studies in instances in which efficacy has not been clearly established through randomized clinical trials. In addition, wide variations in treatment preferences indicate uncertainty about the most effective treatment of choice and

highlight additional areas that could benefit from outcomes research.

Methods and Materials

Physical Therapist Sample

Physical therapists working in a variety of practice settings were included in the sample. Survey questionnaires were distributed in 1990 to all physical therapists employed by the largest health maintenance organization (HMO) in Washington, Group Health Cooperative of Puget Sound. The survey instruments were distributed at the workplace and were voluntarily completed by 63 (89%) of the 71 therapists. We also selected a random sample of 331 of the 993 physical therapists licensed by the state of Washington. Any therapists who were already in the HMO sample were replaced with non-HMO therapists, so the two samples were mutually exclusive. Five therapists in the state sample did not have current addresses and could not be contacted. After two mailings, 230 therapists (71%) responded. Of those, 107 (46%) were excluded because they were no longer in practice or did not treat patients with back pain; this left 123 respondents. Thus, data from a total of 186 therapists were available for analysis.

Survey Instrument

The survey instrument for this study, patterned after one used previously to study family physicians and chiropractors,⁷ contained questions about provider characteristics, attitudes about low back pain, beliefs about the causes of back symptoms, evaluation and treatment preferences, and confidence in treating patients with back pain. The questions relating to the beliefs about the causes of back symptoms and confidence in treating patients with back pain were repeated from the earlier survey, but the evaluation and treatment options were

revised to include a wider variety of methods thought to be used by physical therapists. We initially developed the list of options with assistance from a group of clinically active physical therapists, and we then finalized the list following further review and input of physical therapists from several practice settings.

The therapists surveyed in the study were asked which evaluation techniques and therapies they would most likely use for hypothetical patients with acute back pain and sciatica, acute-recurrent back pain, and chronic back pain (Tab. 1). The acute back pain and acute-recurrent back pain scenarios were the same as those used in the earlier study of chiropractors and family physicians, except that the patient with acute-recurrent symptoms was reported to be 40 rather than 52 years of age.⁷ The other patient scenario was revised, however, to include a work-related onset and symptom duration and associated work loss of 6 months so as to represent chronic low back problems with work intolerance, thought to be an important subgroup of patients seen by physical therapists. The therapists were asked to check applicable items from a list of 10 evaluation and 13 treatment options.

Associated with each hypothetical patient scenario was a question about the confidence of the therapist in being able to affect the patient's rate of recovery, and confidence that the patient would be satisfied with the care. The choice of responses for each question ranged from extremely confident to not confident, on a five-point Likert scale. Additionally, a series of statements was included concerning therapists' beliefs about patients with low back pain and the use of the placebo effect. The choice of responses ranged from strongly agree to strongly disagree on a five-point scale.

Therapists were also asked to rate the effectiveness of several approaches to low back pain, including the Cyriax method,⁸ the McKenzie method,^{9,10} myofascial release,¹¹ and "other"

*The literature searches were conducted using MEDLINE and combinations of the following terms: low back pain, pain, physical therapy profession, ambulatory care, delivery of health care, patient services, attitudes of health professionals. In addition, the reference lists of all related articles that were found were reviewed.

Table 1. *Clinical Vignettes*^a

Patient No.	Description
1	<u>Chronic low back pain</u> A 37-year-old woman comes to see you for the first time, complaining of low back and right buttock pain. The pain began 6 months ago when she was transferring a patient at her job as a nurse's aide. She has been unable to return to her work since the incident. Her neurological examination is normal, and she was given a diagnosis of lumbar strain by her physician.
2	<u>Acute-recurrent low back pain</u> A 44-year-old man sees you for the first time, complaining of mild low back pain. He has been seen by several physicians over a period of years for recurrent low back pain dating to an injury 20 years ago while working in a warehouse. He says that the physicians were unable to find a cause for the pain. He cannot pinpoint when the pain started this time, but thinks it might have been related to working on his roof a week ago. He has no other symptoms, and his general and neurological examination results are unremarkable.
3	<u>Acute low back pain and sciatica</u> A 40-year-old man sees you the day after helping his friends move. Although he felt well initially, he was unable to sleep last night because of increasing pain in the lower back and sciatica on the left side. On examination, the ankle reflex is depressed and straight leg raising is positive.

