

Original Article

Controlled Substances and Pain Management: Changes in Knowledge and Attitudes of State Medical Regulators

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Abstract

Physicians report that concern about regulatory investigation negatively influences their prescribing of opioid analgesics. The views of medical regulators about the legality of prescribing controlled substances for pain management were studied in 1991. However, little is known about whether these views have changed in light of increased emphasis on pain management and educational programs for state medical boards. Two studies that examined this issue are described. In Study 1, a 1997 survey of state medical board members was compared to results obtained in 1991 to evaluate differences in knowledge and perceptions about opioid analgesics. Important changes were observed over time, particularly regarding characteristics of "addiction" and the legality of prolonged prescribing of opioids. For Study 2, a longitudinal survey was conducted of medical board members who participated in five workshops about pain management and regulatory policy. Results revealed significant and sustained changes in attitudes about the incidence of iatrogenic addiction when using opioids to treat pain, the analgesic and side-effect properties of opioids, and the perceived legality of prescribing opioids. Recommendations for reducing concerns about regulatory scrutiny are presented, including the need for a more intensive education program, increasing the rate of adoption of new state medical board policies, and improving communication between regulators and clinicians. *J Pain Symptom Manage* 2001;21:227-237. © U.S. Cancer Pain Relief Committee, 2001.

Key words

Medical boards, pain policy, chronic pain, cancer pain, opioids

Introduction

In the U.S., inadequate relief of pain is prevalent.¹⁻³ Although there are many effective pharmacological and non-pharmacologic pain treatments available, opioids are essential for

the medical management of moderate to severe acute pain⁴ and pain due to cancer.^{1,5,6} There is also a consensus of pain medicine and regulatory experts that opioids are appropriate for selected patients with chronic noncancer pain.⁷⁻¹⁰

Opioids are controlled substances and are subject to additional prescription requirements.¹¹ Their status as controlled substances, however, is not intended to affect their legitimate medical use.¹² Prescribing opioid analgesics for pain is a legitimate medical practice if done in the course of professional practice, and has been

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recognized as such by regulatory and legislative groups.¹³⁻¹⁷ Prescribing opioids for pain patients with a history of, or current, substance abuse also is a legitimate medical practice, as long as its purpose is for pain, and not to treat addiction. The use of opioids (narcotic drugs) for the treatment of addiction is not a legitimate medical practice unless the practitioner is registered as a Narcotic Treatment Program to dispense (but not prescribe) approved drugs such as methadone according to strict federal and state regulations.¹⁸ The long history of the regulation of opioids as controlled substances, the further regulation of their use for the treatment of "narcotic addiction," and misunderstanding of addiction has contributed to confusion regarding the legality of prescribing under various circumstances.^{19,20}

Physicians' concerns about being investigated by controlled substances agencies or state medical boards for prescribing "excessive" amounts or for the wrong patients can negatively affect prescribing practices.^{11,21-27} Although there is little evidence to support a high risk of regulatory sanction for prescribing opioid analgesics legitimately for pain,^{24,28} physician fears of disciplinary action and criminal prosecution are heightened by national media coverage of a small number of investigations of doctors who have been charged with prescribing opioids excessively.²⁹⁻³¹ Concern about prescribing opioids exists not only among physicians in general practice, but also among oncologists³² and pain specialists.³³

A study in 1991 examined the question of whether physicians are justified in their concern about regulatory oversight.³⁴ A survey was used to evaluate state medical board members' knowledge and attitudes about the medical use of opioids for chronic cancer and noncancer pain. The results showed that medical board members often defined "addiction" to include "physical dependence" or "tolerance," which are common in chronic pain patients treated with opioids. Neither physical dependence nor tolerance is sufficient to define addiction.^{1,5,7} In fact, in 1969 the World Health Organization replaced the term "addiction" with "drug dependence," which, like addiction, is characterized primarily by compulsive use of a drug despite harm to the individual.³⁵ Confusion of physical dependence or tolerance with addiction raises the possibility that a physician's opi-

oid for a chronic pain patient could be viewed as questionable medical practice, if not illegal. Indeed, the 1991 survey showed that many board members did not accept extended prescribing of opioid analgesics to treat chronic pain, especially chronic noncancer pain; many would discourage or even investigate this practice as a violation of law. If the pain patient had a history of substance abuse, nearly all medical board members would discourage or investigate the prescribing of opioids even though such prescribing—if for pain—would be legal. These results suggested there could indeed be a risk of regulatory investigation or discipline to physicians who prescribe opioids even when for the legitimate medical purpose of treating pain.

