

Managed Care and Discontinuity of Primary Care Providers: Is There Evidence of Poorer Outcomes?

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For nearly 2 years, while continuing to practice family medicine, I have been a medical director for a managed health care plan. This has given me an almost schizophrenic perspective on our health care system. In straddling the managed care fence, I have seen both sides: the emphasis on primary care, practice guidelines, quality improvement, and preventive care, as well as restricted provider networks, less-than-thoughtful utilization review requirements, and increasing third-party intrusion into the patient-provider relationship. In attempting to refine an admittedly less-than-perfect system, I have become acutely aware that managed care is much maligned and poorly understood.

It is with this in mind that I was interested in the article by Flocke, Stange, and Zyzanski,¹ which attempts to determine the effect of managed care on important attributes of primary care. The authors conclude that forced disruption of physician-patient relationships brought on by changing health insurance plans has an impact on specific components of primary care. These include physician knowledge of the patient, interpersonal communication, coordination of care, continuity of care, and first-contact care. Insofar as these components relate to "hard" outcomes of care, it could be concluded that such discontinuity has a negative effect on the health of patients. I am less certain of the validity of this assertion than the authors.

The results of this cross-sectional study should be of little surprise to readers of the *Journal*. Patients who feel that they have been forced to change their physician will surely be less satisfied with their new physician, at least at the start. What is important to examine is whether this attitude persists over time and for how long. It would also be of interest to examine patient satisfaction with a care system that mandates their choosing a primary care physician as

their "gatekeeper." The managed care industry is currently rethinking this model of care in response to consumers' increasing demand for alternatives to a system driven by primary care.²

So-called open access plans are now being offered by United HealthCare and Blue Shield of California, and are being contemplated by others. Legislation in a variety of states (Georgia, Indiana, Maryland) allows for direct access to other specialty care in areas of dermatology, anesthesiology, mental health, and obstetrics-gynecology. Such direct access could also be said to facilitate patient satisfaction at the expense of discontinuity in the relationship between the patient and the primary care provider.

The relationship of selected components of primary care to the quality of primary care delivery and outcomes of care is less than clear at present. This relationship, however intuitively sound, has yet to be adequately studied.³ As the authors note, specific aspects of primary care have been associated with increased patient satisfaction, compliance with recommendations, and even with discrete health outcomes. They have not made a case, however, that those aspects that are altered in changing health care insurers have had a demonstrable impact on health care outcomes for a population of individuals.

Finally, the changes described by the authors are not necessarily attributable to managed care. In the world of commercial insurance, it is employers, not managed care plans, that change coverage. Employer groups change health care coverage based largely on price and not quality. Health plans contract with different providers for a variety of economic and noneconomic reasons. While health care costs have heretofore guided much of a plan's panel selection, I suspect that quality of care, as measured by risk-adjusted health outcomes, will increasingly drive the selection of the provider panel for most health plans. In Portland, Oregon, The Good Health Plan (a local HMO) currently reimburses a portion of their withhold payment to providers based on a "quality formula" that includes patient satisfaction

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and performance on selected HEDIS indicators. Foundation Health Systems, Inc, which is my employer, has contracted with Care Management Sciences, Inc, of Philadelphia to deliver risk-adjusted outcome data (HCFA all-payer, Medicare) over the Internet by hospital and by provider. In theory, this would enable our health plan to direct the care of patients with specific conditions to specific providers and hospitals based not on the lowest costs but on the best outcomes.

I hear more and more often that physicians are not financially rewarded by managed care plans for the quality of care they deliver. One could well question the ethics of such a reward system when high-quality care is an expectation of patients and payers alike. Regardless, I expect that within the next 5 years, health plans will increasingly use complex quality formulas as a basis for provider reimbursement as well as a compass to direct patient care. Patient satisfaction will certainly be one criterion but not the only one. There is no reason to believe that primary care will be exempt

from these changes.

