

Doctor Discontent

A Comparison of Physician Satisfaction in Different Delivery System Settings, 1986 and 1997

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OBJECTIVE: To examine the differences in physician satisfaction associated with open- versus closed-model practice settings and to evaluate changes in physician satisfaction between 1986 and 1997. Open-model practices refer to those in which physicians accept patients from multiple health plans and insurers (i.e., do not have an exclusive arrangement with any single health plan). Closed-model practices refer to those wherein physicians have an exclusive relationship with a single health plan (i.e., staff- or group-model HMO).

DESIGN: Two cross-sectional surveys of physicians; one conducted in 1986 (Medical Outcomes Study) and one conducted in 1997 (Study of Primary Care Performance in Massachusetts).

SETTING: Primary care practices in Massachusetts.

PARTICIPANTS: General internists and family practitioners in Massachusetts.

MEASUREMENTS: Seven measures of physician satisfaction, including satisfaction with quality of care, the potential to achieve professional goals, time spent with individual patients, total earnings from practice, degree of personal autonomy, leisure time, and incentives for high quality.

RESULTS: Physicians in open- versus closed-model practices differed significantly in several aspects of their professional satisfaction. In 1997, open-model physicians were less satisfied than closed-model physicians with their total earnings, leisure time, and incentives for high quality. Open-model physicians reported significantly more difficulty with authorization procedures and reported more denials for care. Overall, physicians in 1997 were less satisfied in every aspect of their professional life than 1986 physicians. Differences were significant in three areas: time spent with individual patients, autonomy, and leisure time ($P \leq .05$). Among open-model physicians, satisfaction with autonomy and time with individual patients were significantly lower in 1997 than 1986 ($P \leq .01$). Among closed-model physicians, satisfaction with total earnings and with potential to achieve professional goals were significantly lower in 1997 than in 1986 ($P \leq .01$).

CONCLUSIONS: This study finds that the state of physician satisfaction in Massachusetts is extremely low, with the majority of physicians dissatisfied with the amount of time they have with individual patients, their leisure time, and their

incentives for high quality. Satisfaction with most areas of practice declined significantly between 1986 and 1997. Open-model physicians were less satisfied than closed-model physicians in most aspects of practices.

KEY WORDS: health maintenance organizations; job satisfaction; physicians' practice patterns; United States; professional autonomy.

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By many accounts, American physicians are becoming increasingly dissatisfied with many aspects of their professional life. A number of recent articles and editorials report that the level of discontent is rising.¹⁻⁶ The question inevitably follows: should we care about unhappy doctors? There are a number of reasons why physician satisfaction matters. Numerous studies report that dissatisfaction leads to increased physician turnover, which leads to decreased continuity of care for patients and increased costs to the medical system.^{7,8} Other research has found a positive relationship between physician satisfaction and patient satisfaction with the medical encounter.⁹⁻¹² It is also probable that physician satisfaction affects the morale of health care workers and office staff who work closely with physicians. Doctors may also be demonstrating their dissatisfaction in new ways: there is talk of unionization and opting out of managed care,^{1,13,14} and disability claims for physicians have increased markedly over the past few years.^{15,16} From a financial point of view, society has invested a large amount of money in the training of each physician, and to have them leave the work force early, because of either disability or retirement, is a poor investment.

Satisfaction can be conceptualized as the difference between expectations and reality. That is, one can think of physician satisfaction as being determined both by factors intrinsic to the physician (e.g., the satisfaction derived from a job well done or a diagnostic challenge met) and by extrinsic factors (e.g., hours worked, financial remuneration, and working relationships with patients and colleagues). It follows that satisfaction is not a stable property of the medical profession itself, but a balance between physicians' changing expectations and the shifting environment within which physicians work.

