Primary Care Physicians and Capitated Reimbursement

Experience, Attitudes, and Predictors

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Given the explosive expansion of capitated reimbursement for the services of primary care physicians, we conducted a national survey of a random sample of these practitioners to measure attitudes toward capitated payment and identify predictors of important attitudes. Descriptive, factor analytic, and regression techniques were used. The response rate was 54%. As measured by scales derived from factor analysis, perceptions were strong that capitation was costly to professional and patient relationships. Patients' access to care was perceived as slightly reduced. Actual participation in capitation attenuated feelings of lack of access but not those of capitation's costly effects. Physicians' attitudes toward capitation remain negative, but participants perceive their patients' access to appropriate care as reasonable.

KEY WORDS: **primary care physicians; capitation; managed care; access to care.**
J GEN INTERN MED 1997;12:192–194.

Managed health care systems are expanding rapidly throughout the United States especially in the form of independent practitioner associations and preferred provider organizations.[1] Capitated payment for primary care has gained widespread popularity among these systems as a method of inducing physicians to constrain health expenditures for their patients.[1,2] In sporadic local surveys, physicians have expressed misgivings about capitation that include perceptions of limited time spent with patients, decreased quality of care, lack of flexibility to care for the indigent, and poorer relationships with patients.[3–7] Given that privately practicing primary care physicians serve as "gatekeepers" for managed care programs, it is likely that attitudes expressed by these individuals will influence the ethical, medical, and financial direction of managed care organizations. Therefore, after a decade of increasing experience in capitated care, we performed a national survey of primary care physicians to assess their attitudes toward plans that utilize capitated payment.

Received from the Department of Internal Medicine of the University of North Carolina School of Medicine, Chapel Hill, and the Internal Medicine Training Program of The Moses H. Cone Memorial Hospital, Greensboro, NC.

Supported, in part, by a grant from the Education Committee of The Moses H. Cone Memorial Hospital.

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METHODS

In November 1994, questionnaires were mailed to a random sample of 1,400 physicians whose designated primary specialty was family practice, general practice, or general internal medicine in the American Medical Association physician database. A postcard reminder with the opportunity to cite a reason for nonresponse was sent to the initial nonresponders followed by three questionnaire mailings to those who continued not to answer. All individuals who did not return these inquiries were telephoned at their listed address to ascertain the accuracy of their address and their willingness to complete another questionnaire if they met inclusion criteria. Physicians were excluded from analysis if they were retired, disabled, performing less than 50% primary care, practicing in a staff-model health maintenance ogarnization, or not in private practice. Physicians who could not be located by mail or telephone were also excluded.

The questionnaire was derived, in part, from the work of Ellsbury and Montano, who surveyed Washington state primary care physicians in 1986.[6] Items describing attitudes toward diagnostic testing and prescribing were added after pretesting among physicians in central North Carolina. Questions concerning demographic data and capitation are described elsewhere.[8] (For a complete list of attitudinal items, see Table 2.)

Statistical methods were employed as follows: descriptive statistics for demographic and attitudinal items, factor analysis to cluster related attitudinal items and construct scales, Pearson's χ^2 and analysis of variance (ANOVA) to identify predictors of important attitudinal outcomes, regression analysis to adjust for potential confounders, and multiple logistic regression to evaluate the tendency of primary care physicians to participate in or avoid capitated payment plans.

RESULTS

Of 899 eligible subjects, 482 returned questionnaires, yielding a response rate of 54%. Demographic information and data describing physicians' participation in capitation are summarized in Table 1. To assess for bias, demographic comparisons were made between responders and nonresponders; also, attitudinal and demographic data were compared between initial responders (n = 245) and later responders (n = 237). These analyses did not demonstrate any statistically significant differences.

Table 1. Primary Care Physicians and Capitation-Based Payment Plans

Characteristic	
For all respondents (n = 482)	
Age, years	47
Experience in primary care, years	16
Physicians participating in at least one capitated plan, %	48
Specialty, %	
Family practice	44
General internal medicine	46
General practice	10
Gender, %	
Male	84
Female	16
Board certified, %	69
Type of community, %	
Urban	31
Suburban	40
Rural	29
Type of practice, %	
Solo	46
Group	54
Accepting new primary care patients, %	85
For capitation participants (n = 230), %	
Plans requiring patient copayments with each service	93
Plans containing a withholds/risk fund	66
Percentage of practice's patients covered by capitation	22

Table 2. Physicians' Attitudes Concerning Capitated Payment Plans*

Attitudinal Item	Mean (SD)
Capitated payment plans:	
1. Increase tension among physicians	4.6 (1.3)
2. Increase my risk of being sued	4.3 (1.4)
3. Threaten my relationship with patients	4.5 (1.4)
4. Decrease my income relative to the services I provide	4.3 (1.4)
5. Improve the quality of care for patients	2.5 (1.3)
6. Decrease my use of diagnostic tests for a patient with a given diagnosis	4.1 (1.4)
7. Reduce patient access to care	4.1 (1.5)
8. Result in an increased emphasis on preventive care	3.6 (1.5)
9. Decrease the amount of control that I have over my own practice	4.8 (1.3)
10. Cause me to omit tests that may be beneficial for a particular patient	3.8 (1.6)
11. Encourage patients to overutilize office services	4.4 (1.4)
12. Make me think more about the cost of care	4.3 (1.3)
13. Benefit my practice financially	2.8 (1.3)
14. Alter my prescribing (reduce prescribing or emphasize generic drugs)	4.1 (1.5)
15. Sour my relationship with specialists	3.6 (1.4)
16. Decrease health care costs for society	3.0 (1.5)
17. Restrict appropriate referrals	4.1 (1.5)
18. Increase the importance of primary care physicians' role in medicine	4.4 (1.3)
19. Decrease unnecessary utilization of health care	3.2 (1.5)
20. Improve continuity of care	3.0 (1.4)
21. Cause poorer outcomes for sicker patients	3.7 (1.5)
22. Restrict the appropriate use of tests and treatments	4.0 (1.4)
23. Allow covered patients equal access to office visits as compared to fee-for-service patients	3.4 (1.5)