^aClinical vignettes for patients 2 and 3 are almost identical to those used in a previous study of family physicians and chiropractors by Cherkin et al.⁷

approaches specified by the therapist. The approaches were rated on a four-point Likert scale, ranging from very effective to not effective, or the therapist could check "don't know."

Data Analysis

The study was primarily descriptive. Data from the HMO and Washington

State samples were weighted according to the proportion of HMO and other therapists licensed to practice in the state and combined to provide estimates representing all licensed therapists in Washington. The responses of therapists working exclusively in different practice settings (HMO, private practice, and hospital-operated) were examined separately

and compared using chi-square analysis. These analyses focused on variations in practice styles and therapists' attitudes and beliefs about low back pain. Analyses were conducted using SPSS/PC+ V3.1.¹² The numerous comparisons prompted use of a conservative level of significance. Tests with probability values below .001 were considered significant, and probability values between .001 and .05 were viewed as representing tendencies toward significance.

Table 2. *Provider and Practice Characteristics*^a

	\bar{X}	SE	Range
Age (y)	36.9	0.76	23-65
Years in practice	10.7	0.65	0-40
Percentage of patients with LBP ^b per week among all patients	45.3	1.73	0-100
Percentage of patients with LBP with chronic symptoms	37.2	1.69	5-100
Mean length initial LBP visit (min)	60.0	1.19	30-100
Mean length follow-up LBP visit (min)	39.6	1.10	10-90
Mean number visits for patient with LBP	9.7	0.40	2-30
Percentage of females	64.6	3.80	
Percentage poorly prepared at entry	56.4	3.91	
Percentage poorly prepared now	1.5	0.99	

^aThe numbers in the table represent means, standard errors, and ranges of the combined samples weighted by the proportion of physical therapists in Washington State who work in health maintenance organization and non-health maintenance organization settings.

^bLBP=low back pain.

Results

Provider and Practice Characteristics

The combined sample (n=186), proportionally weighted to represent licensed therapists in Washington State, estimated that 45% of patient visits in a typical week were for low back pain (Tab. 2). Therapists saw patients a mean of 9.7 times for an episode of back pain. It was estimated that 37% of visits were by patients with chronic back symptoms (≥ 3 months' duration). Most therapists (89%) acknowledged having had low back pain themselves at some time in the past.

Table 3. Evaluation Preferences of Therapists for Three Hypothetical Patients (in Percentages)^a

Evaluation	Chronic LBP ^b (Patient 1)	Acute-Recurrent LBP (Patient 2)	Acute LBP and Sciatica (Patient 3)
Posture	90	91	79
Range of motion	93	92	81
Palpation	92	85	83
McKenzie evaluation	63	59	67
Sacroiliac joint screen	75	57	47
Neurological screen	63	48	85
Functional activity evaluation	47	56	27
Joint accessory movement	48	51	34
Lower-extremity quadrant screen	50	46	40
Review of radiographs	38	34	30

^aThe numbers in the table are the percentages of the combined sample weighted by the proportion of physical therapists in Washington State who work in health maintenance organization and non-health maintenance organization settings.

^bLBP=low back pain.

Table 4. Treatment Preferences of Therapists for Three Hypothetical Patients (in Percentages)^a

Evaluation	Chronic LBP ^b (Patient 1)	Acute-Recurrent LBP (Patient 2)	Acute LBP and Sciatica (Patient 3)
Education (body mechanics)	92	86	71
Aerobic exercises	42	53	12
Stretching exercises	77	82	46
Strengthening exercises	46	61	6
Spinal mobilization	28	25	16
Traction	10	4	19
Ultrasound	49	43	23
Other heat modality	44	33	7
Ice	35	27	86
Transcutaneous electrical nerve stimulation	7	3	13
Analgesic medications	2	2	12
Anti-inflammatory medications	16	16	40
Bed rest	0	0	35 (1.8 d)

^aThe numbers in the table are the percentages from the combined samples weighted by the proportion of physical therapists in Washington State who work in health maintenance organization and non-health maintenance organization settings.