Results of the survey of board members were presented to the Federation of State Medical Boards of the U.S. (FSMB). Discussions led to the development of a series of educational workshops about the use of controlled substances for pain management, entitled "Pain Management in a Regulated Environment." Eleven workshops were held between 1994 and 1998 and were designed in cooperation with the FSMB. Faculty members for the workshops represented the American Pain Society, the American Academy of Pain Medicine, the American Society of Addiction Medicine, and the University of Wisconsin Pain & Policy Studies Group (PPSG). The workshop curriculum addressed opioid pharmacology, pain management, and addiction, as well as trends and issues in federal and state policies relating to the use of controlled substances for pain. Both the curriculum and faculty were substantially the same for all 11 workshops. The format of the workshop also allowed discussion of regulatory and clinical practice topics of interest to the participants. Overall, 25% of the total U.S. board member population participated in the workshops, representing 40 state medical boards.¹⁹

Between 1994 and 1998 there was a substantial increase in the number of pain policies adopted by state medical boards. Some of these policies encouraged better treatment of pain for patients with chronic cancer and noncancer pain, and addressed physicians' concerns about regulatory scrutiny.³⁶ During this period, there also were national consensus statements about the use of opioids in chronic pain,^{1,9} state pain study commissions and task

forces,³⁷ as well as new intractable pain treatment statutes and regulations.³⁸ The full text for the consensus statements and policies that relate to the treatment of chronic pain can be found on the PPSG website: www.medsch.wisc.edu/painpolicy.

In light of this educational and policy activity, two studies were designed to determine whether the views of state medical regulators about the long-term use of opioid analgesics had changed. In Study 1, we re-surveyed all state medical board members in 1997 to evaluate any changes in knowledge and attitudes since 1991. In Study 2, we evaluated whether changes occurred in a different group of medical board members who participated in any of the five educational workshops about pain management that were held in 1998. Pre-test, post-test, and follow-up surveys were given to all participants to assess changes in their knowledge and attitudes about opioid analgesics and the legitimacy of prescribing such drugs for pain.

Study 1: Re-Survey of State Medical Board Members

Two specific aims guided analyses of the 1997 re-survey of medical board members. First, responses from the 1997 sample of medical board members were compared to those from the 1991 sample. Second, respondents from the 1997 sample who had participated in any of the six pain management workshops held between 1994 and 1996 were compared to those who had not participated. The purpose of this analysis was to determine any changes in knowledge and attitudes that might be due to participation in the workshops.

Methods

Instruments

The 1997 study used a self-report questionnaire consisting of 34 pre-tested items about clinical and policy issues related to pain. The items included those from the 1991 survey,³⁴ as well as six items to evaluate new topics of interest. The results presented in this article address respondents' perceptions in four major areas: (1) cancer pain and its treatment; (2) nature and extent of opioid analgesic addiction,

abuse, and diversion; (3) medical board policies and legal impediments to pain management; and (4) legality of prolonged opioid prescribing in several different patient scenarios.

Sample

The revised "Pain Management Survey" was mailed to a complete list of 700 state medical board members (excluding board administrators and executives) provided by the FSMB. A cover letter stating the purpose of the study and assuring confidentiality of the individual responses accompanied each survey. Two additional mailings were sent to non-responders. Data collection for this study occurred between March–July 1997.

A total of 376 questionnaires (54%) were returned, of which 368 were evaluable for an overall response rate of 53%. Respondents represented all 50 states, as well as the District of Columbia and Puerto Rico, with a mean of seven respondents per state.

