

## Evolving Dissatisfaction Among Primary Care Physicians

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**Objective:** To examine trends in career satisfaction among physicians working with managed care plans.

**Study Design:** Cross-sectional surveys conducted in 1996 and 1999.

**Participants and Methods:** We surveyed primary care physicians (PCPs) affiliated with 5 large health plans in Massachusetts and assessed physicians' ratings of overall satisfaction with their current practice situation and with managed care.

**Results:** A total of 1336 PCPs (56%) responded to the 1996 survey and 966 (42%) responded to the 1999 survey. In 1996, 19.8% of physicians were somewhat or very dissatisfied with their current practice situation vs 33.4% in 1999, an increase of more than 50% ( $P < .001$ ). Overall dissatisfaction with managed care increased from 28.3% to 62.2% ( $P < .001$ ). In multivariable models, external influences on physicians' practices were important predictors of overall dissatisfaction. Physicians whose choice of hospitals was restricted (odds ratio, 2.23; 95% confidence interval, 1.30-3.78) and those who reported that managed care plans influenced their practice "a lot" (odds ratio, 1.85; 95% confidence interval, 1.10-3.11) were more likely to be dissatisfied. Adequacy of reimbursement was an important predictor of overall satisfaction and satisfaction with managed care, and ways physicians experienced financial incentives were associated with managed care dissatisfaction.

**Conclusions:** Primary care physicians in Massachusetts are increasingly dissatisfied with their practice and with managed care. Continued erosion of physician satisfaction could have significant implications for quality of care and the quality of the workforce attracted to medicine as a career.

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nizations.<sup>3-5</sup> Whereas physicians once practiced primarily alone or in small autonomous groups, they now are more likely to practice in large groups and are increasingly subjected to profiling, utilization review, and preapproval for procedures and treatments. In addition, most physicians are now expected to follow prescribed guidelines and to use decision tools supplied by others, and they encounter patients who are better informed and more likely to ask about information found on the Internet or in advertising.<sup>6,7</sup> Evidence suggests that physicians are becoming increasingly unhappy in this environment.<sup>8-11</sup>

Many researchers described changes in professional autonomy well before the major changes described in the previous paragraph occurred. As early as 1973, there was extensive debate about this issue.<sup>12</sup> Physicians in the United States currently have relatively higher salaries and levels of autonomy than those in many other countries, and medicine is still perceived as a desirable occupation in the United States. Thus, it is important to evaluate whether physicians are less satisfied with their careers than they were in the recent past and whether current issues affecting the practice of medicine are similar to those that have been expressed previously.

Understanding the physician perspective on recent changes is important for several reasons. First, if physicians are dissatisfied with their current situation and feel that they are not able to change

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During the past decade, an accumulating confluence of forces that first began in the early 1980s has changed the practice of medicine in unprecedented ways. There is increasing focus on, and concern about, the quality of medical care<sup>1,2</sup>; financial constraints are being applied more frequently and stringently; and the practice and management of medical care has become increasingly centralized and dominated by managed care and physician orga-

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the situation, they are more likely to leave the profession or not to encourage others to enter.<sup>13-15</sup> In addition, they might be more likely to relocate to other practices or practices in other areas of the country.<sup>16</sup> Even if such changes are only occurring on the margin, this would diminish the overall quality of care, be very expensive, and cause a great deal of disruption. Health plans would also bear higher costs and inefficiencies as their physicians leave the plan and, in certain circumstances, if their patients also leave the plan as a result. Furthermore, if physicians view current strategies for improving the efficiency and quality of care negatively, they are unlikely to adhere to, and indeed may actively resist, strategies for encouraging certain types of practices. Although this would be beneficial if they resisted inappropriate restrictions on care, it would be deleterious if they resisted efforts to increase efficiency and the use of "best practices."

There are few systematic data on trends in physician satisfaction, particularly within managed care. Whereas some studies have examined the associations between features of physician practices and overall career satisfaction, few have systematically tracked changes in satisfaction over time. We are aware of only 3 previous studies that examined satisfaction over time. The first 2 studies used data that are now several years old, and the third study, also conducted in Massachusetts, used data from disparate samples of physicians that were collected many years apart.<sup>11,16,17</sup> Furthermore, in addition to examining changes in satisfaction over time, it is important to try to understand which factors most affect physician behaviors and perceptions.

In the study reported herein, we administered surveys to probability samples of practicing primary care physicians (PCPs) in Massachusetts several years apart to examine trends in career satisfaction. We believe that Massachusetts is an interesting area to study because it has a high level of managed care penetration (approximately 50% in 1999) and its health plans are regularly rated among the top in the nation.<sup>18</sup> We had 2 primary questions. First, is overall career satisfaction and satisfaction with managed care changing over time? Second, what features of individual physicians and practices are associated with lower levels of career satisfaction?