Future studies need to address population-based health care outcomes resulting from forced changes in physician-patient relationships. For specific chronic illnesses, one might well be able to demonstrate the negative effects of such changes on outcomes, but this cause-and-effect relationship does not necessarily exist. In addition, such a relationship might not exist for the delivery of acute illness care or even preventive care. Whatever positive or negative evidence there is for these outcomes, they will increasingly become the focus of interest for employers, insurers, and the American public as they confront the next generation of managed health care.

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The Impact of Insurance Type and Forced Discontinuity on the Delivery of Primary Care

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BACKGROUND. The effect of managed care on important attributes of primary care is poorly understood. Of particular concern is the potential for annual bidding on managed care contracts, which may cause forced discontinuity of care. We examined the effect of insurance type and insurance-mandated disruption in continuity of care on the quality of primary care.

METHODS. A cross-sectional study design was used to examine 1839 patient visits to 138 community-based primary care physicians. The quality of primary care delivery was measured with the Components of Primary Care Instrument, a patient-reported indicator of physician knowledge of the patient, interpersonal communication, coordination of care, continuity of care, and patients' preference to see their regular physician.

RESULTS. No significant differences in any of the five indicators of primary care quality were found between patients with independent provider association/preferred provider organization (IPA/PPO) and fee-for-service insurance. Patients with IPA/PPO health insurance were four times as likely as patients with fee-for-service insurance to report a forced change in their primary care physician ($P \leq .01$). Individuals forced to change their physician because of changes in their health care insurance scored significantly lower on all five indicators of primary care quality ($P \leq .01$).

CONCLUSIONS. The quality of primary care appears to be less dependent on the payment system than on the maintenance of the patient-physician relationship. Forced disruption of continuity of care is detrimental to patient receipt of quality primary care, and is a potential negative consequence of annual bidding for managed care contracts.

KEY WORDS. Primary health care; managed care programs; continuity of patient care; physician-patient relations; quality of health care. (*J Fam Pract* 45; 129-135)

Managed care is rapidly becoming the predominant health care financing approach in the United States.¹ While managed care plans typically position primary care clinicians as the cornerstone of the health care delivery system, the effect of managed care on the important attributes of primary care, as described in two reports from the Institute of Medicine,^{2,3} are poorly understood.

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The common practice of annually bidding on managed care contracts may cause forced discontinuity of care and thus diminish the quality primary care.⁴

The Institute of Medicine (IOM) report states that primary care is the logical foundation of an effective health care system, and calls for efforts to increase the delivery of the specific aspects of primary care.² Critical functions of primary care clinicians include the provision of care to address a large majority of health problems present in the population, emphasizing health promotion and disease prevention, and fostering seamless care of the chronically ill.² The core components of primary care include comprehensiveness, continuity of care, coordination of care, interpersonal communication, longitudinality of the patient-physician relationship, patients' preference to see their regular physician,

and the accumulation of physician knowledge about the patient.^{3,5,6} These important components are viewed as the essence of the delivery of quality primary care.

Primary care has been shown to be parsimonious in resource utilization⁷ and generally effective in providing quality care.^{8,9} Specific aspects of primary care have been associated with important health-related outcomes including enhanced quality of care,^{10,11} patient satisfaction with care,¹²⁻¹⁴ compliance with recommendations,^{15,16} and health outcomes.^{13,14}

Primary care has always played a major role in managed care systems because primary care physicians function as gatekeepers and coordinators of all health care services for patients in their care.¹⁷ Concerns have been raised about conflict of interest, the effect of financial incentives on physician behavior and decision-making, time constraints, and the potential for underservice with managed care systems.¹⁸⁻²¹ The impact of these potentially negative aspects of managed care on specific components of primary care delivery has not been well evaluated.