Statistical Analysis

The variables of interest for this study had statistically non-normal distributions, which led to the use of non-parametric methods for independent samples to analyze the data. Survey items were analyzed to determine their association with the following two dichotomous groups: (1) respondents from either the 1991 or 1997 sample, and (2) respondents who did or did not participate in a pain management workshop. The Mann-Whitney (MW) test was used to compare the groups for variables that were either ordinal or categorical. The chi-square test of association was used to compare groups with respect to nominal variables. A 0.05 level of significance was used for all statistical tests.

Results for Specific Aim I: Comparison of Respondents from the 1991 and 1997 Surveys

Sample

Due to the national turn-over rate of board members, only 6% of the 1997 respondents ($n = 20$) had participated in the 1991 survey. The results presented here, therefore, reflect differences in the knowledge and perceptions of two separate groups of board members.

Demographic characteristics of the 1997 board

members, as well as for those surveyed in 1991, are shown in Table 1. The two samples are quite similar. Mean age of the respondents in 1997 was 56 years (range, 34–81 years). Length of service on a state board ranged from 1 to 25 years and represented a mean of 5 years. The vast majority of board members were physicians. Sixteen percent of the respondents were public members and 4% were other health professionals. Thirteen percent of the sample were members of a state osteopathic board. Physician respondents received their medical degrees between 1943 and 1991; their median year of graduation was 1966. This was the only demographic variable that was statistically significant between the 1991 and 1997 samples ($MW[535] = -5.276, P < .0001$), and is merely a reflection of the six-year difference between survey time-frames.

Cancer Pain and Its Treatment

Board members surveyed in the 1997 sample were more likely than those in 1991 to understand the extent to which cancer pain relief is possible. Board members in 1997 believed that significantly more cancer-related pain could be

relieved using available therapies, including opioid analgesics ($MW[650] = -3.396, P < .001$). More respondents in 1997 viewed the majority of cancer pain patients in their state as “undermedicated” ($\chi^2[2] = 11.146, P < .005$). Thus, medical regulators were more likely in 1997 than in 1991 to recognize that opioids are underutilized as analgesics for cancer pain.

Addiction, Abuse, and Diversion

There were no differences in board members’ responses between 1997 and 1991 regarding the perceived approximate incidence of psychological dependence (“addiction”) or about the extent that diversion and abuse of prescription opioids was a problem in their community. Most respondents in both surveys overestimated the incidence of addiction and considered diversion to be a minor to moderate problem. The only statistically significant difference between samples involved board members’ knowledge about the meaning of “addiction.” Board members were asked to define addiction using a brief list of several common terms, such as “physical dependence,” “psychological dependence,” “tolerance,” or a

Table 1
Demographic Characteristics of Survey Respondents

Characteristics	Year of Survey			
	No. of 1991 surveys (n = 304)	%	No. of 1997 surveys (n = 368)	%
Age (years)				
Mean	55.22		55.67	
SD	10.93		10.62	
Board type				
Medical	269	88.5	322	86.8
Osteopathic	35	11.5	46	13.2
Status of board member				
Current member	300	98.7	360	97.8
Past member	4	1.3	8	2.2
Capacity of board member				
Physician member	241	79.3	284	77.2
Public member	46	15.1	57	15.5
Other health professional member	10	3.3	16	4.3
“Other” member	7	2.3	6	1.6
Missing	0	0	5	1.4
Time served on board (years)				
Mean	4.51		4.54	
SD	4.01		3.68	
Physician members only				
Year of medical degree, Median	1961		1966	
Currently practicing medicine				
Yes	229	93.5	260	89.3
No	16	6.5	31	10.7

combination of terms. In 1997, fewer respondents associated addiction solely with physical dependence ($\chi^2[1] = 9.558, P < .005$). Conversely, there was a much greater likelihood in 1997 for board members to define addiction as psychological dependence alone ($\chi^2[1] = 28.669, P < .001$).

