Physician Communication in Managed Care Organizations: Opinions of Primary Care Physicians

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Background. One method of achieving appropriate patient treatment and continuity of care is to ensure good communication between primary care physicians and specialist physicians. We undertook an exploratory study designed to assess primary care physicians' opinions regarding communication patterns between primary care physicians and specialist physicians participating in fee-for-service and managed care health insurance plans.

Methods. A 26-question survey instrument was mailed to 110 general internists on the clinical faculty of a university hospital. Each question solicited a response for "managed care plans" and "nonmanaged care plans," with responses scored on a 5-point Likert scale ranging from 1=never to 5=always. Results were analyzed using the Wilcoxon signed-ranks test of the difference between responses for managed care and nonmanaged care settings.

Results. Eighty-four physicians (76%) responded to the survey. Forty-one of these physicians participated in both managed and nonmanaged care plans and thus were eligible for the analysis. These primary care physicians reported that patients were referred more often to an unknown specialist for managed care (MC) plans than for nonmanaged care (NMC) plans (MC mean=2.8, NMC mean=1.4; $P<.01$). They also reported that when referring patients in managed care plans to a specialist, they spoke personally with specialists less often (MC mean=2.8, NMC mean=3.5; $P<.01$) and sent a written summary to specialists less often (MC mean=2.6, NMC mean=2.9; $P<.05$). Primary care physicians in this study perceived that patients in managed care plans changed primary care providers much more frequently than did those in nonmanaged care plans (MC mean=3.8, NMC mean=2.2; $P<.01$).

Conclusions. In this exploratory study, we found that communication between primary care and specialist physicians may be impaired when multiple health insurance plans with restricted panels of participating physicians are implemented in communities. Further research is required to confirm these findings and to assess how patient-related communication is managed.

Key words. Managed care programs; health maintenance organizations; primary care; independent practice associations; preferred provider organizations; health care reform; medical economics; communication; continuity of patient care. (*J Fam Pract 1994; 39:446-451*)

Communication between primary care physicians and specialist physicians is one means of ensuring appropriate patient treatment and continuity of care. Others have reported the importance of communication in patient referral, and many problems in the management of referred patients have been "attributed to failures in communication and discordant expectations" between physicians involved in this process.[1]

Communication in the referral process in fee-for-service practice has occurred as a matter of professional responsibility to patients and colleagues. In newer health insurance arrangements, some level of communication is required before patients obtain medical and surgical care outside the primary care physician's office. Many managed care organizations (MCOs) rely on primary care physicians to serve as gatekeepers in the management of all aspects of patient care.

Under any type of payment system, the primary care

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physician's responsibilities do not end when a patient is referred to a specialist: "As a part of total patient management [primary care physicians] must continually monitor the performance of their consultants, relying not only on written reports, but also on patient feedback and their own subjective impressions."[2] The focus on physician communication by MCOs theoretically ensures continuity of care and appropriate use of health care resources, and enhances the reported ability of group and staff model health maintenance organizations (HMOs) to reduce resource consumption while maintaining the quality of care.[3] Indeed, patients report superior coordination of care in group and staff model HMOs as compared with patients in fee-for-service arrangements.[4]

Since the early 1980s, MCOs have grown rapidly, with the greatest enrollment of patients occurring not in relatively well-studied group or staff model HMOs, but in newer types of MCOs: independent practice associations, preferred provider organizations, exclusive provider organizations, and point-of-service plans. This enrollment is potentially problematic, as "there is really very little research on the impact of different combinations of MCO characteristics on health care use, cost, and quality."[3] Further, the newer MCOs are often made up of physicians and patients spread out over a large geographic area rather than within the infrastructure provided by a group or staff model HMO. The impact of these structures on physician communication and coordination of patient care is relatively unknown at present. One recent study found no difference in coordination of patient care between fee-for-service practices and independent practice associations (network HMOs).[4]

The present study is an exploratory analysis of the impact of independent practice associations on communication between primary care and specialist physicians. Our study asked primary care physicians to report their opinions about communication and coordination of care for their patients in both the fee-for-service and independent practice association settings. Although preliminary, this study helps to highlight the potential of this type of process-evaluation research to help improve our understanding of the impact of newer types of MCOs on patient care.

Methods

Survey Design

We developed a survey to solicit the opinions of physicians practicing general internal medicine to determine how primary care and specialist physicians interact in managed care and nonmanaged care (traditional fee-for-service) health insurance plans. For this study, managed care plans included the newer independent practice and preferred provider organization types of managed health care plans rather than group and staff model HMOs. The goal of the survey was to provide a tool for identifying and evaluating deficiencies in communication that exist in the current managed care system so that methods can be developed to improve professional communication and maintain continuity of patient care.