Theoretically, competition between managed care organizations will occur on price and quality.^{22,23} In practice, however, managed competition incentives are largely economic, and effective price competition often dictates that the least expensive plan changes from year to year.²⁴ Therefore, the common practice of employers annually bidding on health insurance contracts often results in patients being shuffled from one health care plan to another, as employers annually select the best bargain. Competition for subscribers on the basis of price and range of benefits disregards the value of established patient-physician relationships.¹⁸ The development of an ongoing relationship with communication, trust, and partnership with patients is a central element to providing quality care.^{18,20,23} The impact of managed care and the effect of forced discontinuity of the patient-physician relationship on critical aspects of the delivery of primary care need to be further evaluated.

This study was undertaken to evaluate differences in the delivery of key aspects of primary care to patients with independent provider association or preferred provider organization (IPA/PPO) insurance as opposed to traditional indemnity health care insurance, and to examine differences between patients who were forced to change physicians compared with those not forced to change physicians.

METHODS

SAMPLE AND DATA COLLECTION

A cross-sectional design was used in this study, in which consecutive patients visiting their family physician were asked to participate in a study of primary care. The family physicians were members of the Research Association of Practicing Physicians (RAPP), a network of 138 community-based family physicians in Northeast Ohio who agreed to participate in a study of the content of primary care practice. Participating physicians were demographically similar to active practicing members of the American Academy of Family Physicians (AAFP),²⁵ in age (sample mean = 43 vs AAFP mean = 45), percentage in rural locations (22% vs 25%), and number of patients seen per week (104 vs 106). Participating physicians were more likely to be female (28% vs 18%) and residency trained (89% vs 68%), which may represent recent demographic trends in the specialty.

The data collection period began in October 1994 and concluded August 1995. Four teams of two research nurses collected data from consecutive patients visiting participating physicians' offices during 2 typical scheduled practice days separated by about 4 months. The research nurses were extensively trained to carry out the study protocol, which included direct observation of the physician-patient encounter, medical record review, abstraction of billing data, and patient exit questionnaire. The reason for visit (acute care, chronic care, well care, and other) was classified by the research nurses based on direct observation of the encounter.

The majority of data for this report are from the patient exit questionnaire. Patients were asked to complete the exit questionnaire immediately after completion of their office visit. The study population was composed of all patients, including children. Parents completed the patient questionnaire for children under the age of 14, and were asked to assist children up to the age of 17.

Patient Exit Questionnaire. Measures on the patient exit questionnaire included demographics, the number of problems addressed on the observed visit, functional health status, type of health insurance, forced discontinuity, and delivery of specific primary care components.

Functional Health Status. The measure of functional health status used a 5-item index modified

TABLE 1

Characteristics of the Study Sample

Characteristic	IPA/PPO Insurance (n=1141)	FFS Insurance (n=688)	t or χ^2	P
Age	34.5	34.0	.63	NS
Sex(% female)	62	62	.02	NS
No.of health problems,mean	2.1	2.0	.12	NS
Health status,*mean score	3.5	3.5	.52	NS
Type of visit,%				
Acute care	60.6	60.9	2.04	NS
Chronic care	18.5	17.3		
Well care	14.1	13.3		
Other	6.8	8.5		

*Modified version of MOS SF6, where 1 =poor health or extremely limited and 5=excellent health or not at all limited.

IPA/PPO denotes independent provider association/preferred provider organization; FFS, fee-for-service.

from the 6-item General Health Survey.²⁶ This index included items about general health, health limitations in everyday physical activities, emotional problems, bodily pain, and difficulty doing daily work because of physical health or emotional problems.

Type of Insurance. The type of health insurance was determined from a patient questionnaire item. Classification was confirmed by insurance data collected from the billing record. All of the managed care type of insurance identified by the billing data in this sample was either independent provider association (IPA) or preferred provider organization (PPO), and is identified as IPA/PPO throughout this paper. Managed care insurance coverage for Medicare and Medicaid patients was not available at the time of data collection in this region.

Forced Discontinuity. This variable was measured by patient response to the item "In the last 2 years have you been forced to change doctors because of changes in your insurance plan?"

