Primary Care Physician Attitudes Regarding Communication with Hospitalists

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Hospitalist systems create discontinuity of care. Enhanced communication between the hospitalist and primary care physician (PCP) could mitigate the harms of discontinuity. We conducted a mailed survey of 4,155 physician members of the California Academy of Family Physicians to determine their preferences for and satisfaction with communication with hospitalists. We received 1,030 completed surveys (26%). PCPs overwhelmingly stated that they "very much prefer" to communicate with hospitalists by telephone (77%), at admission (73%), and discharge (78%). Only discharge medications (94%) and discharge diagnosis (90%) were deemed "very important" by >90% of PCPs. Of the 556 respondents (54%) who had ever used a hospitalist, 56% were very or somewhat satisfied with communication with hospitalists, and 68% agreed that hospitalists are a good idea. Regarding communication at discharge, only 33% of PCPs reported that discharge summaries always or usually arrive before the patient is seen for follow-up. Only 56% of PCPs in our survey were satisfied with communication with hospitalists. Hospitalists should communicate with PCPs in a timely manner by telephone, at least at admission and discharge, and provide the specific pieces of information deemed important by the vast majority of PCPs. Hospitalists should also ensure that discharge information arrives in time to assist the PCP in reassuming care of their patients. It may be possible to tailor communication to individual PCPs. Further research could assess the impact of such communication on patient satisfaction and outcomes. *Am J Med.* 2001;111(9B):15S–20S. © 2001 by Excerpta Medica, Inc.

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Dr. Pantilat is a Soros Foundation Project on Death in America Faculty Scholar and a recipient of a Mentored Patient Oriented Clinical Research Career Development Award from the National Institutes on Aging. A grant from Pfizer supported the administration of this survey.

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In hospitalist systems important clinical, social, and psychological information may be lost because of the discontinuity between the inpatient and outpatient settings, resulting in poorer outcomes, decreased patient and physician satisfaction, and increased costs.[1–3] One way to overcome problems associated with discontinuity is to enhance communication between the PCP and hospitalist.[4] However, indiscriminate and voluminous communication may overwhelm PCPs or interrupt busy outpatient practices.

Despite the growth of hospitalist systems and the importance of these issues, we know little about PCP desires for communication in hospitalist systems or their satisfaction with communication with hospitalists. Our goal was to determine PCP perspectives on the ideal timing, frequency, method, and content of communication with hospitalists. We also assessed PCP attitudes regarding their desire to be involved in inpatient decision making and examined PCP satisfaction with communication with hospitalists.

METHODS

Subjects

We surveyed all physician members of the California Academy of Family Physicians (CAFP), because family physicians provide substantial amounts of primary care and are likely to consider using hospitalists, and because the CAFP endorsed the study. We excluded physicians who provide no patient care.

Survey

Our survey comprised 2 parts. The first assessed physician preferences for communication about their patients admitted to another physician's care. To assess preferences for timing, frequency, and content of communication, we used a 5-point Likert scale, where 5 represented "very important," and 1 represented "very unimportant." To gauge preferences for method of communication we used a similar scale, where 5 represented "very much prefer," and 1 represented "very much dislike." We also measured physicians' preferences for timing, method of communication, and importance of personal input in the decision-making process for 3 common inpatient scenarios.

We then asked the physicians whether they had ever used a hospitalist for inpatient care. We used a published definition of a hospitalist as "an internist or family phy-

sician who spends at least 25% of the time providing inpatient care and assumes the care of your patient during a hospitalization."[5] In the second part of the survey, only those physicians who had ever used a hospitalist completed items regarding experience and satisfaction with communication with hospitalists. We assessed the frequency, method, and timing of their communication with hospitalists using 4 categories: "always," "usually," "sometimes," and "never."

To measure PCPs' contact with their patients during hospitalization, we asked how often they visit or call their patients cared for by hospitalists. We also measured PCP satisfaction with the timing, frequency, content, and method of communication with hospitalists at admission, during the hospitalization, and at discharge using a 5-point Likert scale, with 5 representing "very satisfied" and 1 representing "very unsatisfied." Finally, we obtained demographic information about the physicians and their practices.

Mailing

We mailed the self-administered surveys to 4,155 CAFP members and included a letter from the president of the CAFP encouraging them to participate. Surveys were mailed in April 1998. At 3 weeks after the first mailing, we remailed surveys to those physicians who had not responded. The University of California, San Francisco, Committee on Human Research approved our protocol.

Data Analysis

We calculated means and standard deviations where appropriate and percentages for categorical variables. We used 2-tailed χ^2 analyses with a cutoff of $P = 0.05$ for statistical significance to examine the effect of demographic variables on physicians' satisfaction with communication.