Policy Awareness

Respondents surveyed in 1997 reported more often that their state medical board has a policy or guideline for the appropriate prescribing of opioid analgesics for pain management ($\chi^2[1] = 25.003, P < .001$). This result reflects the increase in the number of pain policies that were adopted by state medical boards between 1991 and 1997.³⁶

Legality of Prescribing Opioids

Board members were asked to judge the legality of prescribing opioids for more than several months in four different patient scenarios: (1) chronic cancer pain, (2) chronic cancer pain with a history of opioid abuse, (3) chronic noncancer pain, and (4) chronic noncancer pain with a history of opioid abuse. The response options were that the practice was: (1) Lawful and generally acceptable medical practice, (2) Lawful but generally not acceptable and should be discouraged, (3) Probably a violation of state medical practice laws or regula-

tions and should be investigated, (4) Probably a violation of federal or state controlled substances laws and should be investigated, and (5) Don't know. More than one response could be chosen by individuals who believed that both categories of illegality were applicable. Table 2 contains the frequencies of responses within each chronic pain scenario for 1991 and 1997.

Cancer pain scenarios. Compared to respondents in 1991, those in 1997 viewed the prescribing of opioids for more than several months for cancer pain as both lawful and acceptable medical practice ($\chi^2[4] = 18.598, P < .001$). Likewise, when the cancer patient also had a history of opioid abuse, medical board members surveyed in 1997 were more likely than those in 1991 to view opioid prescribing as lawful and generally acceptable ($\chi^2[4] = 18.123, p < .001$).

Noncancer pain scenarios. Compared to the two cancer-related scenarios, medical board members were generally much more skeptical about prescribing opioids for noncancer pain. Respondents in 1997 were more likely than in 1991 to consider prescribing to patients with chronic noncancer pain for more than several months as acceptable medical practice ($\chi^2[4] = 62.200, p < .001$). These regulators viewed the

Table 2
Legality and Medical Acceptability of Extended Opioid Prescribing, 1991 Compared to 1997

Year	Level of Perceived Legality									
	Lawful and generally acceptable medical practice; no need to investigate		Lawful and generally not acceptable medical practice; should be discouraged		Violation of medical practice laws and regulations; should be investigated		Violation of controlled substances laws; should be investigated		Don't know	
	1991	1997	1991	1997	1991	1997	1991	1997	1991	1997
Cancer pain	75%	82%	14%	5%	5%	2%	5%	2%	7%	5%
Cancer pain with history of opioid abuse	46%	57%	22%	17%	14%	6%	12%	4%	16%	11%
Chronic noncancer pain	12%	33%	47%	40%	32%	11%	27%	6%	7%	6%
Chronic noncancer pain with history of opioid abuse	1%	6%	25%	36%	58%	34%	50%	20%	6%	6%

Note: Rows do not sum to 100% because respondents could give more than one response.

prolonged prescribing of opioids to a patient with chronic noncancer pain and a history of drug abuse as least acceptable. However, medical board members in 1997 were more likely to view such prescribing as a lawful and acceptable medical practice ($\chi^2[4] = 37.630, p < .001$). Although statistically significant, it should be noted that only 6% of the 1997 sample gave this response.

Results for Specific Aim II: Analysis of Workshop Participants

Twelve percent ($n = 41$) of the 1997 board members reported that they had participated in one of the six workshops on pain management held between 1994 and 1996. This subsample was large enough to compare the responses of participants and non-participants on a limited set of survey items. To preserve the statistical power of the analyses, only those items were analyzed that relate to the legality of prescribing opioids for pain.

There were no statistically significant differences in responses to the cancer pain scenarios. Indeed, a majority of board members, whether or not they had participated in a workshop, were confident in the legal and medical acceptability of this practice. Board members who attended workshops were moderately more likely than those who did not attend to view prescribing opioids for noncancer pain as lawful and generally accepted medical practice, although this finding did not achieve statistical significance. However, workshop participants were much more likely to consider the prescribing scenario involving noncancer pain and a history of opioid abuse as an acceptable medical practice ($\chi^2[2] = 11.503, P < .005$). Since there is generally a greater reluctance to view prescribing for patients with noncancer pain or a history of drug abuse as legitimate, it is encouraging that participation in the education program was associated with increased acceptance of this practice.

Study 2: Prospective Survey of Workshop Participants

Study 2 was a longitudinal assessment of changes in knowledge and attitudes among medical board regulators who participated in any of the five workshops held in 1998.