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METHODS

**Overview**

We report data from 2 surveys conducted in 1996 and 1999 of representative cross-sectional samples

of physicians affiliated with the largest health plans in Massachusetts. The main purpose of the surveys was to gather information on physicians' perceptions of the major health plans in Massachusetts to help the PCPs improve. The surveys asked about the physician's practice situation, attitudes, and experiences, as well as specifically about one of the health plans for which he or she provided services. The methods used for the 1996 survey have been described in detail elsewhere.<sup>19,20</sup>

**Study Population**

Study physicians were selected to be representative of physicians practicing under managed care in Massachusetts. In 1996 and 1999, physicians were sampled based on their affiliations with the 5 largest HMOs in Massachusetts. Collectively, these health plans represented more than 85% of the HMO market in Massachusetts in 1996 and 95% of the market in 1999 and virtually all PCPs in eastern Massachusetts.

We drew a probability sample of eligible physicians from plan lists of participating physicians.<sup>20</sup> Both PCPs and specialists were surveyed, but this article presents results from PCPs only; those with specialties in internal medicine, family practice, or pediatrics or those who were identified by the health plan as providing primary care services and were assigned a panel of patients by the plan.<sup>20</sup> A subset of the questions refers to the plan from which the physician was sampled, that is, the "target plan."

**Survey Development**

The development and content of the 1996 survey have been described fully elsewhere,<sup>19</sup> so only relevant parts of the survey are described in the following section. For the 1999 survey, we shortened and modified the 1996 survey based on 3 focus groups with generalist and specialist physicians, review of other surveys,<sup>21-23</sup> and analyses of the 1996 data.

**Measures**

*Physician Satisfaction and Ratings of Managed Care.* Physicians were asked to rate their overall satisfaction with their current practice situation and their current experience with managed care using a 4-point scale ranging from "very satisfied" to "very dissatisfied." They were then asked whether they would recommend working with the target health plan to physician colleagues and whether they would recommend insurance coverage from the target health plan to a member of their family using a 5-point scale ranging from "strongly agree" to "strongly disagree." In the 1999 survey, physicians were also asked to rate

the quality of care and the burden of treating patients in managed care compared with that in 1997.

*Physician and Practice Characteristics.* The questionnaire asked about respondent sex, year of graduation from medical school, primary area of practice, hours per week spent in patient care, number of patients seen in a typical week of patient care, number of health plans worked with, and the percentage of their patients enrolled in managed care plans. Physicians were also asked whether their main practice was a solo practice or a single-specialty or multispecialty partnership or practice; whether they owned the practice; the number of years they had been affiliated with the practice; and whether the practice was part of an integrated delivery system, independent practice association, or physician hospital organization. Physicians were then asked to rate the extent to which each of these types of organizations as well as the target health plan and other managed care plans they work with influenced “the way you provide care to your patients.”

We also asked whether any of these types of organizations, including their practice, set restrictions on either the specialists or hospitals that they could use and how much influence, ranging from “none at all” to “a great deal,” the physician had on the reimbursement and referral policies of their practice.

Respondents then rated agreement with general statements about the practice of medicine. Questions asked about the need to consider resources available for all patients when making decisions about individual patients; whether respondents felt pressure from their peers to reduce healthcare costs; and whether they agreed that physicians “should tell patients of alternative treatment options even if they are not covered by their current health plan.” We also asked whether the respondent thought that capitation “influences physicians to withhold appropriate care” or “fee-for-service medicine influences physicians to provide unnecessary care.”

*Financial Arrangements.* Physicians were asked what percentage of their income from clinical practice is based on a salary set at the beginning of the year and whether the salary is based on their performance (or that of their group) in the previous year. We then asked physicians what percentages of their clinical income were derived from fee-for-service payments and capitation payments.

To determine whether physicians were eligible for bonus payments, we asked whether their personal income is adjusted up or down based on their personal “volume, financial, or quality performance” or that of their group and, if so, the percentage of their per-

sonal income in the previous year that was earned in the form of a bonus, returned withhold, or surplus payment. For physicians who indicated that their group performance affected their income, we also asked how many people were in the risk pool whose performance determined adjustments to their personal income. Last, we asked for what percentage of their patient visits did their group receive capitated payments.

*Plan Ratings and Evaluations.* The survey included questions about the specific performance of the target health plan, including questions about professional autonomy, adequacy of the fee schedule or capitation rates, availability of services (subspecialists and behavioral health services), ease of obtaining referral authorizations, and completing paperwork and of appealing denied claims, support for prevention, and the quality of information about the plan given to enrollees. Physicians were also asked the frequency with which they had not been paid on time or had been denied payment for services and if there were health plan policies or procedures that had a particularly positive or negative impact on their practice.