Components of Primary Care. An instrument designed to measure specific components of primary care from the perspective of the patient was developed based on the Institute of Medicine's interim report defining primary care and its components.³ The Components of Primary Care Instrument (CPCI) is a 20-item questionnaire that measures the following four components of primary care: interpersonal communication, physician's knowledge about the patient, coordination of care, and preference to see usual physician.²⁷

The *interpersonal communication* scale (4 questions) focuses on the ease of exchange of information between patient and physician. The *physician's knowledge about the patient* scale refers to 5 questions about the physician's accumulated knowledge about the patient's medical history, family medical history, and health needs and values. *Coordination of care* refers to the incorporation of information from referrals to specialists and previous health care visits into the current and future medical care of the patient (4 questions). *Preference to see one's regular physician* refers to the degree to which patients feel that they can go to their regular physician for almost all problems (6 items). Responses to each of these scale items were made using a 5-point Likert-type scale, where 1=strongly disagree to 5=strongly

agree. A score of 5 indicates the highest level of perceived delivery of the component of primary care. Scale scores demonstrate internal consistency, with Cronbach's alpha coefficients ranging from .68 to .79. Also included on the CPCI instrument is a measure of continuity called the *usual provider continuity* (UPC) index, which is the number of visits to the index provider divided by the total number of visits during the past year.²⁸

STATISTICAL ANALYSES

Patient characteristics (age, sex, number of health problems, health status, and type of visit) for both IPA/PPO and fee-for-service (FFS) groups were compared by *t* test for continuous variables and chi-square for categorical variables. Differences between FFS and IPA/PPO groups on each of the dimensions of primary care were assessed by *t* test. Similarly, those individuals who reported that within the past 2 years they were forced to change physicians because of changes in their health insurance plan were compared with those who reported no such change. Analyses of covariance were planned to control for potentially confounding differences in patient characteristics between the groups. The sample size of 1839 provides a power of .95 to detect a .2 standard deviation difference between means with an alpha of .05.²⁹ *P* values were adjusted using a Bonferroni correction³⁰ for testing 10 hypotheses.

TABLE 2

Comparison of Primary Care Reported by Patients with IPA/PPO and FFS Payment Systems

Component	IPA/PPO Insurance (n=1141) Mean (SD)	FFS Insurance (n=698) Mean (SD)	t	P*
Interpersonal communication	4.30 (.76)	4.29 (.74)	.28	NS
Knowledge of patient	3.34 (.89)	3.44 (.89)	2.46	NS
Coordination of care†	3.75 (.96)	3.75 (.98)	.07	NS
Patients' preference to see their regular physician	4.42 (.60)	4.34 (.68)	2.78	NS
UPC	.65 (.28)	.67 (.28)	1.42	NS

* All *P* values are corrected for multiple comparisons using Bonferroni method.

† Mean based on an IPA/PPO n=530 and FFS n=327. The response format for the coordination of care items included a "not applicable" response to accommodate those individuals who had not been referred or had no follow-up of care upon which to report the level of coordination. Coordination scale scores were therefore computed based on those individuals who had the opportunity for their care to be coordinated.

IPA/PPO denotes independent provider association/preferred provider organization; FFS, fee-for-service; UPC, usual provider continuity; NS, not significant.

RESULTS

Of the patients presenting for care on the observation days, 89% agreed to participate in the study. Of these 4544 patients, 3287 (75%) completed the patient questionnaire. Patients with 6 or more items (out of a possible 20) missing from the CPCI section of the questionnaire were excluded from analysis, resulting in a sample size of 2899 (88% of those completing the patient exit questionnaire; 64% of the entire study sample). Compared with those patients who did not complete the CPCI items (n=1555), those who did complete the CPCI (n=2899) were more likely to be white, have IPA/PPO or fee-for-service insurance, and were, on average, slightly older. Those completing the CPCI were also less likely to have Medicaid insurance than those not completing the CPCI. There was no significant difference between the groups on sex or reason for visit.

