Communication Breakdown in the Outpatient Referral Process

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OBJECTIVE: To evaluate primary care and specialist physicians' satisfaction with interphysician communication and to identify the major problems in the current referral process.

DESIGN: Surveys were mailed to providers to determine satisfaction with the referral process; then patient-specific surveys were e-mailed to this group to obtain real-time referral information.

SETTING: Academic tertiary care medical center.

PARTICIPANTS: Attending-level primary care physicians (PCPs) and specialists.

MEASUREMENTS AND MAIN RESULTS: The response rate for mail surveys for PCPs was 57% and for specialists was 51%. In the mail survey, 63% of PCPs and 35% of specialists were dissatisfied with the current referral process. Respondents felt that major problems with the current referral system were lack of timeliness of information and inadequate referral letter content. Information considered important by recipient groups was often not included in letters that were sent. The response rate for the referral specific e-mail surveys was 56% for PCPs and 53% for specialists. In this e-mail survey, 68% of specialists reported that they received no information from the PCP prior to specific referral visits, and 38% of these said that this information would have been helpful. In addition, four weeks after specific referral visits, 25% of PCPs had still not received any information from specialists.

CONCLUSIONS: Substantial problems were present in the referral process. The major issues were physician dissatisfaction, lack of timeliness, and inadequate content of interphysician communication. Information obtained from the general survey and referral-specific survey was congruent. Efforts to improve the referral system could improve both physician satisfaction and quality of patient care.

KEY WORDS: ambulatory care; communication; referral and consultation.
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The referral process is a critical component of quality clinical care, and it has become increasingly scrutinized in the managed care era. Physician-to-physician communication is vital to the success of an outpatient referral. Optimal communication involves transfer of relevant clinical information in both directions (from the referring physician to the specialist and vice versa). Breakdowns in communication can lead to poor continuity of care, delayed diagnoses, polypharmacy, increased litigation risk, and unnecessary testing,[1] and can therefore decrease the quality of care.

Difficulties with referrals are commonplace because of physician time constraints, lack of clarity about reasons for referrals, patient self-referrals, limitations imposed by managed care, and unclear follow-up plans. Several studies have shown that communication between primary care providers (PCPs) and specialists is suboptimal in many ways. In a 1983 study of inpatient consultation,[2] the requesting physician and the consultant completely disagreed on both the reason for consultation and the principal clinical issue in 14% of consultations. In one outpatient study done in 1980, PCPs only received follow-up information for 62% of consultations.[3] However, despite advances in medicine and communication technology, the available data suggest that these figures have not improved. A 1998 study found that referring physicians received feedback from consultants in only 55% of cases.[4]

Much of the research on referral communication has focused on the content of referral letters. In one of those studies, researchers surveyed general practitioners and consultants about what a referral letter should include.[5] A high degree of consensus existed among clinicians about important content of referral communications. Over 90% of both generalists and consultants agreed that statement of the problem, current medication, and reason for referral should be in a referral letter. However, several studies show that letters from general practitioners often lack critical information, explicit statements of the reason for consultations, sociopsychological factors, or plans for follow-up.[6-10] For example, one study found that although referring physicians provided patient background in 98% of referrals, they made the purpose of the referral explicit in only 76%.[8]

Developing a better understanding of problems in communication should be the first step in creating systems that facilitate better quality referrals. Methods of communication have significantly changed in the past few years with the advent of electronic mail (e-mail). However, it is not clear that better communication is occurring, especially since physicians are busier than ever. In addi-

tion, little is known about the reasons for inadequate physician communication and what the significant barriers are to effective communication from the physicians' perspective.

To evaluate our current referral process in order to improve its quality, we sought to measure physician satisfaction with the current referral process at our institution; identify the type of communication that is occurring and evaluate the adequacy of provider communication both in general and for specific referrals; identify the major problems with the current referral system; and identify potential targets for improvement.

METHODS

Description of Current Referral Process

This study was performed at Brigham and Women's Hospital, an academic tertiary care teaching and referral center. Our institution has a computerized medical record including outpatient notes and e-mail, which all physicians can access.[11] However, while almost all PCPs use the computerized record regularly, specialists often do not. Communication at the time of referral at our institution relies on dictated notes, e-mail notes, or direct personal communication between providers that is not computerized. These interactions occur at the discretion of the providers.

Study Design

We conducted 2 types of surveys. First, we performed a mail survey that asked providers about their satisfaction with the referral process, the major problems with the system, and what they felt was important content to convey in referral letters. However, we were concerned that providers might selectively remember referral instances in which communication had been poor and overemphasize certain cases. Therefore, to reduce recall bias we performed a second e-mail survey in real-time, in which we asked providers about specific individual referrals (referenced by date of visit and patient information). The goal was to obtain detailed, concurrent, referral-specific information about actual communication (see below).

