

Patient Reports of Coverage Denial: Association With Ratings of Health Plan Quality and Trust in Physician

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Objective: To evaluate whether HMO patients' reports of denial of coverage were associated with their ratings of health plan quality and trust in their physician.

Study Design: Cross-sectional survey.

Patients and Methods: Within a mixed-model HMO, we surveyed 2000 adult patients who had seen a clinician at least once during the previous year.

Results: Of the 2000 patients, 921 (46%) responded. Denial of coverage within the previous 12 months was reported by 64 (7%) patients. Among the denials, 42% were for specialist referral, 32% were for tests or treatments, 18% were for a certain length of hospital stay, and 8% were for a hospital admission. Patients scoring in the lowest quartile on physical functioning were more than twice as likely as other patients to report denial of coverage (12.2% vs 5.1%, $P = .001$). In multivariable analyses, poor physical functioning remained the only significant independent variable associated with reporting denial of coverage (odds ratio = 3.0; 95% confidence interval, 2.4, 3.6). More than half (53%) of patients reporting denial of coverage said that they had considered leaving the health plan because of concerns about quality of care. These patients also were less likely to express high trust in their primary care physician (64% vs 78%, $P < .001$).

Conclusions: Patients with poor physical functioning were more likely to report denial of coverage. Perceived denial of coverage was associated with lower ratings of health plan quality and with significantly less trust in patients' own primary care physicians.

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that lead to appeals by patients and/or physicians.⁹ Yet these appeals may represent only a small proportion of the total number of denials experienced by patients.

If we know little about the incidence of denials of coverage, we know even less about the effects of coverage denials on patient outcomes. Whether coverage denials more often keep patients from getting needed care or safeguard patients from getting unnecessary or even dangerous care is hotly debated.¹ The primary purpose of this study was to focus on the relationship that denials of care may have with 2 other important outcomes: ratings of the quality of one's health plan and trust in one's physician. We also sought to determine whether certain kinds of patients were more likely than others to report a coverage denial by their health plan. Given this focus, we sought to analyze patients' self-reports of coverage denial, whether or not the denial actually prevented the patient from receiving the service. The primary hypothesis of this study was that patients reporting a denial of coverage would rate the quality of their health plan substantially lower but would retain trust and confidence in their own physicians.

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Study Site and Patient Selection

This study was conducted among members of Harvard Pilgrim Health Care, a large mixed-model

Few situations in managed care seem to generate as much concern and anger as when a health plan says no to a physician's request for a referral, test, or treatment for a patient.¹⁻⁵ Despite the interest in the issue of these health plan denials, data regarding their prevalence are few.^{6,7} In one recent national survey, almost 9 of 10 physicians (87%) said that they had witnessed some type of denial of coverage for a patient within the previous 2 years.⁸ Most publicly available data, however, have been limited to analyses of those health plan denials

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HMO in New England. The Human Subjects Committee of the health plan approved the study design and all survey instruments.

Patients were eligible if they were age 25 years or older, had been a continuous member during the previous year, and had seen a clinician at least once during that time. From among all eligible patients, 1000 patients were selected from each of 2 different group practice divisions within the HMO: 1) the large multispecialty practice known as Harvard Vanguard Medical Associates, previously a staff-model component of Harvard Pilgrim in which the majority of patients are covered by Harvard Pilgrim; and 2) a division of Harvard Pilgrim consisting of smaller, scattered, affiliated group practices in which the proportion of patients with Harvard Pilgrim insurance varies widely.

In neither of these group practice divisions within the HMO was precertification from the health plan required for tests, treatments, or hospitalizations. Referral to specialists did not require approval by the health plan unless the specialist was outside the extensive Harvard Pilgrim in-state network; however, each group practice had their own system for internal approval if a primary care physician wanted to refer a patient to a specialist outside the group practice's local contracting "risk unit." The health plan formulary was not closed, and at the time of this study there was a single-tier copayment benefit structure.