Six hundred ninety-eight patients (24%) had FFS insurance and 1141 (39%) had IPA/PPO insurance. The remaining 1060 patients had some other type of insurance (Medicare, Medicaid, no insurance, other,

unclassifiable) and were excluded from these analyses. The proportion of FFS patients and IPA/PPO patients satisfactorily completing the CPCI items was similar (93% vs 94%). Table 1 displays the patient and visit characteristics of the sample by insurance type, ie, either IPA/PPO or FFS. Age, the number of health problems addressed during the visit, health status, and the reason for visit were not significantly different for the two groups.

Differences in the four CPCI scale scores and the UPC index between FFS patients and IPA/PPO patients are displayed in Table 2. The group means are not significantly different. Similar analyses controlling for patient and visit characteristics (age, number of problems addressed, and health status) did not change the findings.

The second outcome of interest involved the issue of forced discontinuity. A significantly higher percentage of patients in the IPA/PPO group reported a forced change of physicians in the past 2 years (25% vs 6% for patients with FFS insurance, $P \leq .01$). Patient age, health status, and the number of problems addressed during the visit were not significantly different between patients forced to change and those not forced to change. However, as indicated in Table 3, those who reported being forced to change in the past 2 years had significantly lower scores on interpersonal communication, physician's accumulated knowledge of the patient, coordination of care, patients' preference to see their regular physician, and the UPC index. These data indicate that insurance-mandated disruption in the primary provider is associated with patient-reported poorer quality on each of these aspects of primary care. The same analyses controlling for patient and visit characteristics (age, number of problems addressed, and health status) did not change the findings.

DISCUSSION

Our analyses indicate that there is no difference in perceived delivery of specific aspects of primary care between patients with IPA/PPO and those with FFS health insurance. This lack of difference is similar to recent findings by Safran and associates³¹ in a

TABLE 3

Comparison of Primary Care Perceived by Patients Who Reported a Forced Change in Physician Due to Changes in Health Insurance Plan

Component	Forced to Change* (n=321) Mean (SD)	Not Forced to Change (n=1487) Mean (SD)	t	P†
Interpersonal communication	4.16 (.77)	4.32 (.75)	3.46	≤.01
Knowledge of patient	2.84 (.77)	3.49 (.88)	13.34	≤.001
Coordination of care‡	3.42 (.93)	3.81 (.97)	4.31	≥.01
Patients' preference to see their regular physician	4.21 (.65)	4.43 (.62)	5.56	≤.001
UPC	.58 (.31)	.68 (.27)	5.21	≤.001

*This variable was missing for 31 patients, 22 with IPA/PPO and 9 with FFS insurance.

†All P values are corrected for multiple comparisons using the Bonferroni method.

‡Means for this variable based on n=135 and n=709. The response format for the coordination of care items included a "not applicable" response to accommodate those individuals who had not been referred or had no follow-up of care upon which to report the level of coordination. Coordination scale scores were therefore computed based on those individuals who had the opportunity for their care to be coordinated.

sample of moderately ill patients. These authors found differences on many aspects of primary care between patients with health maintenance organization (HMO) and FFS insurance, but few differences between patients with IPA and FFS insurance.

Some striking findings are evident in the comparison of those patients who experienced forced discontinuity. One of four patients with IPA/PPO health insurance in our community sample experienced an involuntary change of physician. The extent of this disruption is amplified when one considers that when an insured individual is forced to change physicians, typically other family members are also affected. In our sample of patients, 71% reported that other family members use the same physician as a regular source of care.

Those patients who were forced to change their physician because of changes in their medical care insurance had significantly lower scores on each of the indicators of primary care. On average, they reported that physicians knew less about their medical history, family medical history, and health needs. Forced disruption of the patient-physician relationship thwarts the longitudinal investment of time and interaction needed to accumulate this kind of knowledge.^{23,24} This kind of knowledge and understanding is only gradually accumulated by interacting with patients and their families over time, "not by assembling records from a series of health plans."^{24(p880)} In addition, interpersonal communication (ie, comfort in asking questions, receiving explanations, and being listened to by the doctor) was also lower among those forced to change physicians.