#### **Study Procedures**

For both rounds of the survey, self-administered questionnaires were mailed to sampled physicians. Nonresponders were sent a reminder postcard and then were contacted by telephone if they did not return the questionnaire. For the second survey, a subsequent letter was sent encouraging physicians to participate in the survey, and nonrespondents were faxed copies of the survey to complete. A \$35 voucher to a Massachusetts Medical Society continuing medical education program was offered as an incentive. The first round of the survey was administered between September 1996 and February 1997, and the second round of the survey was administered between May and October 1999.

#### **Data Analysis**

We compared respondents and nonrespondents by target plan, age, sex, and specialty using administrative data from the Massachusetts Board of Registration of Medicine. We used the Student *t* test for continuous variables (age and number of ambulatory visits) and the Pearson  $\chi^2$  test for categorical variables.

For multivariable analyses, we created a series of dichotomous variables to indicate whether the physician’s main or other practice influenced care “a lot”; whether organizations such as a physician hospital organization, independent practice association,

or integrated delivery system influenced care “a lot”; or whether the target or other health plans influenced care “a lot.” Finally, we created 2 composite variables related to managed care “hassles” and access that were constructed by taking the mean scores of plan ratings.

All analyses were conducted using sampling weights equal to the inverse probability that the physician would be sampled and asked to report on the target plan. The weights depended on both the plan reported and the stratum (group of physicians with the same set of plan affiliations) for the reporting physician.

**Longitudinal Analysis.** We examined differences between 1996 and 1999 survey responses using the  $\chi^2$  test for categorical variables and the Student *t* test for continuous variables. We estimated multi-variable logistic regression models to assess changes in overall career satisfaction and satisfaction with managed care while controlling for changes in the composition of the sample and individual provider characteristics.

**Cross-sectional Analysis.** We analyzed the 1999 data to examine the impact of individual- and practice-level characteristics on satisfaction with the current practice situation and satisfaction with managed care. We assessed the association between variables hypothesized to be related to physician dissatisfaction using the  $\chi^2$  test for categorical variables and the Student *t* test for continuous variables. Next we estimated logistic regression models to assess the independent influence of these variables on the dissatisfaction measures. To simplify the presentation of the models, we present a model that does not include variables that were not associated with the dependent variables in either of the models and/or were confounded with other variables in the model (eg, base payment method and bonus payments).

## RESULTS

We received responses from 1336 PCPs for the 1996 survey (56% response rate) and 966 physicians for the 1999 survey (42% response rate). Respondents to the 1999 survey were very similar to respondents to the 1996 survey (Table 1). For the 1999 survey, 28% of respondents were women; there was an average of 22.7 years since graduation from medical school, with 91% of the sample graduating at least 10 years earlier. Fourteen percent of respondents were family physicians, 52% were general internists, and 28% were general practitioners.

### Changes in Physician Satisfaction Between 1996 and 1999

In 1996, 19.7% of physicians were somewhat or very dissatisfied with their current practice situation

**Table 1.** Characteristics of Respondents to the 1996 and 1999 Surveys of Massachusetts PCPs

	1996 Survey (n = 1336)	1999 Survey (n = 966)
Female, %	25.9	28.4
Time since medical school graduation, mean, y	22.4	22.7
Time since medical school graduation, %		
0-10 y	11.2	9.1
>10 y	88.8	90.9
Specialty, %		
Family medicine	15.4	14.2
General medicine	49.0	51.9
General pediatrics	27.7	27.7
Specialists who are PCPs	8.0	6.3
Practice type, %		
Solo	21.1	24.6
Single specialty	39.4	38.0
Multispecialty	39.5	37.4
Time spent in patient care, mean, h/wk	46.1	46.9
Patient visits per week, mean, No.	96.3	95.2
Patients in any managed care plan, %*		
0%-25%	7.3	5.8
26%-50%	30.7	24.1
51%-75%	41.4	38.5
76%-100%	20.6	31.6

PCPs indicates primary care practitioners.

\**P* < .001 for the difference between 1996 and 1999.

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**Table 2.** Changes in Physician Satisfaction Between the 1996 and 1999 Surveys of Massachusetts PCPs

	1996 Survey (n = 1336)	1999 Survey (n = 966)
Recommend target health plan to colleagues, %*		
Strongly agree	28.4	12.4
Agree	47.2	49.7
Undecided	14.3	22.4
Disagree	7.5	11.7
Strongly disagree	2.6	3.8
Recommend target health plan to family members, %*		
Strongly agree	27.6	14.3
Agree	44.1	47.8
Undecided	14.5	19.0
Disagree	9.6	13.4
Strongly disagree	4.2	5.5
Overall satisfaction with current practice situation, %*		
Very satisfied	29.7	17.7
Generally or somewhat satisfied	50.6	48.9
Somewhat or generally dissatisfied <sup>†</sup>	16.0	25.7
Very dissatisfied	3.7	7.7
Overall satisfaction with managed care, %**		
Very satisfied	6.0	4.8
Generally satisfied	41.2	33.0
Neither satisfied nor dissatisfied	24.6	— <sup>§</sup>
Somewhat or generally dissatisfied <sup>†</sup>	22.7	42.0
Very dissatisfied	5.6	20.1
Quality of care for managed care patients in 1999 compared with 1997, %		
Much better	NA	2.3
Somewhat better	NA	14.4
About the same	NA	47.5
Somewhat worse	NA	30.0
Much worse	NA	5.9
Burden of treating managed care patients in 1999 compared with 1997, %		
Much better	NA	0.9
Somewhat better	NA	5.2
About the same	NA	24.7
Somewhat worse	NA	45.0
Much worse	NA	24.2

PCPs indicates primary care practitioners; NA, not applicable.