The research literature suggests that dissatisfaction in the medical profession is not new. Studies of physician job stress and physician satisfaction in the past have consistently identified excessive workloads and time pressures,^{9,17-20} limited personal time,¹⁷ paperwork associated with patient care,^{20,21} problems associated with

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patient communication,²² and patients not responding to treatment²¹ as causes of physician stress and dissatisfaction. It has been suggested that these problems reflect stresses that are an inevitable part of the practice of medicine.²³ More recent studies have identified new areas of dissatisfaction, which have appeared on the horizon since the advent of managed care: decreased professional autonomy over clinical decisions^{2,24-31} and decreased time with patients.^{2,27}

There is some evidence to suggest that these problems increase with increasing level of managed-care penetration within a region or within an individual practice.^{2,3,26,32-36} Why would physician satisfaction be related to the presence of managed care? Some research suggests that physicians are less satisfied when working in larger organizations than in smaller practice settings.³⁷ Other studies report that physicians struggle to balance their traditional role as patient advocate with the financial incentives from managed care that seek to control spending^{1,38,39} and time with patients.³⁴

However, it may be an oversimplification to consider the relationship between physician satisfaction and managed care without reference to the type of practice setting in which care is provided. It seems likely that physician satisfaction in managed care settings will depend, in part, on physician's professional expectations and also on the substantive characteristics of the practice setting (i.e., expectations and reality). In particular, one may expect to find differences in the professional satisfaction among physicians in open- versus closed-model practice settings. By closed-model settings, we refer to practices in which physicians work exclusively for one HMO (i.e., staff- and group-model HMO), while open-model practices refer to those in which physicians serve patients with multiple forms of insurance (i.e., they do not have an exclusive relationship with any single health plan). Closed-model physicians actively selected to practice in a managed care organization (staff- or group-model HMO), while physicians in open-model practice settings may have come to work with managed care plans largely out of necessity as the plans became increasingly prevalent in their area over the past decade. Thus, the two groups may differ substantially in their expectations concerning their professional life, and their objective work environments may differ as well, leading to differences in their satisfaction. Indeed, a recent California-based study found that physicians in closed-model HMO practices were more satisfied with their autonomy and administrative issues, but less satisfied overall, than physicians in open-model settings.³⁴

The present study uses data from two surveys of Massachusetts physicians, one in 1986 and one in 1997, to compare the professional satisfaction of physicians in open- and closed-model practice settings, and to examine how physician satisfaction changed during a period of substantial delivery system change. Using data from a longitudinal study of health care delivery in Massachu-

setts, we compared physician satisfaction in open- and closed-model systems in 1997. Using a second longitudinal study from 1986, we examined whether there was an observable shift in physician satisfaction from 1986 to 1997, and whether this differed by practice model-type.

METHODS

Study Design

Data for these analyses come from two longitudinal studies of patients' health care utilization and health outcomes: the Study of Primary Care Performance in Massachusetts (PCPM) and the Medical Outcomes Study (MOS).

The Study of Primary Care Performance in Massachusetts was a longitudinal study conducted between 1996 and 1999. The PCPM included physicians and adult patients from five different types of health plans (staff-model HMO, group-model HMO, independent practice association/network-model HMO, point-of-service, and managed indemnity). A survey of study participants' primary care physicians was conducted between March and May, 1997. The study contacted 2,078 physicians using a three-stage mail survey protocol, supplemented with express mail follow-up of nonrespondents. Of these, 158 physicians were excluded due to incorrect address or ineligibility. Overall, 992 physicians responded to the survey (51.7% response rate). Respondents and nonrespondents did not differ in gender or number of years since medical school graduation. A slightly greater percentage of respondents than nonrespondents were generalists, i.e., primary specialty family medicine or general internal medicine (81% vs 78% respectively, $P = .05$). Obtaining higher rates of response from physicians is historically difficult and growing more so. The rate that we obtained is consistent with other published surveys of physicians.^{34-36,40,41}

The MOS was an observational study conducted between 1986 and 1990 in Boston, Chicago, and Los Angeles. The study included physicians and adult patients from prepaid and fee-for-service settings. In each city, one large staff- or group-model HMO, several multi-specialty groups, and representative solo and single-specialty practices were selected. All multi-specialty group physicians participated in at least one IPA or network-model HMO. A portion of solo practices accepted a mixture of prepaid and fee-for-service patients, and the remainder cared for fee-for-service patients only. Within each selected practice, physicians who were board certified or board eligible in family medicine, general internal medicine, endocrinology, or cardiology were invited to participate. In total, 266 eligible clinicians practicing within an HMO or multi-specialty group were contacted and 245 (92.1%) completed clinician background questionnaires. As well, 511 eligible solo practitioners were contacted and 338 (66.1%)

completed physician background questionnaires. Further details of practice and clinician sampling strategies are provided elsewhere.⁴²