In designing the survey instrument, we first performed a literature review for item generation to assess interactions between primary care physicians and specialist physicians. We then conducted a pilot study in which we administered the survey to general internists in a university hospital–based faculty group practice. After the pilot study, we redesigned the survey instrument based on feedback from the participating subjects: questions in the survey were rewritten and the format of the survey instrument was modified based on their comments regarding ease of use, potential for error and bias associated with self-reporting, and face validity of the questions.

Survey Administration

The 26-question survey instrument (available from the authors) was mailed to 110 general internists (primary care physicians) on the voluntary clinical faculty of a university hospital in Washington, DC. This group did not include the physicians who participated in the pilot study. Voluntary faculty have offices in the community and, when necessary, admit patients to the university hospital or other community hospitals. The Washington metropolitan area is a relatively mature managed care market: HMOs serve 26% of the insurance market through 19 different plans (personal communication, Group Health Association, February 1993). Preferred provider organizations serve at least an additional 15% of the insurance market through 60 different plans (personal communication, American Association of Preferred Provider Organizations, February 1993).

Physicians listed in the local medical directory as having subspecialty training or certification were excluded from the study to ensure that the participants were primary care physicians practicing general internal medicine. Therefore, of the 192 physicians listed as general internists on the voluntary faculty, the survey questionnaire was mailed to 110. Two weeks after the initial mailing, a reminder letter was sent to encourage each physician to return the questionnaire. Two weeks after the reminder letter, the offices of all nonresponding physicians were contacted by telephone in an effort to maximize response rate. Finally, a letter from the department chairman was sent to nonresponders.

Each question in the survey instrument solicited physician responses for both managed care and nonmanaged care patients. Managed care was defined as independent practice association and preferred provider organization plans. The responses were scored on a 5-point Likert scale ranging from 1 (never) to 5 (always); 1 (low quality) to 5 (high quality); 1 (no control) to 5 (complete control); 1 (never) to 5 (very frequently); or 1 (not committed) to 5 (committed).

Data Analysis

Physicians' responses to each question were evaluated using the Wilcoxon signed-ranks test, with *P* values representing the difference between responses for managed care and nonmanaged care patients. The responses eligible for evaluation included only those from physicians participating in both managed care plans (as defined previously) and nonmanaged care plans.

Results

Eighty-four physicians (76%) responded to the survey. Forty-one of these physicians participated in both managed care and nonmanaged care plans and thus were eligible for this analysis. Of the remaining respondents, 14 participated in managed care plans only, 15 did not participate in managed care plans, 11 were no longer in practice, and 3 returned incomplete surveys. Table 1 contains demographic information on the physicians in the subgroup analyzed (n=41). Thirty-three (80%) physicians had between 1% and 40% of their patients in managed care plans.

Primary care physicians reported that they spoke personally with specialists less often and sent a written summary to specialists less often when referring patients in managed care plans to a specialist (Table 2). They also reported that their nurses or secretaries contacted specialists' offices more often when referring patients in managed care plans than did the physicians themselves. Primary care physicians reported that after specialists had evaluated referred patients, the specialist physicians spoke personally with them less often and sent a written summary to them less often for patients in managed care plans.

Primary care physicians reported that specialist physicians seldom contacted them before ordering laboratory tests or performing minor procedures in both managed care and nonmanaged care plans, but did so even less often for patients in managed care plans (Table 3). They also reported that specialist physicians usually contacted them before performing major procedures, but were less likely to do so for patients in managed care plans.

Primary care physicians reported that the laboratory tests and procedures performed by specialists on referred patients were almost always appropriate and crucial for the management of these patients in both managed care and nonmanaged care plans (MC mean=3.5, NMC mean=3.7; $P>.2$).

Table 1. Characteristics of Primary Care Physicians Participating in Managed and Nonmanaged Health Insurance Plans Who Responded to a Survey About Communication Patterns Between Primary and Specialist Care Physicians (N=41)

Characteristic	
Age, y	
Mean	50
Standard deviation	13
Years in practice	
Mean	18
Standard deviation	13
Male, %	80
Office location, %	
Washington, DC	39
Maryland	24
Virginia	37
Specialty, %	
General internal medicine	100
Type of practice, %*	
Group	54
Solo	41
Hospital-based	3
Other	3
Number of managed care plans in which physicians participated, %	
0	12†
1–3	54
4–6	27
≥7	7
Years of participation in managed care health insurance plans, %*	
<1	8
1–3	38
4–6	36
≥7	18
Years of participation in nonmanaged care health insurance plans, %	
<1	2
1–3	5
4–6	15
≥7	78

**Total number of physicians responding to this question = 39.*
†Although five (12%) of the 41 physicians responded that they participated in zero managed care plans, their responses to later questions in the survey revealed that they did participate in managed care insurance plans.
NOTE: Percentages may not add to 100 because of rounding.