True denials of coverage by the health plan could have occurred in one of several scenarios. Denials could be issued by the health plan for requests for coverage of services not considered "medically necessary" by the health plan (eg, cosmetic treatment). Requests for treatment by clinicians outside of Harvard Pilgrim could have been denied, as could requests to extend specific therapies (eg, physical therapy, mental health) beyond benefit limits stated in the benefit package. Denials could be issued for payment of emergency department charges incurred for "nonemergent" care. Payment for hospital days deemed unnecessary also could have been denied after the hospitalization, although patients were explicitly held harmless for charges in this situation.

In addition to these actual coverage denials by the health plan, patients could have ascribed responsibility for a denial to the health plan for certain decisions that were actually under control of the physician group. These included decisions about coverage of certain forms of durable medical equipment and decisions about referral to specialists outside the physicians' local risk unit.

Survey Development and Administration

A written survey was created and pilot tested among 1000 patients in January 1999. Questions were retained for the final survey if they showed useful test characteristics (eg, low skip rate, no ceiling or floor effect) in the pilot test. The survey was accompanied by an institutional review board-approved cover letter for informed consent and was mailed out in February 2000; nonresponders received 1 follow-up reminder.

Measures

Sociodemographic information was obtained from the computerized enrollment database of the health plan. Health status was determined by the physical functioning subscale of the Medical Outcomes Study Short-Form 12 (SF-12). Patients were asked to rate the "overall quality of care you receive in this health care plan" on a 5-point Likert scale. Each patient also was asked a yes/no question: "Have you ever considered changing health plans because of concerns about the care you received through Harvard Pilgrim Health Care?"

Denial of coverage was determined based on a yes or no response to the following question: "Are you aware of any incidents during the past year in which Harvard Pilgrim Health Care denied your doctor(s) request for: a) a test or procedure; b) a referral to a specialist; c) a hospital admission; d) a certain length of hospital stay."

Trust in the patient's primary care physician was assessed based on responses to statements rated on a 5-point scale of "strongly agree" to "strongly disagree." Overall trust was evaluated with the following statement: "Overall, I have a very trusting relationship with my primary care doctor." Component areas of trust in the primary care physician were evaluated with the following 5-part statement: "I have complete trust that my primary care doctor would always: a) tell me about all potential treatments that might help me; b) do all tests that he/she thought were important for diagnosing my complaints; c) fight against all barriers to get me tests, treatments, or hospital stays I need; d) keep my medical records confidential; e) refer me to a specialist quickly if he/she thought the specialist would be better at caring for a particular problem."

Data Analysis

Chi-square and Student *t* test statistics were used for univariate comparisons. A global multiple logistic regression analysis was used for multivariable analy-

Table 1. Clinical Characteristics and Insurance Source of Survey Respondents (n = 921)

Characteristic	Value
Mean \pm SD age, y	57.1 \pm 13
Female, %	58.2
White, %	91.0
Insurance source, %	
Employer sponsored	81.0
Medicare	17.9
Medicaid	1.1
Self-described health, %	
Excellent	18.5
Very good	43.2
Good	29.1
Fair	8.0
Poor	1.2
Mean number of clinician visits in the past 12 months	7.1 \pm 7.7
Family income, %	
<\$20 000	12.8
\$20 000-\$60 000	40.7
>\$60 000	46.5

ses to determine correlates of the likelihood of reporting a denial of coverage. Independent variables entered in the model included age, sex, race, income, functional status, and division of care within the HMO.

Overall, 921 (46%) of 2000 patients responded to the survey. Respondents were older on average to nonrespondents (mean \pm SD age of 57.1 \pm 13 years vs 54.6 \pm 14 years, $P = .001$). However, the percentages of nonrespondents who were women (56% female vs 58% female, $P = .36$) and who received care in the staff-model HMO (53% vs 50%, $P = .27$) did not differ significantly between respondents and nonrespondents. Respondents in survey studies are routinely older on average than the population as a whole. A small difference in mean age is unlikely to affect the interpretation of the results of this study given that 1) the range of ages among participants was not greatly skewed from that of the population and 2) age was included in multivariate models even when insignificant in univariable testing.