Physicians in both studies were asked an identical set of six questions about their satisfaction with the following aspects of their professional life: quality of care they are able to provide; potential to achieve their professional goals; time spent with each patient; total earnings from practice; personal autonomy; and time for family and personal life. The PCPM asked about one additional aspect of satisfaction not included in the MOS questionnaire: incentives for high quality in their practice. For each question, physicians were given five response choices: very satisfied, satisfied, neither satisfied nor dissatisfied, dissatisfied, very dissatisfied. The items were developed as part of the Medical Outcomes Study.⁴³ Items were selected based on their salience to office-based physicians, their utility in discriminating between systems of care, their demonstrated importance in the literature, and their relevance to policy deliberations.⁴³ In 1986, the items were pretested on a group of physicians in solo practice, and items were reworded, dropped, or redesigned based on the results. Both the MOS and PCPM data provide evidence of high data quality for these items, with extremely low missing data rates, and distributions that included all available response choices used for each item, and acceptable rates of respondents choosing the top-most and bottom-most response choices.

The PCPM survey contained additional questions about the physician's health plan and the process of care. Physicians were asked to name their principal plan (the plan which insures the largest number of their patients) and then were asked to rate their plan's authorization process and to report the number of denials (for referrals, tests, or hospitalizations) that they had had in the past year. In addition, physicians were asked a series of questions about their attitudes and experiences with their principal plan, considering all the health plans they were affiliated with. They were asked questions about how restricted they felt in discussing alternative medical treatments, the amount of time they spent getting the health plans' approval for care for their patients, the amount of time they spent explaining rules and coverage limits to patients, whether they thought their plan had a gag rule, and whether they would recommend the plan to family and friends.

Analytic Method

We compared the sociodemographic profiles and practice characteristics of the physicians in the two studies using normal tests (*z* test). In the present analysis, only generalist physicians were considered. From the MOS sample, only physicians practicing in the Boston area were included. Chicago and Los Angeles physicians were excluded to ensure that the MOS physicians practiced in the same geographic area as the PCPM physicians. To further rule out confounding due to geographic factors, we tested

the sensitivity of our results to a sample restricted to physicians from ZIP codes common to both studies.

Physicians in both the MOS and PCPM were categorized as working in either open- or closed-model practice settings. Physicians in staff or group model HMOs, each of which had exclusive physician-plan contracts, were categorized as closed-model physicians. Physicians who did not have an exclusive arrangement with one health plan (i.e., those whose practice involved patients from multiple health plans and insurers) were categorized as open-model physicians. In the MOS, this included doctors in solo and multi-specialty practices. In the PCPM study this included doctors of patients in IPA/network model HMOs, point-of-service, and managed indemnity plans. There were 110 physicians in the PCPM study for whom model type could not be definitively established. These physicians were excluded from model-type comparisons.

Physician Satisfaction in Open- versus Closed-models of Care

Using data from the PCPM, we compared the satisfaction of physicians practicing in open- versus closed-model practices. For the purpose of analysis, each satisfaction item was divided into a binary variable: proportion of physicians satisfied (including response choice "very satisfied" or "satisfied") versus physicians not satisfied (including response choice "neither satisfied nor dissatisfied," "dissatisfied," or "very dissatisfied"). Individual regression models were constructed for each satisfaction item. The main effect of interest was a binary indicator of practice setting (open versus closed). All regression models controlled for physician sociodemographic variables (physician's age, race, and gender). The percentage satisfied was compared across open- and closed-model physicians using an unpaired *t* test.

Plan-related Experiences and Attitudes of Physicians in Open- and Closed-model Systems

Using data from the PCPM, we compared plan-related experiences and attitudes of physicians in open- and closed-model systems in 1997. The proportion of physicians in each group who rated their plan's authorization process as fair, poor, or very poor, and the proportion of physicians in each group who reported one or more denial of care were compared using a *t* test. The proportion of physicians in each group who agreed with a given attitude and the proportion of physicians who definitely recommended their plan were also compared using a *t* test. All results were adjusted for physician sociodemographic characteristics (age, race, and gender).