Table 2. Methods of Interphysician Communication Identified by 41 Primary Care Physicians Participating in Managed Care and Nonmanaged Care Health Insurance Plans (on a scale of 1 to 5, where 1=never, 5=always)

Communication Method	Mean Score for Managed Care	Mean Score for Nonmanaged Care	*P* Value*
Nurse or secretary communicates with specialists (rather than primary care physician)	3.0	2.4	<.01
Primary care physician personally speaks with specialist	2.8	3.5	<.01
Primary care physician sends written summary to specialist	2.6	2.9	<.05
Specialist personally speaks with primary care physician	2.4	3.5	<.01
Specialist sends written summary to primary care physician	3.2	4.1	<.01

**P value for Wilcoxon's signed-ranks test of the difference between responses for managed care and nonmanaged care patients.*

Primary care physicians reported being more committed to the guidelines and rules of managed care organizations (mean=3.6) than their patients (mean=2.6) or specialist physicians (mean=3.2). Primary care physicians rated their response to the question, "How often do you have enough control to state that you are managing care according to the rules of the managed care insurance program?" as a mean of 3.0, and reported they had less control over how specialists managed referred patients in managed care plans (Table 3).

Primary care physicians reported that patients in managed care plans were referred more often to an unknown specialist than were those in nonmanaged care plans (MC mean=2.8, NMC mean=1.4; $P<.01$). The perceived quality of specialists participating in managed care plans was lower than in nonmanaged care plans (MC mean=3.5, NMC mean=4.6; $P<.01$).

Physicians were asked, "When you are unfamiliar with the specialists and the patient needs a referral, what do you do?" For managed care plans, 30% (12) reported selecting a specialist on the list without further research about the specialist's background; 33% (13) asked the patient to select a specialist; 55% (22) selected a specialist on the list based on information from colleagues or other research; 13% (5) stated they would consider managing the patient's problem themselves; and 3% (1) answered "other" (Table 4). For nonmanaged care plans, 77% (30) stated they would select a specialist in the local medical directory based on information from colleagues or other research; 15% (6) stated they would consider trying to manage the patient's problem themselves; 3% (1) stated they would select a specialist without further research about the specialist's background, 5% (2) stated they would ask the patient to select a specialist, and 18% (7) answered "other."

When asked, "How often do patients come to your office requesting a referral to a specialist and do not want to discuss the problem with you initially?" physicians re-

Table 3. Level of Control Primary Care Physicians Have Over Procedures Performed by Specialists, As Identified by 41 Primary Care Physicians Participating in Managed Care and Nonmanaged Care Health Insurance Plans (on a scale of 1 to 5, where 1=never, no control, 5=always, complete control)

Variable	Mean Scores for Managed Care	Mean Scores for Nonmanaged Care	*P* Value*
Specialist discusses ordering laboratory tests or doing *minor* procedures before performing them	2.1	2.6	<.05
Specialist discusses doing *major* procedures before performing them	3.6	4.2	<.01
Degree of control primary care physician has over how specialists manage patients	2.5	3.0	<.05

**P value for Wilcoxon's signed-ranks test of the difference between responses for managed care and nonmanaged care patients.*

Table 4. Primary Care Physicians' Referral Procedures When Specialist Physicians Are Unknown to the Referring Physician

Procedure	% Managed Care (n=40)	% Nonmanaged Care (n=39)
Manage the patient's problem yourself	13	15
Select a specialist on the list without further research about the specialist's background	30	3
Select a specialist based on information from colleagues or other research	55	77
Ask the patient to select a specialist	33	5
Other	3	18

NOTE: Percentages do not add to 100 because some physicians gave more than one response.

ported this occurred more frequently with patients in managed care plans than with those in nonmanaged care plans (MC mean=3.0, NMC mean=1.6; $P<.01$). When asked how often they provide referrals in this situation, physicians' mean response was 3.0 for managed care and 2.8 for nonmanaged care ($P=.09$).

Primary care physicians perceived that patients in managed care plans changed primary care providers much more frequently than did those in nonmanaged care plans (MC mean=3.8, NMC mean=2.2; $P<.01$). Eighty percent (33) of primary care physicians stated they had lost up to 20% of their practice because of patients switching to managed care plans in which they were not designated as primary care providers; 20% (8) had lost between 21% and 40% of their patients for the same reason.

Finally, when asked whether they had any criticisms or concerns about interactions with specialists within managed care plans, 62% of physicians answered yes.