\* $P < .001$  for the difference between 1996 and 1999.

<sup>†</sup>The exact wording was “generally dissatisfied” in 1996 and “somewhat dissatisfied” in 1999.

<sup>‡</sup>Test for difference between 1996 based on the percentage “somewhat/generally and very dissatisfied” vs other response categories.

<sup>§</sup>“Neither satisfied nor dissatisfied” was not present as a response option for the 1999 survey.

compared with 33.4% in 1999, an increase of more than 50% ( $P < .001$ ) (Table 2 and Figure 1). Similarly, overall dissatisfaction with managed care increased from 28.3% in 1996 to 62.1% in 1999 ( $P < .001$ ). Fully one fifth of physicians were “very dissatisfied” with managed care in 1999. After controlling for potential confounders, the odds of a PCP being dissatisfied with his or her overall practice in 1999 compared with 1996 was 1.87 (95% confidence interval [CI], 1.49-2.35), and the odds of being dissatisfied with managed care was 4.18 (95% CI, 3.37-5.19).

Similar trends were evident in other global assessments of managed care. Many fewer physicians in 1999 than in 1996 reported that they would recommend the target health plan to their colleagues (12.4% vs 28.3%;  $P < .001$ ) or family (14.3% vs 27.6%;  $P < .001$ ) (Figure 2). In addition, when asked to compare care provided in 1999 with that provided in 1997, 35.9% of PCPs reported that quality of care for managed care patients today was somewhat or much worse compared with only 16.7% who said it was somewhat or much better. Similarly, the burden of treating managed care patients in 1999 was reported to be somewhat or much worse for 69.2% of physicians, whereas only 6.1% said it was somewhat or much better.

**Predictors of Satisfaction With Current Practice and Satisfaction With Managed Care in 1999**

General internists and specialists who also practice as PCPs were more likely to be

dissatisfied with their current practice situation and with managed care than were family practitioners or pediatricians, although this difference was less pronounced for dissatisfaction with managed care (Table 3). Physicians who worked more hours per week were more dissatisfied, and increasing numbers of managed care contracts were associated with increased dissatisfaction with managed care. No other demographic characteristics were significantly associated with dissatisfaction.

Influences on practice were strongly related to both overall dissatisfaction with their current practice and dissatisfaction with managed care. Physicians who reported restrictions on their practice, such as choice of hospitals (59.2% of the sample) or specialists (50.3%), and those who reported that managed care plans influence their practice "a lot" (21.3%) were significantly more likely to be dissatisfied with their current practice. In addition, physicians who rated as "fair" or "poor" the availability of subspecialists and mental health services (12.7%), their ability to exercise independent medical judgment (9.2%), the benefit information given to enrollees (39.2%), and the "hassles" of managed care (eg, obtaining referral authorizations and completing paperwork) (16.1%) were more likely to be dissatisfied with both their current practice and with managed care.

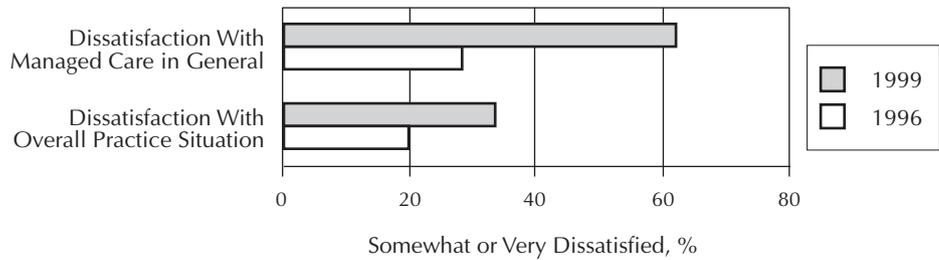
Physicians who gave poor ratings of the adequacy of reimbursement rates (47.4%) and those who experienced late payments (31.3%) were more likely to be dissatisfied with both managed care and their current practice. Conversely, physicians in larger risk pools (in which their own financial performance is diluted by that of many other physicians) and

those whose income was not tied to their personal performance were less likely to be dissatisfied with managed care.