RESULTS

Physician Characteristics

Of 4,155 surveys mailed, 147 were undeliverable, resulting in 4,008 eligible subjects. We received 1,237 (31%) responses, of which 207 were blank and likely represent physicians no longer in practice or unfamiliar with hospitalists. Thus, we analyzed 1,030 usable responses (26%).

Respondents were predominantly middle-aged men (**Table 1**). These physicians have large patient panels and spend a full workweek seeing patients; they also spend significant time in administration, teaching, and research. Age and sex were similar for responders and all eligible physicians to whom we mailed surveys.

Table 1. Demographic Characteristics of Participants and Practices

	Participants (n = 1,030)
Age, yr (mean ± SD)	47 (± 10)*
Male (%)	72†
Panel size,‡ n (±SD)	2,138 (± 1,450)
Job description (mean hrs /wk in each activity ±SD)	
Patient care	40 (± 16)
Administrative work	9 (± 9)
Teaching	7 (± 7)
Research	6 (± 5)
Practice setting (%)	
Multispecialty group	30
Solo	25
Group (single specialty)	8
Academic	8
Other	28
Have a facsimile machine in your office (% yes)	98
Use e-mail in your office (% yes)	34

* Mean age of all eligible physicians = 51 ± 4 years.
† Mean percent male of all eligible physicians = 73%.
‡ Number of patients.

Preferences for Communication

We assessed PCP preferences for communication about their patients admitted to the hospital for a medical problem under the care of another physician. The majority of PCPs thought it was very important to hear about their hospitalized patients cared for by another physician at admission (73%) and discharge (78%). Half thought it was very important to hear about a change in clinical status (54%) or a major intervention (50%), but only 6% thought it was very important to be notified daily about their patient.

Overwhelmingly, PCPs' preferred method of communication was a telephone call (77% "very much prefer"; **Figure 1**). Only 8% "very much preferred" e-mail, although at the time 35% used e-mail in their offices. Those physicians who used e-mail were more likely to "very much prefer" e-mail communication about their patients (14% vs. 4%, $P = 0.001$).

More than 70% of PCPs rated the following information received from the inpatient physician as "very important": discharge medications (94%), discharge diagnosis (93%), results of procedures (80%), scheduled follow-up with the PCP (76%), and results of laboratory tests (73%). Fewer than half the PCPs identified information about the physical examination at discharge (46%) or code status (44%) as very important.

Preferences for Communication in Specific Scenarios

We asked PCPs to consider specific patient care scenarios in which a hypothetical patient is admitted to another physician's care. (**Figures 2** and **3**). For each scenario, we

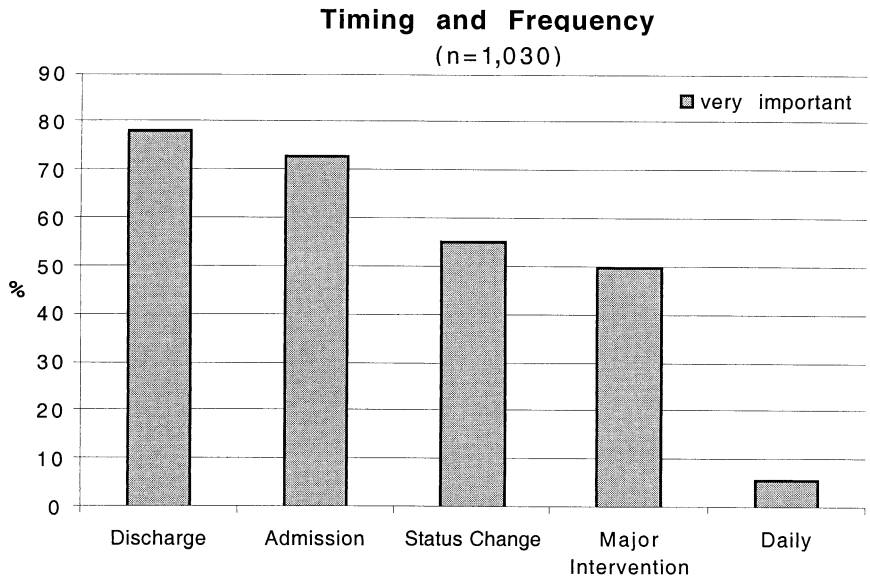

Figure 1. Primary care physician preference for method of communication regarding their patients admitted to the hospital with a medical problem for whom they do not serve as the physician-of-record.