Mail Survey

Distribution. Physicians studied included 84 PCPs and over 400 specialists who practice in the Boston area and are affiliated with our institution (both on-site and off-site). We mailed one survey to all 84 PCPs (including both on-site and community-based physicians), and a slightly different instrument with specialty-related questions to 405 specialists. The PCPs were all attending-level physicians. Specialists were selected for the survey if they had received more than ten managed care referrals within the past 2 years. We sent follow-up letters to all physicians

who had not responded after 4 weeks. The survey was performed from September to November of 1997. The response rate was 57% for PCPs and 51% for specialists.

Design. We used a confidential mail survey to assess the overall referral process and physician satisfaction with the process. Questions about satisfaction were on a 1 to 5 scale (1 = very dissatisfied, 2 = somewhat dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = somewhat satisfied, 5 = very satisfied). Questions about the frequency of various activities were also scored on a 1 to 5 scale (1 = rarely, 2 = a few times, 3 = sometimes, 4 = most of the time, 5 = always). Questions about the importance of information used a 1 to 5 scale as well (1 = unimportant, 2 = somewhat unimportant, 3 = neither unimportant nor important, 4 = somewhat important, 5 = very important). Questions to determine how often information was included in notes also used a 1 to 5 scale (1 = almost never [<5%], 2 = occasionally [<25%], 3 = sometimes [25%–50%], 4 = usually [50%–75%], 5 = almost always [>75%]). Questions to PCPs and specialists were virtually identical, with "mirror image" wording.

E-mail Survey

Distribution. An automated program was created to detect referral visits by new patients to orthopedics, cardiology, and gastroenterology. These specialties were chosen because of their high volume of referrals. The day after the visit occurred, an e-mail message was sent to the specialist. The e-mail had the patient's name, date of visit, and PCP at the top, and the survey questions below. If there was no response within 3 days, a repeat survey was sent. Two weeks after the referral visit, the PCP survey was sent. The e-mail included the patient's name, date of visit, PCP name, and the survey questions. Again, if there was no response within 3 days, a repeat survey was sent. If the PCP had not received information at two weeks, the same survey was sent again at 4 weeks (again, with a 3-day repeat if necessary).

Data were collected from May to July 1998. The response rate for specialists was 53%; the response rate for PCPs was 56% at 2 weeks and 70% at 4 weeks. In addition, for each referral, patient information was collected from the electronic medical record (age, gender, race, and insurance type).

Design. To obtain more concurrent detail about communication between PCPs and specialists regarding specific referrals, we created a confidential real-time e-mail survey to send to both sets of providers. Each e-mail survey referenced a specific referral visit that had occurred. Surveys were very brief (4 questions) and had yes/no responses. Respondents could complete and return the survey within e-mail. Surveys to specialists asked, for a specific referral visit, whether they had received a referral letter prior to the visit and whether they had all the necessary informa-

tion (problems to be addressed, questions to be answered). Surveys to PCPs included whether they had heard back from specialists about specific referrals and if their clinical questions were answered.

Analysis

Satisfaction was defined as a reported survey response of either 4 (somewhat satisfied) or 5 (very satisfied). Dissatisfaction was defined as a reported survey response of either 1 (very dissatisfied) or 2 (somewhat dissatisfied). Responses from PCPs and specialists were grouped and averaged using the SAS program (SAS Systems, Inc., Cary, NC). Student's t tests and χ^2 analyses as appropriate were performed to compare PCP and specialist responses.

RESULTS

Mail Survey Results

Overall Dissatisfaction. Of the 48 PCPs who responded, 30 (63%) reported they were dissatisfied with the current managed care referral system. While PCPs were more often dissatisfied with the process than specialists ($P <$ .001), 35% of specialists were also dissatisfied.

The PCPs said that the 3 biggest problems with the current referral system were lack of timeliness of information from specialists, redundancy of the current process, and time required to create adequate referral notes (Table 1). Specialists reported that the 3 biggest problems with the current referral system were lack of timeliness of information from the PCPs, time required for medical management or insurance approvals, and lack of clarity of note content from PCPs.

Method of Information Exchange. The most common forms of PCP communication with specialists were letters (40%), followed by computerized notes (33%) and e-mail (28%). Specialists also reported communication via letters (73%), computerized notes (47%), and e-mail (24%).