Changes in Physician Satisfaction

We then examined changes in physician satisfaction from 1986 to 1997. We compared all physicians in 1986 to all physicians in 1997 along the six measures of physician satisfaction asked in both studies. Differences in the

Table 1. Characteristics of Physicians Surveyed, 1986 and 1997

	Medical Outcomes Study 1986 (n = 104)	Primary Care Performance in Massachusetts 1997 (n = 788)
Age, y (mean)	40.0 (6.4)	47.5 (9.7) [‡]
Female, %	21.0	25.0
White, %	77.0	92.0 [‡]
Medical specialty		
General internist, %	78.8	75.2
Family physician, %	21.2	23.2
General practitioner, %	—	1.6
Open-model practice setting, %	61.5	82.0 [‡]
Closed-model practice setting, %	38.5	18.0 [‡]
Hours per week (mean)	48.6 (12.9)	54.0 (15.3) [†]
Visit length with established patients, min (mean)	NA	16.0 (5.9)

* P < .05.

† P < .01.

‡ P < .001.

distribution of satisfaction between the two studies were compared using a z test statistic from the Wilcoxon rank sum test for unmatched samples. We then looked separately at changes in open-model physician satisfaction from 1986 to 1997 and changes in closed-model physician satisfaction from 1986 to 1997. Results were tested with and without adjustment for physician's age, race, and gender. *t* tests were used to assess significance of the changes.

RESULTS

The demographics, specialty, and practice characteristics of physicians in the two studies are summarized in

Table 1. PCPM doctors were significantly older than MOS doctors (mean age of 48 compared to 40, $P < .001$). The PCPM doctor population also had a greater proportion of doctors who were white (92% vs 77%, $P < .001$). There were no significant differences in the distribution of medical specialties between the two samples of generalists. A greater proportion of physicians in the PCPM were in open-model systems (82% vs 62%, $P < .001$). The PCPM physicians also worked significantly more hours than the MOS physicians (mean = 54 vs 49 hours per week, $P < .01$). When stratified by model of practice (open vs closed), the number of hours physicians worked in 1986 did not differ by model type (49 vs 48 hours per week, $P = .69$); while in 1997, open-model doctors averaged significantly more hours per week than closed-model physicians (55 vs 49 hours per week, $P = .0001$). In 1997, there was no difference in the average length of patient visits reported by physicians in open- versus closed-model practices (16 minutes for both, $P = .58$). Data on visit length were not available in the 1986 study.

Table 2 presents a comparison of satisfaction among doctors practicing in open- versus closed-models of health care delivery in 1997. Doctors in closed-model practices were more satisfied than open-model physicians in six of seven aspects of professional life. Differences were statistically significant in three areas (total earnings, time for family and personal life, and incentives for high quality, $P < .05$), and marginally significant in one area (autonomy, $P < .10$).

Table 3 compares the plan-related experiences and attitudes of physicians in open- and closed-model systems in 1997. Open-model physicians' evaluations of their plan's authorization processes were significantly lower (percent fair, poor, or very poor) than their counterparts in closed-model practices ($P < .01$). Open-model physicians reported significantly more denials from their plan in the past year for specialist referrals, tests or procedures, inpatient admissions and length of hospital stay ($P < .001$). Open-model physicians reported that they spent significantly

Table 2. Comparing Physician Satisfaction in Open- versus Closed-model Practices, 1997*

Percent of Physicians Satisfied or Very Satisfied with:	All Physicians [†] (n = 788)	Open-model Physicians (n = 548)	Closed-model Physicians (n = 120)
Quality of care able to provide	90.9	91.1	91.2
Potential to achieve professional goals	73.4	74.0	72.5
Time with individual patients	42.2	41.0	46.1
Total earnings	55.1	53.2	64.3 [§]
Autonomy	59.7	58.0	67.6 [‡]
Time for family and personal life	32.0	29.5	42.2
Incentives for high quality	35.2	30.8	49.1 [¶]

* Results are adjusted for physician age, race, and gender.

† In the sample (n = 788), there were 110 physicians whose model-type could not be classified.

‡ P ≤ .10.

§ P ≤ .05.

|| P ≤ .01.

¶ P ≤ .001.