^bLBP=low back pain.

Evaluation and Treatment Preferences

More than two thirds of the therapists from the combined weighted sample included palpation and assessment of posture and range of motion in their evaluations of all three hypothetical patients (Tab. 3). In addition, more than 50% of therapists included the McKenzie evaluation method for all three patients, and sacroiliac joint screening, functional activity, and joint accessory movement evaluations for the patient with acute-recurrent symptoms. More than 50% of therapists included a neurological examination for the patient with acute low back pain and sciatica, as was sacroiliac joint and neurological screening for the evaluation of the patient with chronic low back pain.

The greatest differences in treatment preferences for the combined weighted sample existed between the hypothetical patient with acute low back pain and sciatica and those with acute or chronic low back pain alone (Tab. 4). The most common treatment preferences for the hypothetical patients without acute low back pain and sciatica were education on proper body mechanics and stretching, strengthening, and aerobic exercises. In contrast, more than half of the therapists recommended only ice and education for the patient with acute low back pain and sciatica. At least 35% of therapists recommended bed rest (a mean of 1.8 days) and anti-inflammatory medications for the patient with acute low back pain and sciatica. Conversely, recommendations for bed rest were nonexistent for the hypothetical patients without acute sciatica or neurologic signs, and anti-inflammatory medications were suggested less than half as frequently.

In respect to the value of specific evaluation and treatment approaches, the combined weighted sample estimated that 85% of therapists perceived the McKenzie method^{9,10} as moderately to very effective. The McKenzie method was also rated as the "most useful" approach by 48% of therapists. Myofascial release¹¹ was

Table 5. Mean Percentage of Patients Believed to Have Various Principal Underlying Causes of Low Back Pain^a

Cause of Back Pain	%
Disk disease	27
Muscle strain	26
Spinal arthritis	14
Facet syndrome	11
Psychosomatic	5
Vertebral subluxation	3
Other, unknown	11

^aThe numbers in the table are the percentages of the combined samples weighted by the proportion of physical therapists in Washington State who work primarily in health maintenance organization and non-health maintenance organization settings.

rated most useful by 5% of the therapists; the Cyriax approach⁸ was rated most useful by 5% of the therapists; and 44% of the therapists cited a variety of other methods, such as patient education, postural advice, following Maitland principles,¹³ pelvic stabilization,¹⁴ and various stretching, strengthening, and conditioning exercises.

Confidence In Managing Low Back Pain

Only 8% of the therapists indicated that they felt well prepared to manage low back pain when they first entered practice. Responses to this question were not related to years in practice. At the time of the survey, however, 82% of the respondents felt well prepared. When asked about confidence in their ability to affect patients' rate of recovery, the combined weighted sample estimated that 75% of therapists felt very or extremely confident in the vignette case of the patient with acute low back pain and sciatica. Slightly fewer therapists (65%) were confident of affecting the recovery rate of the patient with chronic pain, and only 50% of the therapists were confident in the case of acute-recurrent low back pain. Eighty-one percent of therapists were very or

extremely confident that the patient with acute low back pain and sciatica would be satisfied with their care, 70% were confident the patient with chronic pain would be satisfied, and 57% were confident that the patient with acute-recurrent low back pain would be satisfied.

Despite the therapists' level of confidence in managing patients with back symptoms, 54% agreed with the statement "I often feel frustrated by patients with low back pain who want me to 'fix' them." Half of the therapists (50%) also felt that "patients with low back pain often have unrealistic expectations about what therapists can do for them."

Beliefs About Underlying Causes of Symptoms

When therapists were asked what they believed to be the principal underlying cause of low back pain among their patients, disk disease and muscle strain were estimated to account for the greatest proportion of symptoms. Therapists believed that disk disease was the cause of pain in 27% of their patients, followed closely by muscle strain (26%) (Tab. 5).

