

BRIEF REPORTS

Communication Problems for Patients Hospitalized with Chest Pain

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In many settings, primary care physicians have begun to delegate inpatient care to hospitalists, but the impact of this change on patients' hospital experience is unknown. To determine the effect on physician-patient communication of having the regular outpatient physician (continuity physician) continue involvement in hospital care, we surveyed 1,059 consecutive patients hospitalized with chest pain. Patients whose continuity physicians remained involved in their hospital care were less likely to report communication problems regarding tests (20% vs 31%, $p = .03$), activity after discharge (42% vs 51%, $p = .02$), and health habits (31% vs 38%, $p = .07$). In a setting without a designated hospitalist system, communication problems were less frequent among patients whose continuity physicians were involved in their hospital care. New models of inpatient care delivery can maintain patient satisfaction but to do so must focus attention on improving physician-patient communication.

KEY WORDS: patient-provider communication; quality of care; hospitalists; primary care.

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Recent efforts in the United States to maximize the efficiency of hospital care have included the creation of "hospitalists," specialists in inpatient medicine who replace primary care doctors in their traditional role of managing the care of hospitalized patients.¹ Anecdotal reports about hospitalist systems suggest that they may soon become an important mode of inpatient care in this country.^{2,3} Removing primary care physicians from direct involvement in inpatient care may be more efficient, but

its impact on patients' experience in the hospital remains unknown.

As part of a study of process and outcomes of care for patients hospitalized with acute chest pain, we surveyed patients about specific aspects of their care. Our goal was to determine the effect of involvement of a patient's continuity physician on several dimensions of physician-patient communication in the hospital.

METHODS

All patients aged 30 years or older who were admitted to Brigham and Women's Hospital between July 1990 and February 1992 with chest pain unexplained by local trauma or chest radiograph were eligible for this study. During the study period, there was no formal "hospitalist" system in which a dedicated group of physicians provide care for hospitalized patients in place of their regular outpatient physicians.¹ Demographic, clinical, and comorbidity data were entered on a form by a physician at the time of clinical evaluation or by a research nurse.⁴ Within 4 weeks of discharge from the hospital, patients were reached by telephone and asked, "If you have a regular doctor, did that doctor help take care of you in the emergency room or hospital?" Hospitalized patients responding "yes" were considered to have had continuity physician involvement in their hospitalization.

Dimensions of physician-patient communication were measured through eight closed-ended questions derived from the Picker-Commonwealth Survey of Patient-Centered Care.⁵ Responses to these questions were grouped a priori into four categories representing potential communication problems regarding: diagnostic tests, physical activity following discharge, health habits (cardiac risk factors and lifestyle modification), and medications (Table 1).

RESULTS

Between July 1990 and February 1992, there were 1,059 eligible patients hospitalized after presenting to the emergency department with a chief complaint of acute chest pain. Of these patients, 637 (60%) completed the survey. Nonrespondents included patients who died ($n = 30$), refused to participate ($n = 93$), or were lost to follow-up ($n = 274$), along with 2 patients who did not speak

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Table 1. Grouping of Survey Questions into Domains of Communication Problems Regarding Tests, Activity After Discharge, Health Habits, and Medications

Tests
In the hospital, did someone explain why important tests were ordered in a way that you could understand?
Did a doctor or nurse explain the test results in a way you could understand?
Activity after discharge
Were you told what activities you should or should not do when you go home?
If you are working outside the home, were you told when you could go back to work?
Health habits
Were you told ways you should change your diet or your habits (smoking, drinking) to reduce your future risk of heart disease?
Medications
Was the purpose of any new medications you received in the hospital explained to you in a way you could understand?
When you left the hospital, were the important side effects of any new medications explained to you in a way that you could understand?
Were you told what you needed to know about when and how to take your medicines at home, or not?

English and 23 patients who were too ill to complete the survey.

Of the 637 responding patients, 580 (91%) reported having a continuity physician, of whom 301 (52%) reported that their physicians were involved in their care while hospitalized. Patients whose continuity physician was involved in their hospitalized care were older (63 vs 61 years, $p = .01$), were less likely to be insured by an HMO (40% vs 51%, $p = .01$), and had higher Charlson comorbidity scores (mean 1.55 vs 1.17, $p = .002$). Race, gender, education, clinical diagnoses, and rates of admission to critical care units, however, were similar among patients with and patients without continuity physician involvement.