Methods

Instruments

The evaluation was conducted using a 31-item self-report questionnaire. Most of the items addressed the workshop content and a few were adapted from the 1991 and 1997 surveys of medical board members.³⁴ The survey addressed: (1) cancer pain and its treatment, (2) addiction issues, (3) analgesic efficacy and side-effects of opioids, and (4) perceived legality of prolonged prescribing of opioids in several different patient scenarios. Each participant completed the survey three times: Before the workshop (pre-test), immediately after its completion (post-test), and after approximately six months (follow-up).

Sample

The sample for this study was all participants in five regional medical board workshops co-sponsored by the PPSG and the FSMB in 1998. Curriculum and the faculty was similar for each workshop, and addressed the nature and extent of pain, the barriers to adequate relief, both pharmacologic and non-pharmacologic treatments for pain, the appropriate medical use of opioids, definition and prevalence of addiction, and the current status of pain management and controlled substances policies.

Statistical Analysis

All data were analyzed using non-parametric methods at a 0.05 significance level. Chi-square tests were used to evaluate whether workshop participation was significantly associated with the categorical survey items. The effect of the time of assessment (i.e., pre-test, post-test, and follow-up) on any continuous dependent variable was calculated using the Wilcoxon matched-pair signed-rank test. This method of statistical analysis typically identifies changes that are significant using the pre-test as the point for comparison.

Results

Sample

Seventy workshop participants were surveyed at pre-test. Age of the participants ranged from 28 to 83 years, with a mean age of 54 years ($SD = 10.32$). Males represented slightly more than half (57%) of the sample. The workshop audience

consisted of physician members (49%), investigators (10%), executive directors or secretaries (9%), attorneys (9%), public members (7%), and "other" board members (16%). Length of service on the board ranged from 1 to 21 years, with a mean of 5 years. Physician members reported that they had received their medical degrees between 1952 and 1984, with a median of 1964. A large majority of physician respondents (87%) were currently practicing medicine.

As expected with any longitudinal study design, sample attrition occurred at follow-up assessment, decreasing 36% from pre-test to follow-up, with 45 respondents submitting a completed survey after six months. Loss of participants can lead to sample bias if the final sample varies considerably from the initial group of respondents. Demographic characteristics of the pre-test and follow-up samples were, therefore, compared to determine the extent of dissimilarity. If sample differences are found at the time of the follow-up survey, changes in responses across time can result from such differences rather than from workshop participation. There were no statistically significant differences between the pre-test and follow-up samples on any demographic characteristic.

Cancer Pain and Its Treatment

Workshop participants were more likely both at post-test (Wilcoxon[61] = 2.895, $P < .005$) and follow-up (Wilcoxon[36] = 3.737, $P < .001$) to believe that available therapies, including opioid analgesics, can relieve cancer pain effectively. In addition, board members were less familiar at pre-test about the degree to which patients under-report pain ($\chi^2[8] = 17.461$, $P < .05$). (A significant chi-square result indicated variability in responses given by the same individual at pre-test, post-test, and follow-up. Adjusted standardized residuals were then used to identify the patterns in the data that contributed to the statistical significance. In all instances of statistical significance, the largest residual was found at pre-test (i.e., pre-test was the reference category). As a result, significant chi-square associations are interpreted in terms of different responses being given at pre-test, as compared to post-test and follow-up.) It appears that the workshops increased participant awareness of the potential for patients to under-report pain.

Addiction

At pre-test, medical regulators viewed addiction as a frequent occurrence when opioids are used for a prolonged period of time ($\chi^2[8] = 31.548$, $P < .001$), and defined addiction as physical dependence ($\chi^2[8] = 29.144$, $P < .001$). Since these beliefs were significantly less prevalent after participating in the workshop, the survey results suggest that the workshop was successful in clarifying the definition of addiction.

Analgesic and Side Effect Properties of Opioids

Medical regulators were less likely to understand the pharmacodynamics of opioid analgesics prior to the workshop. Respondents were less likely to know at pre-test whether prolonged opioid use leads to a deterioration of organ functioning ($\chi^2[6] = 29.493$, $P < .001$) or to a decrease in cognitive function ($\chi^2[8] = 26.612$, $P < .001$). Before the workshop, participants also were more likely to believe that there is a ceiling to the analgesic effect of morphine ($\chi^2[8] = 51.309$, $P < .001$), and that tolerance diminished the analgesic efficacy of opioids ($\chi^2[8] = 42.673$, $P < .001$). In general, there was a greater likelihood of inaccurate knowledge about the effects of opioids prior to the workshop.