Clinical and insurance characteristics of the respondents are shown in **Table 1**. Respondents

in the staff-model HMO differed from those in the group practice division in age (mean age 54.8 \pm 17 years vs 59.3 \pm 17 years, $P = .009$), sex (62% female vs 55% female, $P = .01$), and race (83% white vs 96% white, $P < .001$), but did not differ significantly in the proportion who had family incomes of less than \$20 000 (13.3% vs 12.6%, $P = .34$).

RESULTS

Among all survey respondents, 622 (68%) reported excellent or very good overall quality of care in the health plan. Eighty-eight patients (9.6%) reported fair or poor quality. Ratings of excellent or very good were above 50% for patients' ability to choose their own doctor(s) (58%), for their ability to see a specialist when needed (57%), for their ability to obtain tests when needed (66%), and for their ability to obtain emergency care when needed (86%).

Among all patients, 64 (7.0%) reported a denial of coverage by their health plan within the previous year. Of these 64 patients, 38 were cared for in the group practices and 26 in the staff-model division. These 64 patients reported a total of 90 incidents of denied coverage, including 38 (42%) for referral to a specialist, 29 (32%) for tests or treatments, 16 (18%) for a certain length of hospital stay, and 7 (8%) for a hospital admission.

Univariate correlates of the likelihood of reporting denial of coverage are shown in **Table 2**. Patients who scored in the lowest quartile on the physical functioning subscale of the SF-12 were more than twice as likely to report denial of coverage than all other patients (12.2% vs 5.1%, $P = .001$). There were nonsignificant results suggesting that denial may have been more common among the following: 1) nonwhite patients, 2) patients with income below \$20 000, 3) patients with commercial insurance, and 4) patients cared for in the group practices. There was little association, however, between the likelihood of denial and the self-reported number of visits to a clinician in the previous year. Among patients reporting a denial of coverage, the mean number of clinician visits was 8.3; among patients not reporting denial the mean was 7.1 ($P = .3$). Well over half (66.0%) of all patients with a denial had fewer than the mean of 7 visits during the previous year.

Multivariable analysis found that poor physical functioning was the only significant independent variable associated with the likelihood of reporting

denial of coverage (odds ratio [OR] = 3.0; 95% confidence interval [CI], 2.4, 3.6; see **Table 3**). Nonwhite patients also had a higher likelihood of denials, with the results nearly reaching statistical significance (OR = 2.1; 95% CI, 0.9, 4.8).

Denial of Coverage and Opinions of Health Plan and Physician

Not surprisingly, patients who reported denial of coverage had a lower opinion of their health plan. Patients reporting a denial rated the overall quality of health care in the health plan as excellent or very good less often (51.6% vs 69.8%, $P = .001$), and they rated quality as only fair or poor much more often (28.0% vs 7.0%, $P = .001$). Among patients reporting a denial, a high proportion (53%) indicated that they had considered leaving the health plan because of concerns about the quality of their care. In this group, even some patients who rated the overall quality of health care as “very good” reported that they had considered leaving the health plan. In contrast, only 14% of patients who did not report a denial of coverage said they had contemplated leaving the health plan ($P < .001$). These results did not differ significantly between patients in different group practice divisions of the HMO.

Whereas denial of coverage would be expected to adversely affect patients’ opinion of their health plan, our data showed that patients who reported a denial also had significantly lower trust in their own primary care physician (see **Table 4**). Patients’ trust in their physician for diagnosis, treatment, confidentiality, referral, and advocating for the individual all were significantly lower among patients who reported a denial of coverage by the health plan. Less than half (47%) of patients reporting a denial of coverage believed that their doctor would “fight against all barriers” to get them needed tests, treatments, or hospital stays. Only 64% of patients reporting a health plan denial agreed with the statement that they had a very trusting relationship with their primary care physician, compared with 78% of the other patients ($P < .001$). As was the case for rating of health plan quality, the relationship between coverage denial and trust in the primary care physician was not significantly different between the 2 types of group practice divisions within the HMO.