**Responses for each statement based on a 6-point Likert-type scale (1 = strongly disagree, 6 = strongly agree).*

The mean scores for all attitudinal items are reported in Table 2. Notably, primary care physicians felt that capitated care increases stress in professional relationships, interferes with the doctor-patient relationship, and reduces physicians' incomes. Although items that asked about overall access to care or testing elicited slight perceptions of restriction, these feelings were somewhat attenuated by the addition of adjectives such as "appropriate" or "beneficial." It was mildly expressed that sicker patients might have worse outcomes when cared for within a capitated system (see item 21 in Table 2).

The factor analysis results are shown in Table 3. Three scales of attitudinal items met criteria for item loading ($\geq$0.5) and internal consistency (Cronbach's $\alpha \geq 0.75$). The common concepts uniting the items in each scale and the specific items contributing to the scale are identified in Table 3.

The attitudinal scales served as the outcomes of interest. Univariate analysis identified six significant predictors of physician attitude toward capitation: board certification, physician specialty, perceived local market penetration of capitation, duration of practice, type of practice, and participation in capitation. These six predictor variables were then entered into multiple regression models with scores of the three attitudinal scales used as outcome variables. Solo practice, nonparticipation in capitation, and perceptions of high local market penetration predicted more intense feelings about capitation being "costly" (all p values $<.01$). Participation and duration in capitated plans, group practice, and board certification predicted perceptions of better access to care for patients covered by capitated payment (all p values $\leq.02$).

In the logistic regression model, the strongest predictor of primary care physicians' participation in capitated payment plans was perceived local market penetration of capitation of greater than 20% (odds ratio [OR] 2.6; 95% confidence interval [CI] 2.0–3.3), while the strongest predictor of nonparticipation was a high score on the scale describing perceptions of reduction in patients' access to care (OR 0.6; 95% CI 0.4–0.7).

Table 3. Attitude Scales for Primary Care Physicians Responding to a National Survey on Capitated Payment

Scale Concept	Mean Scale Score* (SD)	Cronbach's α	Items in Scale (Table 2)	% Variability Explained
Patients' access to care in capitated payment plans is reduced and outcomes are compromised	3.9 (1.1)	0.84	6,7,10,17,21,22,23	34
Capitated care is costly in terms of income and professional relationships	4.4 (1.1)	0.83	1,2,3,4	11
Beneficial consequences derive from capitated care	3.0 (1.0)	0.75	5,8,13,16,19	6

**Derived from a Likert-type response scale with 1 representing strong disagreement and 6 representing strong agreement with the concepts stated.*

DISCUSSION

This report demonstrates that, despite 10 years of increasing experience with capitated payment plans, physicians still hold negative perceptions regarding this method of reimbursement. Specifically, the feelings that relationships with patients and subspecialists have deteriorated and that the economic position of primary care doctors has been compromised have not changed since Ellsbury and Montano's survey of Washington state physicians in 1986.[6] This stability of attitude is consistent with our regression findings that show duration of participation in capitated plans does not attenuate feelings of "costliness," and serves as evidence that professional and economic stress remain a reality in market-driven health care reform. The optimistic note here is that, in comparison with the 1986 Washington state data, physicians' perceptions of reduced access for their patients are less severe. This suggests that physicians are working better within capitated systems, are more apt to participate in plans that preserve access, or that these systems have become less restrictive. The fact that the perception of reduced access was the strongest negative predictor of participation in capitated plans supports the notion that primary care physicians as a group are proactive concerning their patients' access to appropriate tests and treatments. As pressures mount to reduce the "medical-loss ratios" and increase corporate profits, measurement of physicians' perceptions of access may be a way to rapidly pinpoint underutilization trends within capitated payment plans.

Nationally mailed surveys of physicians have been historically plagued by limited response rates but still have described important attitudes and actions of these practitioners.[7,9–11] Although a nonresponse bias is of concern, the lack of demographic differences between responders and nonresponders argues that the responders are a representative sample of practicing physicians. Also, the similarity of attitudinal scores between initial responders and late responders, including those that had to be encouraged to participate via telephone, suggests that reluctance to complete the questionnaire did not represent any systematic bias in attitudes. Of note, the demographic data obtained in this study, including the proportion of solo practitioners represented, did not differ from those in other recently published physicians' surveys.[10,11]

In conclusion, physicians, after a decade of experience in capitated care, perceive that patients' access to appropriate care has been reasonably maintained but at the price of strained relationships with patients and colleagues.

Special thanks to Drs. Timothy Lane and C. Stewart Rogers for their diligient review of this manuscript and to Ms. Jean Farlow for her organization and expertise during the telephone phase of this study.

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