Content of Information Exchange. Regarding the information they provided to the other group (Table 2), 28% of PCPs and 11% of specialists were somewhat or very dissatisfied. Primary care providers were significantly more often dissatisfied ($P <$ .005). In addition, 28% of PCPs and

43% of specialists were dissatisfied with the information received from the other group. On average, specialists reported that they did not receive enough information to adequately address the problem 23% of the time. Primary care providers said that 19% of their referrals were "repeat referrals"—referrals that had to be repeated because the patient's problem was not addressed completely during the initial visit.

Specialists reported that the most important information they needed from PCPs was problems to be addressed, clinical questions to be answered, details the patient was unable or unlikely to provide, medical problems, and medications. However, PCPs often do not include this information (Table 3). For example, 74% of PCPs stated that they often do not include medications, and 68% stated that they often do not include medical problems. Primary care providers felt that the most important information they want from specialists is answers to specific questions, the specialist assessment of the patient, results of tests and procedures, and therapy proposed or initiated. A substantial percentage of specialists often omit this information as well (Table 3).

Timeliness of Information Exchange. Forty-eight percent of specialists were dissatisfied with the timeliness of information from PCPs (Table 2), and 50% of PCPs were dissatisfied with the timeliness of feedback from specialists. Specialists stated that they responded to PCPs within 7 days of the patient's visit 87% of the time; in contrast, PCPs reported that only 36% of the time did they receive follow-up within 7 days.

E-mail Survey Results

Content of Information Exchange. There were 105 referrals for which specialist responses were obtained. Of these, 53 were from gastroenterology, 37 from orthopedics, and 15 from cardiology. Overall, 68% of specialists reported that they did not receive prior information from the PCP, and 38% of these reported that this information would have been helpful. No substantial differences were found between specialties. Specialists who did not receive prior communication were less likely to report that they knew the problem to be addressed, the question to be answered, or that they had received all the patient information they needed (Table 4) (all $P <$ .05). No significant rela-

Table 1. Most Significant Problems with the Current Referral Process

Primary Care Providers	% Reporting a Problem	Specialists	% Reporting a Problem
Timeliness of information from specialists	54	Timeliness of information from PCP	41
Redundant aspects of the current process	35	Time required for insurance approvals	39
Time required to create an adequate referral note	31	Time required for medical management approvals	31
Difficulty in finding a specialist	29	Lack of clarity of note content from PCP	27
Lack of knowledge of role of medical management	29	Time required to create an adequate note for PCP	21
Time required for medical management approvals	15	Redundant aspects of the current process	18

Table 2. Dissatisfaction with Information Content and Timeliness of the Referral Process

	Primary Care Providers (%)	Specialists
Dissatisfaction with content of information they provided*	13 (28)	22 (11%)
Dissatisfaction with content of information they received	13 (28)	85 (43%)
Dissatisfaction with timeliness of information they received	24 (50)	95 (48%)

*P < .005.

tionship existed between specialty type and receipt of letters. However, specialists in cardiology and gastroenterology were more likely to send letters than orthopedic surgeons.

Timeliness of Information Exchange. There were 112 referrals from PCPs to specialists that had PCP responses by e-mail. Two weeks after the referral visit, 40% of PCPs had received no information from the specialists. Four weeks after the referral visit, 25% of PCPs still had not received any information from the specialist. Patient demographics (age, gender, race) and managed care insurance status did not affect whether PCPs or specialists received letters.

DISCUSSION

In this study, we found that both PCPs and specialists at our institution were dissatisfied with the current referral process. We surveyed providers for general impressions of the referral process and with regard to specific referrals, and found issues of inadequate referral content and timeliness in both. The referral-specific data obtained by e-mail survey were remarkably congruent with the mail survey information. A key issue was the large discrepancy between what both groups of physicians thought was important information to convey and what they were actually communicating. In addition, key barriers to communication were identified, such as time to create an adequate note. Interestingly, patient factors and managed care insurance type were not associated

with receipt of information, perhaps demonstrating that the problem is with the referral system as a whole. Like many other systems in medicine,[12] this system was never consciously designed and leaves much to be desired. These data suggest that systems to improve the transfer of information from PCPs to specialists and vice versa could improve the quality and efficiency of care for patients that are referred.

Communication issues are important for physician satisfaction and for quality of care. Physicians making referrals have switched hospitals and specialists because of poor communication.[13] In addition, physicians who received feedback were the most satisfied with communication from consultants and with the care their patients received.[4] Finally, improving communication before referral visits occur can reduce inappropriate referrals.[14] Thus, making the communication system more functional and precise could improve both physician satisfaction and the quality of care.