Legality of Prolonged Opioid Prescription

The same four patient scenarios were used from the national survey of medical board members. Four response options were provided: (1) Lawful and generally acceptable medical practice, (2) Lawful but generally not acceptable and should be investigated, (3) Probably a violation of federal or state controlled substances or medical practice laws and should be investigated, and (4) Don't know. Only one response could be chosen for each patient scenario. Table 3 contains the frequencies of responses within each chronic pain scenario for the pre-test, post-test, and follow-up.

Cancer pain scenarios. Compared to responses given at both post-test and follow-up, respondents at pre-test were less likely to view the prolonged prescribing of opioids for cancer pain as a lawful and accepted medical practice ($\chi^2[6] = 18.701$, $P < .005$). Likewise, when the cancer patient also had a history of opioid abuse, a lower proportion of regulators surveyed at pre-test viewed the prescribing of opi-

Table 3
Legality and Medical Acceptability of Extended Opioid Prescribing at Pre-test, Post-test and Follow-up

Assessment Period	Level of Perceived Legality									Don't know		
	Lawful and generally accepted medical practice			Lawful but generally not accepted medical practice; should be investigated			Violation of federal and state laws; should be investigated					
	1	2	3	1	2	3	1	2	3	1	2	3
Cancer pain	77%	98%	95%	6%	0%	0%	3%	0%	2%	14%	2%	2%
Cancer pain w/Hx of substance abuse	54%	76%	68%	16%	16%	25%	9%	2%	3%	22%	7%	5%
Chronic noncancer pain	38%	75%	60%	33%	22%	30%	10%	0%	5%	19%	3%	5%
Chronic noncancer pain w/Hx of substance abuse	17%	48%	36%	44%	37%	49%	17%	10%	10%	21%	6%	5%

Note: Assessment Period 1 = pre-test results.
 Assessment Period 2 = post-test results.
 Assessment Period 3 = follow-up results.

Note: Rows may not add up to 100% due to rounding error.

oids as lawful and generally accepted ($\chi^2[6] = 16.732, P < .01$).

Noncancer pain scenarios. The findings for both the noncancer pain scenarios were similar to those obtained for the two cancer pain scenarios. Prior to workshop participation, respondents were less likely to consider as legal and acceptable medical practice the long-term prescribing of opioids to patients with chronic pain not due to cancer ($\chi^2[6] = 25.467, P < .001$), as well as chronic noncancer pain with a history of substance abuse ($\chi^2[6] = 20.577, P < .005$).

Discussion

The second survey of state medical board members (Study 1) revealed that there had been important, although not profound, improvements in knowledge, attitudes, and beliefs since 1991. In 1997, board members were more likely to recognize the efficacy of opioid analgesics for cancer pain, but that cancer pain patients are not adequately treated for pain. In addition, board members in 1997 had greater confidence in all four scenarios that prescribing opioids for chronic pain was legal and accepted medical practice. Although still representing a small percentage of the total sample,

more board members in 1997 viewed prescribing of opioids to be lawful and medically acceptable for the treatment of chronic noncancer pain, as well as for those with chronic pain and a history of opioid abuse. This difference between the two samples represents encouraging movement toward recognizing the legitimacy of prescribing that, by today's standards, would be considered acceptable medical practice.¹⁰

The data also suggest a positive shift in medical board members' understanding of what addiction is and what it is not. Fewer participants in 1997 defined it solely on the basis of the manifestation of a withdrawal syndrome. This represents encouraging movement toward the use of behavioral, rather than physiological, measures of addiction. Nevertheless, physiological interpretations of addiction remain common. A much more concerted effort is needed to bring regulators' understanding of the determinants of addiction up-to-date, as well as be able to determine what constitutes accepted prescribing practices.