Seeing multiple physicians may be appropriate and common among patients with multiple problems or with problems that require referral to other health care providers. For such patients, the flow of information from other specialists back to the primary care physician through reports and personal contacts is critically important to the provision of quality care. This type of coordination of care was perceived to be significantly lower among patients forced to change physicians. Likewise, the UPC measure of the proportion of visits to the index physician indicated that continuity of care was lower for those forced to change physicians. This may indicate that

patients who had been forced to change physicians are not utilizing a single new physician as their major source of care.

The scores on preference to see one's regular physician were also significantly lower for those individuals who were forced to change their physician because of their medical care insurance. Diminished patient perception of their primary care provider's ability to provide first-contact care may lead to increased utilization of both specialty services and emergency room visits,⁵ and, therefore, costs.

The difference in perceived delivery of primary care between those forced to change physicians has important implications. In the current managed care environment, it is common for employers to bid annually on contracts and often to change employees' health care systems. Our findings are similar to those of Davis and colleagues,⁴ who, in a three-city telephone survey study of FFS and managed care patients, found that nearly one half of people with employer- or union-purchased health insurance had changed insurance plans in the past 3 years. Seventy-three percent of these changes were involuntary for

the patient. Persons with managed care insurance were more than three times as likely to have had to change physicians as were those with fee-for-service insurance. Kahana et al³³ recently surveyed patients who experienced forced discontinuity because their physicians withdrew from their insurance plans. This disruption of continuity of care adversely affected 61% of patients, who were forced to find a new primary care clinician. Reactions of the patients included anger and frustration at the loss of a trusted physician who knew the patient's history and personal values. Others have found that forced change in the usual source of care decreased satisfaction and increased emergency department use.³⁴

Our data show that in addition to causing patient and physician angst, the practice of insurance-mandated change of physicians may be disruptive to the delivery of critical components of primary care to patients. Emanuel and Brett²⁴ suggest that perhaps a longer term of enrollment would stabilize enrollment sufficiently to allow the patient-physician relationship to be established. This would decrease and delay, though not eliminate, the threat of forced disruption. Even with longer enrollment terms, it is possible that the threat of insurance-mandated disruption in care could impede the patient and the physician from investing in the development of the long-term relationship, which is a fundamental tenet of primary care. In addition, a clinician's ability to practice population-based and cost-effective medicine¹ is built on a foundation of individual patient trust that is developed over time.

While our study has many strengths, some limitations must be considered. On average, the group of patients who did not return a patient questionnaire were younger than the respondents, and a slightly higher proportion were nonwhites; thus, the conclusions drawn here may not be generalizable to these groups. The study relied on patients' reports to classify their forced discontinuity. Some misclassification of forced discontinuity would most likely have biased the findings toward the null, and thus would not change the conclusions reported here. As previously mentioned, managed care insurance coverage for Medicare and Medicaid patients was not available at the time of data collection in this region, and, therefore, these results may not be generalizable to these groups. In addition, the data represent a regional sample of family physicians in a market with moderate managed care penetration.

Generalization to other settings should consider the stability and similarity of the health care market.

CONCLUSIONS

The data presented here suggest that the quality of primary care may not be largely dependent on how physicians function within a payment system, but on whether the patient-physician relationship is preserved. Scores on the primary care scales were generally high in both the FFS and IPA/PPO patient groups. It is likely, however, that the process of bidding and competing for enrollees based on financial incentives is driving the health care financing industry to disrupt the patient-physician relationship. This severing of the patient-physician relationship is detrimental to critical components of primary care. Managed care systems and policy regarding employer purchasing of plans should be modified to foster rather than impede continuity and other critical elements of primary care. Otherwise, the anticipated benefits of emphasizing primary care as the foundation of managed care's health care delivery systems are unlikely to be realized.

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