**Multivariable Predictors of Overall Dissatisfaction With Their Current Practice Situation and Dissatisfaction With Managed Care in 1999**

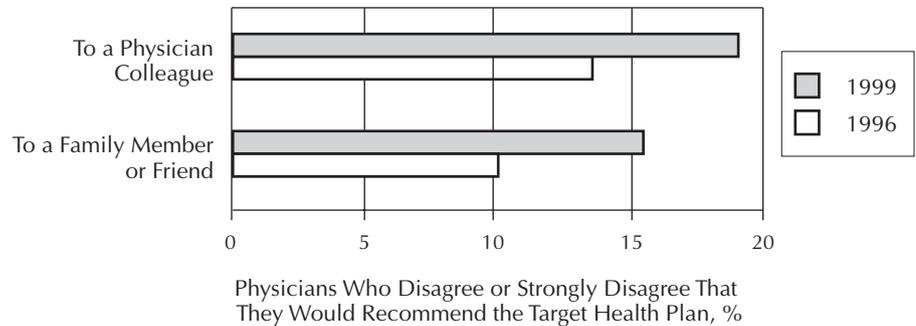
In multivariable models, personal characteristics continued to be important predictors of overall dissatisfaction with the current practice situation (Table 4). Older physicians who had been in practice for at least 10 years (OR, 2.01; 95% CI, 1.02-3.96) were more likely to be dissatisfied than were younger physicians, whereas family practitioners (OR, 0.50; 95% CI, 0.27-0.92) and pediatricians (OR, 0.56; 95% CI, 0.33-0.95) were less likely to be dissatisfied. In addition, external influences on practice remained important predictors of overall dissatisfaction. Physicians whose choice of hospitals was restricted (OR, 2.23; 95% CI, 1.30-3.78) and

**Figure 1.** Changes in Physician Satisfaction Between the 1996 and 1999 Surveys of Massachusetts Primary Care Physicians



*P* < .01 for all.

**Figure 2.** Changes in Physician Health Plan Recommendations Between the 1996 and 1999 Surveys of Massachusetts Primary Care Physicians



*P* < .01 for all.

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**Table 3.** Physician and Practice Characteristics and Physician Dissatisfaction—1999 Survey of Massachusetts PCPs

	Proportion of Sample	Proportion Somewhat or Very Dissatisfied	
		Current Practice	Managed Care
<b>Personal and Practice Characteristics</b>			
Sex			
M	71.6	72.9	71.8
F	28.4	27.1	28.2
Time since medical school graduation, y			
0-10	9.1	5.6	7.6
>10	90.9	94.4	92.5
Specialty			
Family medicine	14.2	10.2	11.5
General medicine	51.9	59.5	54.1
General pediatrics	27.7	20.9	27.3
Specialists who are PCPs	6.3	9.5	7.1
Practice type			
Solo	24.6	26.7	26.9
Single specialty	38.0	34.4	39.5
Multispecialty	37.4	38.9	33.7
Hours per week			
0-40	42.7	35.0	40.2
41-50	25.2	26.0	24.7
51-60	19.8	21.4	20.4
≥61	12.4	17.6	14.7
Patients in managed care, %			
0-25	5.8	6.7	6.4
26-50	24.1	25.9	25.5
51-75	38.5	35.4	39.5
76-100	31.6	32.0	28.6
Managed care contracts, No.			
0-4	24.0	19.8	17.9
5-9	48.0	50.7	53.3
≥10	28.0	29.5	28.8
Practice affiliation <sup>§</sup>			
IDS	38.1	41.6	39.7
IPA or PHO	43.0	40.5	43.9
None	19.0	17.9	16.4

(continued on following page)

PCPs indicates primary care physicians; IDS, integrated delivery system; IPA, independent practice association; PHO, physician hospital organization.

\* $P < .05$  for the difference between respondents who are very or somewhat dissatisfied with managed care and those who are not.

† $P < .001$  for the difference between respondents who are very or somewhat dissatisfied with managed care and those who are not.

‡ $P < .01$  for the difference between respondents who are very or somewhat dissatisfied with managed care and those who are not.

§Physicians in an IDS can also be members of an IPA or PHO. "None" refers to physicians who are not in an IPA, PHO, or IDS.

those who reported that managed care plans influenced their practice "a lot" (OR, 1.85; 95% CI, 1.10-3.11) were more likely to be dissatisfied, whereas those who had any influence on the reimbursement policies of their medical group were less likely to be dissatisfied (OR, 0.44; 95% CI, 0.25-0.75). Physicians who rated the adequacy of reimbursement rates as "fair" or "poor" were also more likely to be dissatisfied (OR, 1.40; 95% CI, 1.04-1.87).