The educational workshops described in this article had a lasting impact on medical regulators' understanding of a number of topics. First, there were significant and durable changes in respondents' views about the legality of prescribing for chronic pain for a prolonged pe-

riod. Fewer regulators at pre-test viewed prescribing opioids for more than several months as legal and acceptable medical practice in the four patient scenarios. Second, regulators had modified their definitions of addiction. Before the workshop, participants were much more likely than at post-test or at six-month follow-up to characterize addiction as physical dependence only. Following the workshop, they were more likely to recognize that addiction is a behavioral syndrome characterized by compulsive craving of a drug for its psychological effects and continued use despite harm. Third, regulators were more likely after the workshop to estimate the low incidence of addiction correctly when opioid analgesics are used to treat chronic pain in patients who do not have prior substance abuse histories. Finally, the workshop increased these board members' understanding that the low potential for substantial physiological or cognitive impairments should not contraindicate the long-term use of opioids.

These studies show that there has been a relatively small but positive change in state medical board members' knowledge and attitudes about the use of opioid analgesics to treat both cancer and noncancer pain. These changes are taking place at the same time that pain relief is becoming more visible and that boards are issuing new pain management policies, some of which recognize that prescribing opioids for chronic noncancer pain is considered legitimate medical practice and that physicians should not fear regulatory discipline for such prescriptions. Although statistically significant changes in knowledge and attitudes were observed over time and as a result of involvement in an educational workshop, most medical board members continued to view prolonged prescribing of opioid analgesics for chronic noncancer pain as inappropriate medical practice and something to be discouraged or even investigated. In addition, there continues to be confusion about the characteristics of addiction and about the approximate incidence of iatrogenic addiction. If there is confusion among regulators about addiction, then there is the potential to investigate physicians for prescribing practices that may conform to present standards.

Improving pain management in the U.S. will depend, in part, on a three-part program that includes: (1) more intensive educational pro-

grams for state medical board members and staff, (2) accelerated policy development by state medical boards to encourage pain management and address concerns about regulatory scrutiny, and (3) increased communication between clinicians and their regulators.

1. Education. State medical boards should sponsor educational efforts for their members, staff, investigators, and attorneys to update their knowledge and views about pain management and regulatory policy. An excellent example is provided by the medical boards in Alabama and North Carolina; they held educational workshops to inform their members and staff.³⁸ After the workshops, these boards adopted guidelines to recognize the use of controlled substances for the treatment of chronic pain.^{17,39}
2. Policy. State medical boards should adopt or amend their existing guidelines according to the national standard established by the FSMB's "Model Guidelines for the Use of Controlled Substances for the Treatment of Pain."¹⁰ (It is recognized that many state medical boards have already adopted guidelines; however, some of these policies fail to encourage pain management or address directly licensees' concerns about regulatory scrutiny.) The Model Guidelines offer significant advantages over current state medical board policies.^{17,19} The Model Guidelines address physician concern about investigation or discipline directly, so that:

Physicians should not fear disciplinary action from the Board or other state regulatory or enforcement agency for prescribing, dispensing, or administering controlled substances, including opioid analgesics, for a legitimate medical purpose and in the usual course of professional practice. (p. 2)¹⁰

Indeed, the Model Guidelines are an unprecedented consensus among groups that represent pain management, regulatory, and drug law enforcement about the medical use of controlled substances for the treatment of pain.¹⁷

3. Communication. Once a state medical board has updated its views about pain management and has adopted or adapted

the Model Guidelines, they should disseminate and publicize the policy widely and repeatedly to encourage positive practice change and reduce concerns about regulatory scrutiny.^{10,17,21} (It is recognized that state policies may differ and that boards may adapt and improve on the Model Guidelines.) Despite initial dissemination efforts by medical boards, practitioners may be unaware of the board's policy.^{17,40} The North Carolina Medical Board (NCMB) provides an example of what state boards can do: In addition to systematic dissemination of its guidelines, the NCMB sponsored educational programs and media events for health-care professionals and for the public.³⁹

We should not be surprised that knowledge and attitudes are slow to change. However, these studies show that change is indeed occurring. We can accelerate the rate of change with more concentrated efforts. Increasingly, state medical boards and their members and staff are coming to recognize that pain control is a significant health-care problem, and that they have an important role to play in eliminating fears of regulatory scrutiny. Making this a reality will require additional efforts and further cooperation between medical boards and the pain management community.

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