Table 2. Correlates of Reported Denial of Coverage by the Health Plan*

Characteristic	Percentage of Patients Reporting Denial of Coverage	P
Age > 50 y (n = 566)	6.3	.4
Age < 50 y (n = 355)	7.8	
Female (n = 514)	7.7	.4
Male (n = 407)	6.3	
White race (n = 817)	6.5	.1
Nonwhite race (n = 81)	11.4	
Commercial insurance (n = 746)	7.4	.2
Medicare (n = 165)	4.9	
Group practices division (n = 471)	7.9	.3
Staff-model HMO division (n = 450)	6.2	
Income below \$20 000 (n = 107)	10.6	.2
Income above \$20 000 (n = 727)	7.0	
Fewer than 7 clinician visits per year (n = 608)	7.0	.9
Seven or more clinician visits per year (n = 313)	7.1	
Low physical function (n = 160)	12.2	.001
All other patients (n = 604)	5.1	

*Column figures do not always sum to 921 because of missing data.

DISCUSSION

Physicians, patients, and health plans are locked in a battle over who will determine when health care is medically necessary.¹⁰⁻¹³ Denials of coverage are the ammunition in this battle. Often touted as evidence of the impersonal venality of managed care, denials are defended by health plans and some policy analysts as being necessary to combat the high levels of unnecessary and needlessly risky care delivered in this country.¹ Denials also are viewed as the only fair response to patient requests for care that is not covered by insurance (eg, cosmetic care). As health economist Alain Enthoven has said, “denials are a necessary feature of a well-run plan.”¹¹ Yet the public seems more convinced that denials are a manifestation of the bottom-line mentality of managed care.³

Table 3. Results of Multivariable Analysis for Correlates of Self-report of Coverage Denial*

Characteristic	Self-reported Denial of Coverage Odds Ratio (95% Confidence Interval)
Poor physical function	3.0 (2.4, 3.6)
Nonwhite race	2.1 (0.9, 4.8)
Age <50 y	1.2 (0.6, 2.3)
Female	1.3 (0.7, 2.5)
Care in group practices division	1.2 (0.7, 2.2)
Annual household income <\$20 000	1.0 (0.3, 3.4)

*Analyses were conducted with adjustment for age, sex, race, income, functional status, and division of care within the HMO. Poor physical functioning was defined as scoring in the lowest 25% of the population on the physical function subscale of the Medical Outcomes Study Short-Form 12.

What little is known about denials has suggested that they are common, and may have significant effects on patients' health. In a survey conducted by the Kaiser Family Foundation and the Harvard School of Public Health in 1998, consumers were asked whether they personally, or someone they knew, had ever experienced a "problem" with their health plan in various dimensions. Among respondents, 30% reported experiencing or knowing someone who had problems getting a health plan to pay for a visit to the emergency department. Getting permission to see a medical specialist had been a problem for 26% of respondents or their acquaintances.¹⁴

In a subsequent Kaiser/Harvard survey of physicians and nurses, 87% of physicians reported that

their patients had experienced some type of denial of coverage within the previous 2 years. Across all types of services, physicians estimated that between 37% and 65% of denials resulted—in their judgments—in a "serious" decline in a patient's health status.⁸

The current study found that 7% of adult patients in the commercially insured population of this HMO reported some form of coverage denial within the previous 12 months. It is important to note the different survey populations and wording of questions that make this 7% result difficult to compare with previously published findings. This study is distinguished by its focus on outcomes not previously evaluated: the association of reported denials with patients' opinion of their health plan and their trust in their physician. It was not surprising to find that

patients reporting a denial of coverage rated the quality of care they received in their health plan substantially lower than the other patients did. But the relationship between reported denials and trust in one's own physician was notable. Even though patients were asked to report the denials of coverage made by the health plan, patients who reported these denials had sharply lower levels of trust in their own primary care physician. It has been claimed that physicians often try to stay in their patients' good graces by acceding to patients' requests for unnecessary tests and procedures and thus putting the onus on the health plan to deny the request.¹ The data from this survey suggest that physicians may not always be immune from the fall-

Table 4. Relationship Between Denial of Coverage and Patients' Trust in Their Primary Care Physician