Multivariable predictors of dissatisfaction with managed care differed from the predictors of satisfaction with their current practice. Except for physicians with larger numbers of managed care contracts, personal and practice characteristics were generally not related to satisfaction with managed care. In contrast to satisfaction with their current practice, availability of services was an important predictor (OR, 1.52; 95% CI, 1.07-2.17). Finally, whereas the adequacy of reimbursement was also an important predictor of satisfaction with managed care and the ways in which physicians experienced the financial incentives associated with managed care also remained important predictors after adjusting for other factors. Physicians in larger risk pools in which financial penalties or bonuses are determined by a larger number of physicians were less likely to be dissatisfied with managed care (OR, 0.52; 95% CI, 0.30-0.92), whereas those who reported that their personal performance influences their income were more likely to be dissatisfied with managed care (OR, 2.14; 95% CI, 1.39-3.30).

**Sensitivity Analysis**

To test the sensitivity of our results to nonresponse bias, we calculated the number of additional responses we would need to have received in the 1999 survey to achieve the same response rate that was achieved in 1996. We then estimated the proportion of these responses that would have had to report being satisfied with either managed care or their current practice situation for there to have been no difference in dissatisfaction rates between 1996 and 1999. For both primary end points, even if 100% of the approximately 320 required additional respondents had reported that they were satisfied, the dissatisfaction rates in 1999 would still have been significantly higher than those observed in 1996.

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**DISCUSSION**

We found an almost 2-fold increase in the number of PCPs in Massachusetts who were very dissatisfied with their practice situation between 1996 and 1999 and a 4-fold increase in the number of physicians who were very dissatisfied with managed care in the same period. Physicians in all types of practices and in all of the sampled managed care plans had comparable levels of dissatisfaction. Physicians also reported

**Table 3.** Physician and Practice Characteristics and Physician Dissatisfaction—1999 Survey of Massachusetts PCPs (Continued)

	Proportion of Sample	Proportion Somewhat or Very Dissatisfied	
		Current Practice	Managed Care
<b>Influences on Practice</b>			
Medical group, IPA, or PHO restricts choice of specialists		†	
No	49.7	37.5	47.9
Yes	50.3	62.5	52.1
Medical group, IPA, or PHO restricts choice of hospitals		†	
No	40.8	27.3	38.6
Yes	59.2	72.8	61.4
Amount of influence on group referral policies		*	*
Any	69.3	62.8	66.0
None	30.7	37.2	34.0
Amount of influence on group reimbursement policies		†	*
Any	52.6	40.2	49.3
None	47.4	59.8	50.7
Medical groups influence the way care is provided			
None to some	54.4	57.2	56.5
A lot	45.6	42.8	43.5
Other physician organizations influence the way care is provided			*
None to some	78.3	74.0	75.7
A lot	21.7	26.0	24.3
Managed care plans influence the way care is provided		†	
None to some	78.7	71.2	76.5
A lot	21.3	28.8	23.5
Availability of subspecialists for referrals		†	†
Good to excellent	87.3	80.9	82.2
Fair or poor	12.7	19.2	17.8
Ability to exercise independent medical judgment		†	†
Good to excellent	90.8	82.9	86.4
Fair or poor	9.2	17.1	13.6

(continued on following page)

PCPs indicates primary care physicians; IDS, integrated delivery system; IPA, independent practice association; PHO, physician hospital organization.

\* $P < .05$  for the difference between respondents who are very or somewhat dissatisfied with managed care and those who are not.

† $P < .001$  for the difference between respondents who are very or somewhat dissatisfied with managed care and those who are not.

‡ $P < .01$  for the difference between respondents who are very or somewhat dissatisfied with managed care and those who are not.

§Physicians in an IDS can also be members of an IPA or PHO. "None" refers to physicians who are not in an IPA, PHO, or IDS.

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**Table 3.** Physician and Practice Characteristics and Physician Dissatisfaction—1999 Survey of Massachusetts PCPs (Continued)

	Proportion of Sample	Proportion Somewhat or Very Dissatisfied	
		Current Practice	Managed Care
<b>Financial Factors and "Hassles"</b>			
Primary payment type			
Salary	37.8	36.8	36.6
Fee for service	26.8	26.7	28.3
Mixed	27.3	30.8	27.2
Capitated	4.9	3.6	4.5
Other	3.2	2.2	3.4
Personal performance affects income			
Yes	71.3	75.0	73.9
No	28.7	25.1	26.1
Practice performance affects income			
Yes	59.1	61.6	60.7
No	40.9	38.4	39.3
Risk pool size ≥50			
No	86.8	86.8	89.6
Yes	13.2	13.2	10.4
Not paid on time			
Never to twice	68.7	63.0	60.6
Several times or regularly	31.3	37.0	39.4
Denied payment			
Never to twice	71.9	67.2	64.2
Several times or regularly	28.1	32.8	35.9
Fee schedule or capitation rate			
Good to excellent	52.6	41.0	41.6
Fair or poor	47.4	58.9	58.4
Information given to enrollees about benefits and referrals			
Good to excellent	60.8	48.2	52.3
Fair or poor	39.2	51.8	47.7
Ease of obtaining referral authorizations, completing paperwork, and appealing denied claims and claims processing			
Good to excellent	83.9	76.2	77.6
Fair or poor	16.1	23.8	22.4

PCPs indicates primary care physicians; IDS, integrated delivery system; IPA, independent practice association; PHO, physician hospital organization.