Practice Variations Among Provider Settings

We compared the responses of physical therapists who worked solely in HMO clinics (n=55), hospital-operated clinics (n=46), and private practice clinics (n=55) and found some statistically significant differences in provider and practice characteristics (Tab. 6). The greatest differences were most commonly between the HMO and private practice settings, with the values for hospital-operated clinics lying somewhere between. In particular, the mean length of the initial and follow-up visits for low back pain were significantly different ($P<.001$) between the three groups. The mean initial and follow-up visits were shortest among the HMO therapists (45 and 29 minutes, respectively) and longest in the private practice group (62 and 45 minutes, respectively). The HMO therapists reported

seeing patients 6.3 times for an episode of back pain, compared with 9.3 times for hospital therapists and 10.3 times for private practitioners. The estimated percentage of all patient visits that were for back pain was significantly higher in the private practice group (53%) as compared with hospital-operated or HMO groups (42% and 36%, respectively).

The most striking and consistent differences in treatment preferences among the physical therapy practice groups were in the advocacy of ultrasound and aerobic exercise (Tab. 7). The HMO therapists were less than half as likely to use ultrasound for the patient with chronic or acute-recurrent back symptoms as were therapists working in private practices (25% versus 56% and 15% versus 55%, respectively). Therapists working in hospital-operated clinics fell between the two. This tendency was present for the patient with acute back pain and sciatica as well. The HMO therapists were significantly more likely to recommend aerobic exercise for the patient with chronic back pain than were the therapists in hospital-operated or private practice clinics (69% versus 30% and 53%, respectively). This was also the case for the patient with acute-recurrent back pain. Therapists in private practice were more than twice as likely to advocate spinal mobilization for patients with acute-recurrent low back pain than were therapists in the other practice settings. This trend was also present for patients with chronic symptoms.

A similar percentage of therapists in the different practice settings (39%–44%) indicated their patients would be dissatisfied if given information but no modality during a clinic visit (Tab. 8). The groups tended to differ, however, in acknowledging deliberate use of the placebo effect to help patients with back pain feel better ($P=.017$). Five percent of therapists in HMO settings admitted to using the placebo effect, compared with 11% in hospitals and 24% in private practice.

Table 6. Comparison of Provider and Practice Characteristics Among Practice Settings^a

	Private Practice (n=55)			Hospital Outpatient (n=46)			HMO ^b (n=55)		
	\bar{X}	SD	Range	\bar{X}	SD	Range	\bar{X}	SD	Range
Mean age (y)*	36.5	7.5	25-58	34.9	8.5	25-65	38.6	8.5	23-60
Mean no. years in practice*	10.9	7.7	1-35	10.0	8.3	1-37	12.9	8.3	1-34
No. outpatient visits per week* [†]	61.0	28.1	0-130	41.8	29.1	0-125	49.1	26.3	0-100
Percentage of patients with LBP ^c per week among all patients* ^{††}	51.7	17.3	20-100 ^d	39.7	23.5	0-100 ^e	36.2	15.7	0-62 ^e
Percentage of patients with LBP with chronic symptoms*	37.4	21.2	10-90	39.3	21.5	5-100	45.3	21.3	10-100
Mean length initial LBP visit (min)* ^{††}	62.2	17.1	30-120 ^e	57.6	11.6	30-90 ^e	44.8	5.2	30-60 ^d
Mean length follow-up LBP visit (min)* ^{††}	44.5	15.7	25-90 ^d	36.5	10.2	10-60 ^d	28.7	5.0	15-40 ^d
Mean no. visits for patients with LBP* ^{††}	10.3	5.0	2-24 ^e	9.3	4.8	2-30 ^e	6.3	2.3	3-14 ^d
Percentage of females**	49.1			73.3			87.3		
Percentage poorly prepared at entry**	55.0			61.0			58.0		
Percentage poorly prepared now**	0.0			4.0			0.0		

^aAsterisk (*) denotes groups analyzed by analysis of variance (ANOVA) and differences tested using Scheffé's method for multiple comparisons; double asterisk (**) denotes differences in distributions for the three groups analyzed by chi-square test applied to 2x3 tables. Dagger (†) denotes overall ANOVA significant at $P=.003$; double dagger (††) denotes overall ANOVA significant at $P<.001$.