Table 3. Comparing Plan-related Experiences and Attitudes of Physicians in Open- and Closed-model Systems, 1997*

	Open-model (N = 548)	Closed-model (N = 120)
Negative rating of plan's authorization process (% fair, poor, very poor)		
Referrals	34	10 [‡]
Procedures and diagnostic testing	27	6 [‡]
Inpatient admissions	16	5 [‡]
Denials in the past year, % with 1 or more		
Referral to specialist	45	24 [‡]
Test or procedure	42	17 [‡]
Inpatient admission	18	3 [‡]
Length of hospital stay	45	7 [‡]
Attitudes and experiences regarding plan's authorization process		
Often have to explain rules and coverage limits to patients, % agree	84	66 [‡]
Spend an inordinate amount of time seeking plan approval for patients' care, % agree	48	12 [‡]
Feel restricted in discussing treatment options with patient, %	36	22 [†]
Hours per week spent seeking authorization from plans, mean	2.9	1.2 [‡]
Perceived gag rule in plan contract		
Yes, %	15	0 [‡]
Not sure, %	44	13 [‡]
Willingness to recommend		
Definitely recommend plan to family and friends, %	43	75 [‡]

* Results are adjusted for physician age, race, and gender.

[†] $P \leq .01$.

[‡] $P \leq .001$.

more time explaining rules and coverage limits to patients, and more time seeking plan approval for patients' care ($P < .001$). On average, open-model physicians reported spending 2.9 hours per week seeking authorization from plans, compared with 1.2 hours among closed-model physicians ($P < .001$). Significantly more physicians in open-model systems reported feeling restricted in discussing treatment options with their patients (36%), compared to physicians in closed-models (22%, $P < .01$). The majority of open-model physicians thought their plan had a gag rule or were not sure (59%); while in closed-models, no physicians thought their plan had a gag rule and only 13% weren't sure. Finally, 43% of open-model physicians would definitely recommend their plan to family and friends, while 75% of closed-model physicians would do so ($P < .001$).

Table 4 shows the distribution of responses to each of the satisfaction items among physicians in 1986 (MOS) and in 1997 (PCPM). For all aspects of professional life, satisfaction was lower in 1997 than in 1986; and the differences were statistically significant for three aspects of practice: amount of time spent with individual patients ($P < .01$), personal autonomy ($P < .001$), and time available for family and personal life ($P < .05$). Less than half of doctors in the 1997 survey were satisfied with their time with individual patients, leisure time, and incentives for high quality in their practice. In both years, doctors were most satisfied with the quality of care they were able to provide (97% in MOS and 92% in the PCPM study).

Table 5 compares physicians' satisfaction in the two studies, stratified by practice model-type (open vs closed), and controlling for physician demographics (age, gender,

and race). For all physicians combined, the adjusted results differ in some limited ways from the unadjusted results (Table 4). After adjustment, a fourth aspect of satisfaction emerged as significantly lower in 1997 than 1986 (quality of care you are able to provide, $P \leq .05$), while that comparison had been statistically equivalent ($P = .15$) before adjustment. Adjusting does not substantively change any of the other comparisons.

Open-model physicians were significantly less satisfied in 1997 versus 1986 with two aspects of care: their time with individual patients ($P \leq .001$), and personal autonomy ($P \leq .01$). In closed-model practices, physicians were less satisfied with their potential to achieve their professional goals ($P \leq .01$) and their total earnings from practice ($P \leq .01$) in 1997 versus 1986. We tested the sensitivity of the results in Table 5 to geographic differences in the study samples by limiting the analyses to physicians in ZIP codes common to both studies (e.g., excluding PCPM doctors from outside of the Boston area). The results were unchanged.

DISCUSSION

Our findings support recent reports suggesting that physician satisfaction is low and that it is declining. In 1997, less than two-thirds of physicians were satisfied in most areas of practice and less than half were satisfied with their time with individual patients, leisure time, and incentives for high quality. For most aspects of practice, satisfaction was lower among open-model physicians than among their counterparts in closed-model settings in 1997, with significant differences in their satisfaction with total