\**P* < .05 for the difference between respondents who are very or somewhat dissatisfied with managed care and those who are not.

†*P* < .001 for the difference between respondents who are very or somewhat dissatisfied with managed care and those who are not.

‡*P* < .01 for the difference between respondents who are very or somewhat dissatisfied with managed care and those who are not.

§Physicians in an IDS can also be members of an IPA or PHO. "None" refers to physicians who are not in an IPA, PHO, or IDS.

that the burden of treating patients in the 1999 managed care environment had increased substantially since 1997.

The most recent studies on physician satisfaction used survey data from 1995 or 1996, which might not reflect adequately the current state of the healthcare market. Nevertheless, our data are consistent with these previous reports. In California, physicians were less satisfied with their career in 1996 than in 1991, and, in the same period, the perceived level of autonomy among physicians also declined markedly.<sup>17</sup> Another study<sup>21</sup> reported that 27% of physicians in states with "high HMO penetration" (including Massachusetts) were dissatisfied with their current practice in 1995. In addition, the 1991 Survey of Young Physicians demonstrated that physicians in markets with higher HMO penetration were less likely to be very satisfied with their current practice.<sup>22</sup>

Overall satisfaction and satisfaction with managed care are related to different factors. In addition to personal characteristics such as years in practice and specialty, overall satisfaction was most strongly related to external influences on practice, such as restrictions on hospital choice and the extent to which managed care plans influence physicians' prac-

tices. Satisfaction with managed care, however, seems to be more related to aspects of managed care that might make practice more difficult, such as increasing numbers of contracts and difficulties in obtaining services for their patients.

The adequacy of the fee schedule or capitation rates was an important determinant of dissatisfaction with current practice and dissatisfaction with managed care, and dissatisfaction with managed care was strongly related to the extent to which the physicians' own performance influenced how they were paid. With respect to managed care, physician dissatisfaction also seems to stem from the sense of conflict engendered by financial incentives that physicians think are not in the best interests of their patients. Physicians whose incentives were diluted by large risk pools were less dissatisfied with managed care, whereas those whose personal performance influenced their compensation were more dissatisfied. These findings are consistent with a survey of California physicians conducted in 1996.<sup>24</sup> In that study, satisfaction was significantly related to the financial incentives experienced by physicians. As in our study, physicians with an incentive based on productivity were less likely to be satisfied.

**Table 4.** Adjusted Predictors of Dissatisfaction With Managed Care and Practice Satisfaction—1999 Survey of Massachusetts PCPs\*