Discussion

Although our empirical study is exploratory, it provides an interesting assessment of physician opinions about communication patterns between primary care physicians and specialist physicians in practice environments where physicians are members of multiple managed care plans, each with its own primary care and specialist physician referral panel. It also serves as an example of the empiric process-evaluation research that needs to be conducted to assess the performance and implementation of newer types of managed health insurance plans.

In our sample, we found that primary care physicians perceived that they communicated less well with specialist physicians concerning the management of patients in managed care plans compared with those in nonmanaged care plans. One possible explanation for this result is that primary care physicians also reported not knowing the specialists in managed care plans. This finding was unexpected. The mean length of time in practice for primary care physicians in this survey was 18 years, and primary care physicians in this survey had participated in managed care plans long enough (92% for more than 1 year) to have established relationships with specialists in these plans.

Further, primary care physicians reported they were much more willing to send patients to unknown specialists or to ask patients to select a specialist in managed care plans. This was not true for nonmanaged care plans, in which physicians reported they took the time to do further research or to ask colleagues about a specialist before referral.

Primary care physicians in this survey perceived that patients changed primary care physicians much more frequently in managed care plans than in nonmanaged care plans. As employers change health insurance programs, patients may find themselves seeing new primary care providers or specialists with no guarantee of continuity of care. A physician who does not know the patient well may not be able to act effectively as a coordinator of care or as a primary care provider. Thus, increased competition in the MCO market may violate the gatekeeper model of the primary care physician who knows the patient well and manages the patient's care.[5]

There are several limitations to this study. Given the small number of physicians in this study, analyzing the impact of demographic information (age, sex, number of years in practice, number of years in managed care plans, or number of managed care plans in a physician's practice) on physician responses was impossible. Because the list of physicians obtained from the department of medicine at the university hospital included some physicians who had moved away from the Washington area, we were unable to contact many of these physicians. The 76% response rate is not corrected for this unknown but substantial number of physicians. The sample chosen was not a national sample and may not be representative of all managed care markets.

This study assessed self-reported physician behaviors, which may not accurately reflect their actual behaviors. Both reporting and selection bias are possible in this type of mailed survey. Attitudes of physicians toward managed care plans, which have been shown to vary according to a number of variables (eg, experience, type of practice, and age), could have affected how physicians in our survey reported their experiences.[6-8] We were unable to validate the responses against objective measurements of commu-

nication, such as medical chart documentation (letters, telephone call records, and so forth).

Further research in this area is required to validate our findings and to account for the possibilities of reporting and selection bias in our study. Validating physicians' self-reported behavior would involve accessing patients' charts, referral forms, records of telephone calls, and copies of letters written between physicians regarding patients' care. Alternatively, a diary recording all referrals made by the primary care physician could serve as a tool for improving continuity of care and follow-up of patients referred to specialists. An additional issue to be assessed could include management decisions regarding the provision of specific types of procedures and diagnostic testing following patient referral to specialists. Finally, measurements of physician communication could be used as quality measurements of medical care processes within individual managed care plans.

In this exploratory study, we found that primary care physicians believe that communication between primary care and specialist physicians may be impaired when multiple health insurance plans with restricted panels of participating physicians are implemented in communities. Continuity of care also potentially suffers in this environment because of patient movement from one plan to another. Further research is required to confirm these findings and to assess the processes of care in managed care programs in the United States.

References

1. Nutting P, Franks P, Clancy C. Referral and consultation in primary care: do we understand what we're doing? [editorial]. J Fam Pract 1992; 35:21–3.
2. Schaffer W, Holloman F. Consultation and referral between physicians in new medical practice environments. Ann Intern Med 1985; 103:600–5.
3. Miller R, Luft H. Managed care: past evidence and potential trends. Frontiers Health Serv Manage 1993; 9:3–37.
4. Safran D, Tarlov A, Rogers W. Primary care performance in fee-for-service and prepaid health care systems: results from the medical outcomes study. JAMA 1994; 271:1579–86.
5. Schroeder SA, McPhee SJ. General approach to the patient; health maintenance & disease prevention; & common symptoms. In: Tierney LM, McPhee SJ, Papadakis MA, eds. Current medical diagnosis & treatment. Norwalk, Conn: Appleton & Lange, 1994: 1–15.
6. Schulz R, Scheckler W, Girard C, Barker K. Physician adaptation to health maintenance organizations and implications for management. Health Serv Res 1990; 25:43–64.
7. Taylor H, Kagay M. The HMO report card: a closer look. Health Aff 1986; 5:81–9.
8. Ellsbury KE, Montano DE. Attitudes of Washington state primary care physicians toward capitation-based insurance plans. J Fam Pract 1990; 30:89–94.