^bHMO=health maintenance organization.

^cLBP=low back pain.

^dSignificantly different ($P<.05$) than the corresponding responses in both columns, by Scheffé's method.

^eSignificantly different ($P<.05$) than the corresponding responses in only one other column, by Scheffé's method.

Discussion

Back pain is likely to be the single most common ailment seen by many physical therapists entering practice. It has been previously estimated that between one quarter and one half of patients treated by physical therapists in acute care hospital, private office, and outpatient physical therapy clinics have low back pain.^{6,15} The results of our survey corroborate the high end of this estimate, with low back pain estimated to account for 36% to 53% of patient visits in such settings. Considering the large proportion of physical therapy practice consumed by this problem, and the low level of therapists' self-perceived competence in managing the problem when entering practice, the evaluation and treatment of patients with back pain may merit greater attention in physical therapy curricula.

Therapists viewed disk problems as the principal underlying cause of low back pain, followed closely by muscle

strains. These beliefs are consonant with the popularity of various exercises and the McKenzie approach, which is based on the theory that changes in the disk induced by mechanical stresses are responsible, in great part, for changes in symptoms.^{9,10} In a survey conducted several years earlier, Cherkin and co-workers⁷ reported that family physicians rated muscle strain as the leading cause of back pain, whereas chiropractors rated vertebral subluxations as the leading cause. The relationship between beliefs of causation and treatment selection is apparent, with manipulation being the most common treatment of choice among chiropractors.

Although therapists were likely to use a variety of treatment modalities, the McKenzie method was said to be the most popular approach for managing patients with back pain. Education in proper body mechanics for activities of daily living and stretching exercises were among the most common treatment preferences, followed by aero-

bic and strengthening exercises. For patients without radiculopathy, ultrasound was the most common passive modality. However, ice was the treatment recommended most often for acute low back pain with sciatica.

For patients with acute symptoms, therapists were more likely to favor exercise and less inclined to recommend bed rest than were family physicians and chiropractors participating in the survey reported by Cherkin et al.⁷ These practice variations may relate to differing beliefs regarding the underlying cause of symptoms, or they may reflect changes in treatment preferences that occurred during the 4 years between the two studies. Although bed rest was once a mainstay in the treatment of acute low back pain, it clearly has decreased in popularity, and early activity and exercise are now being promoted.¹⁶ However, methodological flaws in the studies of exercise therapy for back pain prompted the authors of a recent review of the scientific literature to state

Table 7. Comparison of Treatment Preferences Among Practice Settings for Three Hypothetical Patients (in Percentages)^a

	Chronic LBP ^b			Acute-Recurrent LBP			Acute LBP With Sciatica		
	Private Practice (n=55)	Hospital (n=46)	HMO ^c (n=55)	Private Practice (n=55)	Hospital (n=46)	HMO (n=55)	Private Practice (n=55)	Hospital (n=46)	HMO (n=55)
Education	91	89	98	87	85	95	80	61	80 [†]
Stretching	75	80	91	80	85	89	38	61	55
Ultrasound	56	48	25 [†]	55	46	15 [‡]	31	20	9 [†]
Strengthening	53	43	31	55	63	53	9	4	4
Aerobic exercise	53	30	69 [‡]	53	48	82 [‡]	16	11	15
Ice	45	26	45	38	22	25	85	85	89
Heat	42	48	27	31	35	27	9	4	7
Spinal mobilization	38	15	20 [†]	38	13	18 [†]	22	9	20
Anti-inflammatory medicine	18	15	16	18	17	16	36	52	29
Traction	15	4	2 [†]	4	2	0	22	13	13
Transcutaneous electrical nerve stimulation	9	7	4	2	4	2	18	7	11
Analgesic medicine	4	0	2	4	0	0	11	11	11
Bed rest	0	0	0	0	0	0	31	39	47
							(1.5 d)	(1.9 d)	(2.5 d)

^aDagger (†) indicates .001 < P < .05; double dagger (‡) indicates P < .001.