I Have Complete Trust That My Primary Care Doctor Would Always:	Percentage*		P
	No Denial of Coverage (n = 857)	Denial of Coverage (n = 64)	
"Tell me about all potential treatments that might help me."	82	67	.004
"Do all tests that he/she thought were important for diagnosing my complaints."	83	71	.015
"Fight against all barriers to get me tests, treatments, or hospital stays I need."	63	47	.013
"Refer me to a specialist quickly if he/she thought the specialist would be better at caring for a particular problem."	86	68	.001
"Keep my medical records confidential."	85	76	.050

*Percentages shown are for patients who responded "strongly agree" or "agree."

out when a patient experiences a denial of coverage. Denials may be perceived by patients to be a breach of faith by the entire healthcare system.

What are the implications of this finding for physicians and health plans? Health plans already recognize that denials of coverage sit at the center of concerns about the evils of “managed care.” To address this issue, health plans have taken 2 major approaches: attempts at legitimization and attempts at delegation. Attempts to make the denials process more legitimate have included new steps to disclose medical policy criteria used in coverage decisions, to clarify the decision-making procedures, and to communicate with patients more clearly and in a more timely fashion the rationale underlying any coverage denial. Many health plans have taken an alternative path and tried to disassociate themselves as much as possible from the stigma of denials, sometimes by delegating the responsibility for utilization review for many medical services to medical groups. The data from this study suggest that most patients with a denial of coverage harbor serious concerns about the quality of their health plan and that further work on establishing the legitimacy of health plan decisions may be needed.

The data from this study suggest that physicians have further work to do as well. Physicians should reject any strategy for maintaining patient trust that depends on vilifying health plans. Without the “us-versus-them” approach, however, the appropriate advocacy stance for physicians may be hard to find.¹⁵ It is interesting to speculate whether better communication with patients about the requests that lead to coverage denials, although that would involve physicians more explicitly in bedside rationing, might in the end lead to greater trust among patients overall.

Another finding of this study was that patients with poor physical functioning were more likely to report denial of coverage. The association between physical functioning and denials might be because patients with poor physical functioning need more referrals, tests, and treatments, and thus simply have a greater numerical chance of generating a request that meets with a health plan denial. Our results, however, did not find that the number of visits to a clinician was a strong predictor of the likelihood of denial of coverage. Perhaps patients with the lowest physical functioning request certain medical equipment or special services that are more likely to result in a denial of coverage.¹⁶ This hypothesis cannot be tested with our data, nor can the data answer the important question of whether denials of cover-

age could have caused harm to patients and thus led to lower physical functioning scores. In sum, however, the data do suggest that although most patients participating in the survey were healthy and quite pleased with their healthcare, the sickest patients experienced a disproportionate share of barriers to coverage for care.

This study has important limitations. It was based within the member population of a single health plan, and although the results were comparable across different forms of group practices, the ability to generalize our results is limited. We have limited data with which to compare responders and nonresponders to our survey, and it is possible that nonresponders would have reported a higher or lower prevalence of coverage denials. The study was not designed to link survey responses to actual health plan coverage decisions; therefore, we did not attempt to determine whether each patient’s report of a denial of coverage truly reflected a health plan decision. It is possible that patients reporting a health plan denial may have misinterpreted statements by their physicians or actions by their physicians’ group practice. We know only that the patients believed they had experienced a denial of coverage. For those patient reports of denial of coverage that reflected actual denials, our study provides no data on subsequent healthcare utilization or outcomes. And, importantly, our study was not intended to evaluate the legitimacy of the grounds on which the health plan based its denials of coverage.

Few would argue that health plans should approve coverage when the care requested is unsafe and/or not covered by insurance. Conversely, few would claim that health plans never deny coverage inappropriately. Further research is needed to learn about the nature and impact of denials of coverage across different insurers, benefit packages, and delivery systems. As further research proceeds, however, physicians and insurers should be aware that vulnerable patients report more experiences of denial of coverage, and that perceived denials may erode not only patients’ attitudes about their health plan but also their trust in their own physicians.

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POLICY

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