The relation between continuity physician involvement and reporting of various communication problems is shown in Table 2. Overall, patients with continuity physi-

cian involvement were less likely than those without continuity physician involvement to report one or more problems with communication (66% vs 75%, $p = .01$). Patients with continuity physician involvement in their care were less likely to report communication problems regarding tests (20% vs 31%, $p = .003$), activity after discharge (42% vs 51%, $p = .02$), and modification of health habits such as diet or smoking (31% vs 38%, $p = .07$). However, patients with and patients without continuity physician involvement reported similar rates of communication problems regarding medications (34% vs 38%, $p = .39$). The two patient groups reported similar rates of receiving appropriate instruction regarding the purpose of new medications, potential side effects of new medications, and instructions for self-administering medications.

In multivariate analyses, controlling for clinical and sociodemographic factors potentially related to communication

Table 2. Relation Between Regular Outpatient Physician Involvement and Reported Problems with Communication

Problem Area	Regular Physician not Involved, % (n = 279)	Regular Physician Involved, % (n = 301)	Univariate p Value	Multivariate Odds Ratio (95% Confidence Interval)*
Tests	31	20	.003	0.51 (0.33, 0.78)
Purpose of diagnostic tests not explained or not understandable	18	14	.2	
Results of diagnostic tests not explained or not understandable	24	12	<.001	
Activity after discharge	51	42	.024	0.65 (0.45, 0.94)
Not told how to limit activity	40	36	.26	
Not told when to resume work	48	38	.13	
Health habits	38	31	.07	0.63 (0.42, 0.94)
Medications	34	38	.39	1.16 (0.77, 1.77)
Purpose of new medications not explained or not understandable	13	14	.68	
Side effects of new medications not explained or not understandable	27	31	.46	
Not told when or how to take new medications	8	8	.99	

*Adjusted for age, gender, race, insurance status, income, education, Charlson comorbidity index, diagnosis of myocardial infarction or unstable angina, and length of stay.

problems, regular physician involvement remained independently correlated with three out of the four communication problems (Table 2).

DISCUSSION

We found that patients admitted to our hospital with chest pain whose continuity physician continued to be involved with their in-hospital care were less likely to report communication problems regarding tests, activity after discharge, and health habits. Communication problems were common among all patients hospitalized with chest pain; other studies have reported similar rates of problems with communication.⁵⁻⁷ Effective communication regarding these elements of care plays an important role in the appropriate care for all patients hospitalized with chest pain. Improved physician-patient communication leads to better health outcomes for many illnesses.⁸⁻¹⁰

Several mechanisms may explain the improved communication reported by patients whose continuity physician was involved in their in-hospital care. The long-standing relationships between patients and their outpatient physicians may allow those physicians to communicate with their patients in ways they have already found to be effective. Hospitalized patients may be more receptive to communication and instruction from their regular physician because they will maintain a relationship with that physician beyond the hospitalized period. Furthermore, regular physicians have a direct interest in ensuring that adequate communication occurs in the hospital because such communication may make outpatient care more effective.

One limitation of this study is the inability to define and describe the exact nature of the physician involvement for those patients who reported that their regular physician was involved in their care in the hospital. Involvement could mean that the patient's regular physician served as the attending physician and guided the day-to-day decision making during the hospitalization, but it could also mean that the physician only made "social rounds" and visited the patient in the hospital just to say hello. Furthermore, we did not ask patients to specify whether their regular physicians were generalists or specialists. Our results should therefore not be interpreted to imply that the care provided by generalist physicians is

associated with fewer communication problems than care provided by specialists.

This study was performed before the hospitalist systems emerged as a prominent mode of inpatient care delivery.¹ As medical centers begin to adopt programs of hospitalist-physician care in an effort to improve efficiency, outpatient physicians are likely to become even less involved in the care of their hospitalized patients. A system utilizing hospitalists can maintain patient satisfaction,¹¹ but special attention may need to be paid to patient education and communication in hospital systems in which patients' continuity physicians do not routinely participate in hospital care.

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