^bLBP=low back pain.

^cHMO=health maintenance organization.

No conclusion can be drawn about whether exercise therapy is better than other conservative treatments for back pain or whether a specific type of exercise is more effective.¹⁷⁽¹⁵⁷²⁾

Such conclusions underscore the importance of further clinical trials with improved methodology.

Most therapists were confident that the great majority of their patients were satisfied with their care. Unlike an earlier report by Wolff and co-workers,¹⁸ who found that 75% of therapists felt that physical therapy was not beneficial for patients with "benign chronic pain," 70% of therapists responding to this survey were confident that they could affect the rate of recovery of the patient with back pain of 6 months' duration.

Differences among physical therapists working in different practice settings in terms of treatment preferences, willingness to take advantage of the placebo effect, and mean number of patient visits are curious and point

out the need for more outcomes research to guide clinical practice. These variations could be explained by different philosophies of care that may be more or less dominant in the various practice settings. For example, therapists working in an HMO were more likely to advocate the McKenzie approach and aerobic exercise and less likely to use ultrasound. These differences may relate to the philosophy of care embodied in the McKenzie approach, which encourages active participation by the patient in his or her own care and discourages the use of passive modalities. Variations in the types of patients seen in the different settings also could contribute to the practice variations. In addition, differences in the typical number of patient visits and the use of modalities reported by therapists in private practice compared with those in HMO practice may reflect the different economic incentives and disincentives inherent in these two settings. It is also possible that therapists attracted to HMOs have more conservative

practice styles than those attracted to private practice.

The study findings are based on data collected from a large portion (74%) of therapists surveyed. No information was available on nonrespondents to judge whether they could be considered missing at random. Thus, it is possible that the therapists who responded to the questionnaire may not be fully representative of all therapists and that the percentages of therapists with specific attitudes and treatment preferences may vary somewhat from those of all therapists. Nonetheless, a 74% response rate is high for surveys of this type and reflects the views of a large majority of therapists in the state of Washington. These views may vary, however, between different regions of the United States, such that the survey responses may not be representative of therapists in all parts of the country.

A lack of consensus about the management of low back symptoms is not unique to physical therapy.⁵ Variations in both conservative and surgical treat-

Table 8. Physical Therapists' Beliefs Concerning Patients With Low Back Pain by Practice Setting (Percentage Agreeing With Statement)

Belief	Private Outpatient (n=55)	Hospital Outpatient (n=46)	HMO ^a (n=55)
Patients with low back pain often have unrealistic expectations about what therapist can do for them ^b	43	53	55
I often feel frustrated by patients with low back pain who want me to "fix" them ^b	42	61	56
I often have negative feelings about dealing with patients who have low back pain	16	22	9
There is nothing physically wrong with many patients who complain of low back pain ^b	7	7	2
Patients with back pain given a clear explanation of the cause of their problem are likely to do better	85	87	85
A patient who understands how to care for his or her back will have fewer repeated episodes of pain	96	98	95
Many of my patients will be dissatisfied if I give them information but provide no modality during their visit	39	39	44
I often deliberately take advantage of the placebo effect to help my patients with back pain feel better ^{b,c}	24	11	5
Many of the physical therapy interventions used for back pain have only a placebo benefit	36	27	

^aHMO=health maintenance organization.

^bThese items are almost identical to those used in a previous study of family physicians and chiropractors by Cherkin et al.⁷

^c $P=.0167$; differences in distributions for the three groups analyzed by chi-square test applied to 2x3 tables.

ment practices led to the selection of back pain as one of the first nationally targeted problems for outcomes assessment research funded by the Agency for Health Care Policy and Research.¹⁹ The agency has taken a further step by forming a medical panel to assist in establishing clinical practice guidelines for low back pain problems, which will include guidelines for the use of physical therapeutics.²⁰

The emerging health care reform environment highlights the importance of taking a more critical look at the effectiveness of the various treatment approaches competing for limited health care dollars. The Patient Outcomes Research Teams and the development of clinical guidelines supported by the Agency for Health Care Policy and Research are examples of this trend.^{19,20} Information about the current practice of physical

therapy can be helpful in assisting the profession in defining those areas of practice that are deemed most useful and important by its members, so that clinical research can be focused in those areas in which efficacy is not clearly established.