A critical component of effective referral communication is the referral letter. Both PCPs and specialists were dissatisfied with the content of the letters they provided each other and with the information they received. There were many items that specialists wanted to know that PCPs said they often did not include. This problem is not likely to be due to a lack of understanding about what is important to specialists, given the known consensus about note content previously demonstrated between generalists and specialists.[5] Therefore, the lack of inclusion of important information is more likely due to time pressure. Both groups reported that the time required to cre-

Table 3. Information Providers Want and Percentage of Providers who Report Sending this Information

Most Important Information Specialists Want from PCPs	% of PCPs that Report Sending This Information <75% of the Time
Problems to address	18
Questions to answer	23
Details patient is unable or unwilling to provide	69
Medical problems	68
Medications	74

Most Important Information PCPs Want from Specialists	% of Specialists that Report Sending This Information <75% of the Time
Answers to specific questions	21
Specialist assessment of patient	12
Results of test and procedures	34
Therapy proposed or initiated	21

Table 4. Specialist Knowledge of Referral Issues

	Specialist Received Prior Communication, % (*n* = 33)	No Communication Prior to Referral, % (*n* = 71)
Knew problem to be addressed	100	88*
Knew question to be answered	100	84*
Had all patient information needed for the referral	100	57*

*P < .05.

ate adequate notes was an important barrier. It has been shown that the quality of consultant reports increases directly with the amount of referral information originally received.[15] Therefore, inadequate notes as perceived by both the PCPs and specialists in this study are likely to impact on the quality of the referral process. Interventions designed to streamline the referral process as a whole and to reduce the time required to create notes could improve the quality and content of notes.

Specialists were also dissatisfied with the timeliness of information they received, and 68% reported that they did not receive information before the referral visit. Therefore despite technological advances in communication (e.g., e-mail), we found that a large percentage of patients were referred without communication between providers. In addition, only approximately 25% of providers were using e-mail for referral communication. Not surprisingly, specialists who did not receive referral communication were significantly less likely to know what problems and issues caused the referral. Inadequate letter content and poor timeliness could account for the substantial percentage of specialists who did not have enough information to adequately address the problem. This in turn could lead to additional visits or redundant testing, and therefore increased costs. From the patient's perspective, the current system is hard to defend. Also, PCPs reported a 19% repeat referral rate due to problems not completely addressed at the first visit, some of which may be related to inadequate initial communication. Thus, both cost savings and better quality of care could result from improved referral note content and timeliness.

Similarly, PCPs were dissatisfied with the timeliness of communication. Four weeks after the referral visits, 25% of PCPs had not received information from specialists. Greater knowledge of consultation results could prevent time-consuming phone calls and could improve subsequent PCP-patient interactions. In one study, receipt of feedback from specialists was strongly related to communication by the PCP to the consultant at the time of referral. Referring physicians who personally contacted consultants or who supplied them with significant clinical information were more likely to learn the results of the consultation.[4,8] This effect suggests that interventions to facilitate communication could have a major impact on the quality of the referral process.

In managed care environments, facilitating and improving the referral process is essential to maintaining the referral base of the organization and practicing cost-effective medicine. One study showed 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.[16] In that study, physicians reported that for managed care patients, they were less likely to know the specialist, to speak personally with the specialist, or to send a written summary to the specialist. So-called integrated delivery systems have an obligation to invest in systematic communications programs to ensure proper flow of information between physicians and true integration.

One limitation of this study is that it was based at a single large tertiary care teaching and referral center. The problems faced by physicians at this site are likely very different from the challenges at smaller institutions. Both PCPs and specialists stated that system redundancy was an important problem. As referral processes become more complicated due to the complexity of health care plans and approval processes, medical centers of all sizes need to create systems that work smoothly and efficiently in order to minimize the clerical work of physicians. Large centers with more complicated referral patterns and administrative systems may find this especially challenging. A second potential limitation is respondent bias, particularly given our response rates. Physicians who were more dissatisfied may have been more likely to answer the survey. However, this still means that a large percentage of physicians in our system are clearly dissatisfied. It is unlikely that physicians who are poor communicators would have been more likely to respond to the surveys. Therefore, the issues of dissatisfaction and inadequate communication cannot be ignored.

In summary, communication between PCPs and specialists during the referral process is often inadequate both in terms of quality and timing, physicians are dissatisfied with the process, and physicians identify several important barriers to communication including time required to create adequate notes and redundant processes. Communication needs to be examined in greater detail to determine ways to improve it. Potential strategies include automating referral communication and letter generation through computerized referral applications. We are currently in the process of developing this kind of system. Future studies will examine whether improving communication can result in better patient outcomes, patient sat-

isfaction, and resource utilization. Systems that can facilitate referral communication are likely to make the process more effective for both physicians and their patients.

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ANNOUNCEMENT

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