Table 4. Physicians' Responses to Satisfaction Items, 1986 versus 1997*

How Satisfied Are You with the Following:	Very Satisfied, %	Satisfied, %	Neither Satisfied nor Dissatisfied, %	Dissatisfied, %	Very Dissatisfied, %	P Value †
Quality of care you are able to provide?						
MOS (1986)	37.5	59.1	2.3	1.1	0.0	.15
PCPM (1997)	32.4	59.1	5.5	2.8	0.3	
Potential to achieve your professional goals?						
MOS (1986)	22.7	55.7	9.1	11.4	1.1	.54
PCPM (1997)	21.5	52.3	15.8	8.9	1.5	
Amount of time you are able to spend with each patient?						
MOS (1986)	9.1	44.3	26.1	18.2	2.3	<.01
PCPM (1997)	3.6	39.2	24.7	28.9	3.6	
Total earnings from your practice?						
MOS (1986)	11.6	51.2	17.4	16.3	3.5	.36
PCPM (1997)	11.9	43.2	23.5	17.9	3.6	
Degree of personal autonomy?						
MOS (1986)	25.6	50.0	12.8	10.5	1.2	<.001
PCPM (1997)	12.3	47.4	21.2	15.1	4.1	
Time you have available for your family and personal life?						
MOS (1986)	11.6	32.6	14.0	37.2	4.7	.02
PCPM (1997)	4.5	28.5	17.8	38.5	10.7	
Incentives for high quality in your practice? ‡						
MOS (1986)	—	—	—	—	—	—
PCPM (1997)	5.5	30.0	36.1	21.7	6.9	

* Data are unadjusted. 1986 data are from the Medical Outcomes Study (MOS) (n = 104). 1997 data are from the Study of Primary Care Performance in Massachusetts (n = 788).

† P value represents significance of Wilcoxon rank sum test statistic for unmatched samples.

‡ This item was not asked in the MOS.

earnings, time for family and personal life, and incentives for high quality (Table 2).

Why should physicians in the closed-model settings be more professionally satisfied than those in the open-model? The most probable explanation is that this difference in

satisfaction reflects objective differences in the professional environments of open- and closed-model physicians. Data from the present study support this hypothesis. In 1997, open-model physicians reported working significantly longer hours than closed-model

Table 5. Changes in Physicians' Professional Satisfaction, Open- versus Closed-model HMOs, 1986-1997*

Percent of Physicians Satisfied or Very Satisfied with:	All Physicians		Open-model Physicians		Closed-model Physicians	
	1986 (N = 104)	1997 (N = 788)	1986 (n = 64)	1997 (n = 548)	1986 (n = 40)	1997 (n = 120)
Quality of care able to provide	97.7	90.9 [‡]	97.9	90.8 [†]	97.0	90.1
Potential to achieve professional goals	80.9	73.4	70.1	74.0	94.5	69.3 [§]
Time with individual patients	56.1	42.2 [‡]	67.5	41.3	36.8	43.7
Total earnings	64.5	55.1	48.0	53.6	87.9	62.1 [§]
Autonomy	77.0	59.7 [§]	77.9	58.2 [§]	76.7	64.2
Time for family and personal life	47.5	32.0 [§]	40.0	29.5	57.3	39.3 [†]
Incentives for high quality in your practice	—	35.2	—	30.8	—	49.1

* Results are adjusted for physician age, race, and gender.

† P < .10.

‡ P < .05.

§ P < .01.

|| P < .001.

physicians. Open-model physicians indicated greater difficulties with their plan's authorization process, reporting substantially more denials from their plan for specialist referrals, tests, and inpatient admissions. In addition, open-model physicians reported spending more time explaining coverage to their patients and more hours per week seeking authorization from plans than their closed-model counterparts. The differences may owe partly to the fact that many open-model physicians are dealing with multiple plans, which complicates and compounds tasks such as obtaining authorization relative to that experienced by doctors in closed-model "one plan" systems. Nonetheless, the findings suggest that there are real differences in the work environments, including processes of care, for open- and closed-model physicians that may contribute to the observed differences in their satisfaction. The findings are consistent with those of a recent study of primary care physicians in California, where physicians in closed-model practices reported less pressure to limit referrals or restrict what they told patients.⁴⁴

It is also possible that open- and closed-model physicians differ in some of their professional expectations and that these contribute to differences in their satisfaction. For example, open-model physicians may represent a group who place a higher value on autonomy and self-determination—choosing private practice settings partly because of this. If this is the case, then the increasing presence of managed care in the professional lives of open-model physicians during the study period (1986–1997) would be expected to displease them more than the closed-model physicians. Certain findings in our study support this hypothesis. Satisfaction with professional autonomy declined substantially among open-model physicians between 1986 and 1997, while it did not change significantly among closed-model physicians. In 1997, a larger percentage of open-model physicians reported feeling restricted in discussing treatment options with their patients and the majority were unclear about whether the plan had a "gag rule." And only 43% said they would recommend the plan to family and friends (compared to 75% of closed-model physicians). The findings parallel those of a California-based study, in which open-model physicians were less satisfied than their closed-model counterparts with their autonomy and with administrative issues.³⁴ These findings suggest that open-model physicians may view the health plans they work with largely as an outside interest, and perhaps as parties that they have opted to work with out of financial necessity rather than a shared set of values and approaches to patient care. By contrast, closed-model physicians, who purposefully chose to work for a single managed care organization, may view their interests as well aligned with those of the plan and its approach to patient care.