Summary

The study findings provide physical therapists with information about which therapeutic approaches others in their field deem to be of greater or lesser value in the management of back problems. Commonly used physical therapy interventions are identified, as well as therapeutic approaches for which little consensus appears to exist. To advance the development of optimal standards of care for back problems and to ensure appropriate allocation of limited health care resources, these treatments should be targets of future outcomes research.

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References

- 1 Frymoyer JW, Cats-Baril WL. An overview of the incidences and costs of low back pain. *Orthop Clin North Am.* 1991;22:263-271.
- 2 *Social Security Statistical Supplement (1977-79): HE 3.3/3:979.* Washington, DC: US Government Printing Office; 1979.
- 3 Riihimki H. Low back pain: its origin and risk factors. *Scand J Work Environ Health.* 1991;17:81-90.
- 4 Spitzer WO, LeBlanc FE, Dupuis M, et al. Scientific approach to the assessment and management of activity-related spinal disorders—a monograph for physicians: report of the Quebec Task Force on Spinal Disorders. *Spine.* 1987;12(suppl 7):S1-S59.
- 5 Deyo RA, Cherkin DC, Conrad D, Volinn E. Cost, controversy, crisis: low back pain and the public health. *Annual Review of Public Health.* 1991;12:141-156.
- 6 Jette AM, Davis KD. A comparison of hospital-based and private outpatient physical therapy practices. *Phys Ther.* 1991;71:21-30.
- 7 Cherkin DC, MacCornack FA, Berg AO. Managing low back pain: a comparison of the beliefs and behaviors of family medicine physicians and chiropractors. *West J Med.* 1088;149:475-480.
- 8 Cyriax J. *Textbook of Orthopaedic Medicine, Volume 1: Diagnosis of Soft Tissue Lesions.* 5th ed. Baltimore, Md: Williams & Wilkins; 1969.
- 9 McKenzie RA. *The Lumbar Spine: Mechanical Diagnosis and Therapy.* Waikanae, New Zealand: Spinal Publications Ltd; 1981.
- 10 McKenzie RA. A perspective on manipulative therapy. *Physiotherapy.* 1989;75:440-444.
- 11 Manheim CJ, Lavett DK. *The Myofascial Release Manual.* Thorofare, NJ: SLACK Inc; 1989.
- 12 *SPSS/PC+ V3.1.* Chicago, Ill: SPSS Inc; 1989.
- 13 Maitland GD. *Vertebral Manipulation.* 5th ed. London, England: Butterworth & Co (Publishers) Ltd; 1986.
- 14 White AH. Stabilization of the lumbar spine. In: White AH, Anderson R, eds. *Conservative Care of Low Back Pain.* Baltimore, Md: Williams & Wilkins; 1991:106-111.
- 15 Boone DC. Introduction to this special issue. *Phys Ther.* 1979;59:965.
- 16 Battié MC. Aerobic fitness and its measurement. *Spine.* 1991;16:677-678.
- 17 Koes BW, Bouter LM, Beckerman H, et al. Physiotherapy exercises and back pain: a blinded review. *Br Med J.* 1991;302:1572-1576.
- 18 Wolff MS, Michel TH, Krebs DE, Watts NT. Chronic pain: assessment of orthopedic physical therapists' knowledge and attitudes. *Phys Ther.* 1991;71:207-214.
- 19 Deyo RA, Cherkin DC, Conrad D. The back outcome assessment team. *Health Serv Res.* 1990;25:733-737.
- 20 Edelman B. Federal agency to draft low back pain guidelines. *Orthopedics Today.* 1992;12(4):1, 10.