	Somewhat or Very Dissatisfied	
	Current Practice	Managed Care
<b>Personal and Practice Characteristics</b>		
Female (vs male)	1.19 (0.75-1.90)	0.99 (0.61-1.63)
Medical school graduation >10 y (vs ≤10 y)	2.01 (1.02-3.96) <sup>†</sup>	1.77 (0.94-3.33)
Specialty (vs general medicine)		
Family medicine	0.50 (0.27-0.92) <sup>†</sup>	0.53 (0.29-1.46)
Specialists who primarily work as PCPs	2.65 (1.11-6.33) <sup>†</sup>	1.20 (0.51-2.83)
General pediatrics	0.56 (0.33-0.95) <sup>†</sup>	0.86 (0.51-1.46)
Practice type (vs solo)		
Single specialty	2.26 (0.83-6.12)	0.86 (0.35-2.13)
Multispecialty	1.81 (0.66-5.00)	0.70 (0.28-1.75)
Hours per week (vs ≤40)		
41-50	1.03 (0.62-1.71)	0.69 (0.42-1.13)
51-60	0.80 (0.47-1.37)	0.56 (0.34-0.95) <sup>†</sup>
≥61	1.68 (0.89-3.17)	1.35 (0.64-2.88)
Patients in managed care, % (vs ≤25)		
26-50	0.89 (0.29-2.72)	0.64 (0.23-1.80)
51-75	0.74 (0.24-2.21)	0.62 (0.22-1.70)
76-100	0.87 (0.29-2.62)	0.71 (0.25-2.08)
Managed care contracts, No. (vs 0-4)		
5-9	1.59 (0.93-2.73)	2.19 (1.26-3.80) <sup>†</sup>
≥10	1.78 (0.99-3.21)	2.15 (1.17-3.98) <sup>†</sup>
Part of an integrated delivery system (vs not)	0.73 (0.40-1.35)	0.70 (0.38-1.29)
Part of a PHO or IPA only (vs not)	0.71 (0.40-1.27)	0.71 (0.39-1.31)
<b>Influences on Practice and Autonomy</b>		
Rating of ability to exercise independent medical judgment	1.13 (0.87-1.47)	1.35 (0.82-2.22)
Medical group, IPA, or PHO restricts choice of specialists (vs not at all)	1.10 (0.65-1.86)	0.90 (0.53-1.53)
Medical group, IPA, or PHO restricts choice of hospitals (vs not at all)	2.23 (1.30-3.78) <sup>†</sup>	1.35 (0.81-2.23)
Any influence on group referral policies (vs none at all)	1.07 (0.40-2.89)	0.82 (0.36-2.07)
Medical groups influence the way care is provided "a lot" (vs not at all)	0.87 (0.57-1.33)	0.89 (0.59-1.34)
Any influence on group reimbursement policies (vs none at all)	0.44 (0.25-0.75) <sup>†</sup>	0.90 (0.53-1.53)
Other physician organizations influence the way care is provided "a lot" (vs not at all)	0.77 (0.45-1.33)	1.66 (0.99-2.75)
Managed care plans influence the way care is provided "a lot" (vs not at all)	1.85 (1.10-3.11) <sup>†</sup>	1.72 (0.97-3.04)
Availability of services <sup>‡</sup>	1.09 (0.78-1.52)	1.52 (1.07-2.17) <sup>†</sup>
<b>Financial Factors and "Hassles"</b>		
Personal performance affects income (vs not)	1.17 (0.75-1.84)	2.14 (1.39-3.30) <sup>†</sup>
Risk pool size ≥50 (vs <50)	0.80 (0.43-1.48)	0.52 (0.30-0.92)
Denied payment (vs never to twice)	1.30 (0.80-2.35)	1.65 (1.02-2.67) <sup>†</sup>
Managed care "hassles" <sup>§</sup>	1.14 (0.80-1.62)	1.07 (0.93-1.83)
Rating of the fee schedule or capitation rate	1.40 (1.04-1.87) <sup>†</sup>	1.41 (1.08-1.83) <sup>†</sup>
Rating of adequacy of benefit information given to enrollees	1.21 (0.96-1.52)	1.17 (0.94-1.45)

PCPs indicates primary care physicians; PHO, physician hospital organization; IPA, independent practice association.

\*Data are given as odds ratios (95% confidence intervals).

<sup>†</sup>P < .05.

<sup>‡</sup>Includes availability of behavioral health services and of other subspecialists for referrals.

<sup>§</sup>Combination of ease of obtaining referral authorizations, completing paperwork, and appealing denied claims and claims processing.

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## PHYSICIAN SATISFACTION

More than 90% of Massachusetts physicians said that their ability to exercise independent judgment was good, very good, or excellent, suggesting that Massachusetts health plans do not overly constrain physician decision making. The impact of external influences on practice is thus experienced in more subtle ways. For instance, physicians who felt that managed care and other physician organizations influence their practice were more likely to be dissatisfied with their overall practice. Denied claims were an important determinant of managed care dissatisfaction.

This study has several limitations. The first is the relatively low response rate for the second survey. For a variety of reasons, including increased time pressures, it is getting more difficult to achieve good response rates to physician surveys. In addition, we were unable to offer monetary incentives, which have been used to increase response rates in other physician surveys. Despite the low response rate, however, the characteristics of the representative cross section in 1996 were almost identical to the 1999 sample, suggesting that the samples were similar. More important, whereas one can speculate whether dissatisfied physicians would be more likely to respond in order to vent their frustration or less likely to respond out of frustration with managed care and lack of time, our sensitivity analysis demonstrates that the differences we observed cannot be explained by differential nonresponse bias. Second, we were unable to explore the consequences of career dissatisfaction, such as early retirement or physicians moving to other states.

Physician career satisfaction has several important implications for patient care and patient satisfaction. First, there is previous evidence that patients cared for in settings with more satisfied physicians are themselves more satisfied with care.<sup>25,26</sup> Second, physicians who are satisfied with their practice situation and the support they get probably are able to provide better care. Third, the ability of managed care to influence how care is provided depends on the relationship between managed care (or other) organizations and physicians. To the extent that dissatisfaction is a marker of a poor relationship, the ability of managed care organizations to influence clinical decisions will be compromised, and the tools and strategies that managed care organizations use to effect such change will not result in increasing quality and lower costs. Instead they will be perceived as hassles and will lead to dissatisfied physicians.

Thus, we believe that the very high levels of dissatisfaction among Massachusetts PCPs in 1999 are reason for grave concern. Our results are especially troubling when one considers that Massachusetts is dominated by not-for-profit health plans that consistently receive among the best ratings of quality in the entire country.<sup>27</sup> Continued erosion of physician satisfaction could have significant implications for the future in terms of quality of care and the quality of the workforce that is attracted to medicine as a career. Efforts are needed to develop new strategies for improving the quality and efficiency of medical care that support and energize physicians rather than alienate them.

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