In summary, the study data identify objective differences in the work environments of open and closed-model practices that may account for the different levels of

satisfaction in the two physician groups, and the data also suggest that different professional expectations may play a role. However, irrespective of the explanation for the differences in satisfaction, it should not be overlooked that physician satisfaction was markedly lower in both open- and closed-model practice settings in 1997 than in 1986. Satisfaction with four of six aspects of practice studied longitudinally was significantly lower in 1997 (quality of care they are able to provide, time with individual patients, personal autonomy, and time for family and personal life). And in 1997, less than two-thirds of physicians were satisfied with most aspects of practice regardless of which setting they were practicing in, and only one-third were satisfied with the incentives to provide high quality care.

Limitations

This study is subject to the following limitations. First, although we have collected data from a group of generalist physicians in 1986 and compared them to a geographically matched group of generalist physicians in 1997, this is not a strict longitudinal study of the same group of physicians over time. To limit the effect of using different physician groups in each study, the results are adjusted for physician and patient characteristics which might confound physician indicators of satisfaction (physician age, race, gender, plan type, and average patient income) and controlled for geographic or market effects by restricting the analyses to data obtained from physicians in the same geographic area. Despite this, there may be some differences between the physician groups which were not measured and therefore not controlled for in the analysis.

Second, the study presents the views of generalist physicians practicing in Massachusetts. While several of the findings parallel those observed in two California-based studies of open- and closed-model physicians,^{34,44} these findings may not generalize to other areas of the country, particularly areas where managed care penetration or other delivery system characteristics differ substantially, or to other specialties. Nonetheless, the study's findings provide perspective by monitoring changes in physician satisfaction over a period in which managed care penetration increased substantially in one area of the country.

One final limitation pertains to our measure of physician autonomy. The survey item asked physicians about their satisfaction with "their degree of personal autonomy." There are no data to clarify which aspect of autonomy weighed most heavily in physicians' thinking as they responded to this item (e.g., autonomy in medical decision making, in running their office, or in financial matters) or whether this changed over time. However, supplementary items from the 1997 study shed additional light on physicians' experiences related to issues of autonomy (seeking authorization, denials for care), and how these differed across settings.

CONCLUSIONS

This study finds the state of physician satisfaction in Massachusetts to be extremely low, with the majority of physicians dissatisfied with the amount of time they have with individual patients, their leisure time, and their incentives for high quality. In open-model practice settings, physicians appear particularly dissatisfied, and the data suggest that satisfaction with autonomy has eroded substantially in these settings.

Autonomy over clinical decision making and professional life has consistently been an important issue for physicians.^{2,24-31,45} As the reality of limited resources has grown clearer in the U.S. health care landscape, and managed care has emerged in part to help address these concerns, the ensuing changes in medical practice have been unexpected for many physicians.

If physician satisfaction is, indeed, a product of both reality and expectations, then improving physician satisfaction will require that both be addressed. Organizations that rely on physicians to provide care—from local medical groups to health plans to integrated delivery networks—should take a measure of their professional satisfaction and hear the voices and concerns of physicians about the quality of the workplace as well as the quality of care. When one-third of physicians report dissatisfaction with their incentives to provide high quality care, the organizations in which they work must take a hard look. Likewise, physicians' attitudes and expectations must adapt to the reality of constrained resources that our nation faces, and help define solutions. Resisting and resenting the systems that aim to address the very real problems of cost and quality does little but continue the downward spiral of professional satisfaction. Medical school curricula and professional societies can play a vital role in the gradual reshaping of both the expectations, and the realities of medical practice—and in so doing, serve physicians and patients alike.

A health care system committed to high quality will attend to the satisfaction of its patients, but also foster satisfied physicians and other health care workers. As the U.S. health care delivery systems continue to change and evolve, monitoring the effect of these changes on all relevant participants—physicians and other health care professionals, as well as patients—is critically important.

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