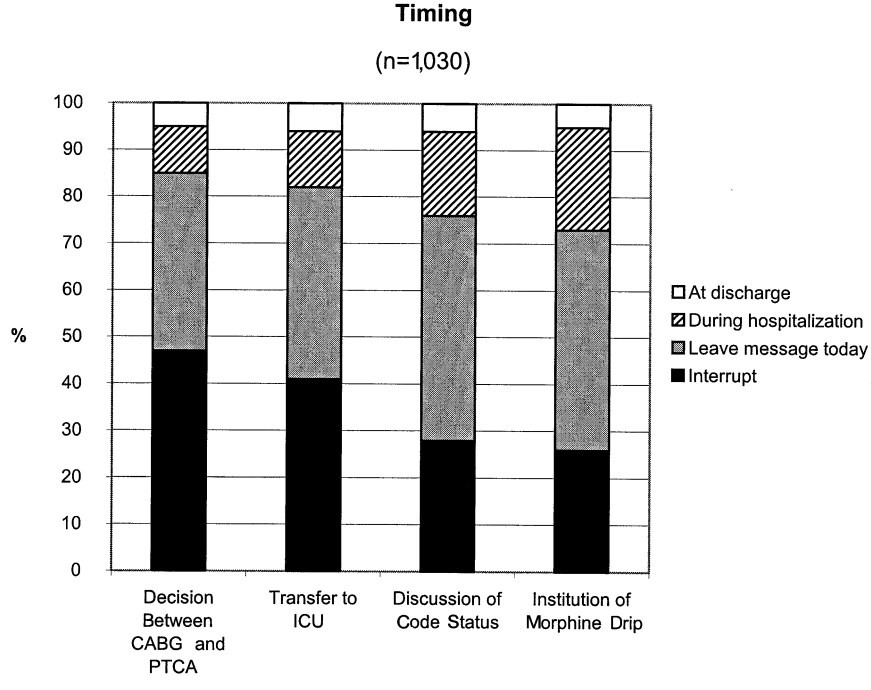

Figure 2. Primary care physician preferences for timing of notification about specific patient care scenarios. CABG = coronary artery bypass grafting; ICU = intensive care unit; PTCA = percutaneous transluminal coronary angioplasty.

asked if PCPs wanted to be interrupted to hear about the case, to get a message that day, to be notified sometime during the hospitalization, or only at discharge and whether they thought it was very important to participate in the decision.

The first scenario involved a decision between emergency coronary artery bypass grafting and percutaneous transluminal coronary angioplasty for a 56-year-old man admitted with a myocardial infarction and postinfarct angina. The second scenario described a 72-year-old man with chronic obstructive pulmonary disease admitted with community-acquired pneumonia whose condition worsens and requires a decision regarding transfer to the intensive care unit. The third and fourth scenarios re-

ferred to a 68-year-old woman with metastatic lung cancer admitted for pain control. In the third scenario the inpatient physician is planning to discuss code status with the patient, and in the fourth scenario the inpatient physician has written a do-not-resuscitate order and is deciding whether to start a morphine drip for difficult-to-manage pain.

For each scenario, the majority of PCPs wanted to hear the same day ("interrupt" or "leave message by the end of the day"; Figure 2) and most preferred telephone notification (Figure 3). In scenarios where physicians were more likely to want to be interrupted, they were also more likely to prefer telephone notification ($P < 0.0001$). By contrast, although more than one third thought it was very important to have input into the discussion of code status, only 5% thought it was very important to have input into a decision regarding a cardiac intervention (Figure 3).

Satisfaction with Communication with Hospitalists

Of the responders, 556 (54%) had used a hospitalist at least once. These PCPs admitted a mean of 15 patients to hospitalists in the previous year, representing 22% of their hospitalized patients. Overall, 68% agreed (33% strongly agreed, 35% agreed), and only 16% disagreed (6% strongly disagreed, 10% disagreed) that "hospitalists are a good idea."

When a patient of theirs is admitted to the care of a hospitalist, one third of PCPs are "always" notified, one third are "usually" notified, and one third are "sometimes" notified (**Table 2**). When notified, hospitalists usually contact the PCP by telephone at admission and discharge. A minority of PCPs always or usually visit their patients hospitalized under the care of a hospitalist and fewer telephone them; however, 79% visit and 69% telephone at least sometimes.

Overall, 56% of PCPs were very satisfied (20%) or somewhat satisfied (36%) with communication with hospitalists, although 89% agreed that they were not notified often enough when their patient was admitted by a hospitalist. Those PCPs who were more satisfied with communication with hospitalists were more likely to agree that hospitalists are a good idea than those who were not satisfied with communication (63% vs. 27%, $P < 0.001$). Similarly, 69% of PCPs were satisfied with the timing of communication about their patients admitted to a hospitalist (most commonly at admission and discharge), and 70% were satisfied by the method used for communication (most commonly telephone).

Communication at Discharge

Regarding discharge, 63% of PCPs reported that they are "always" or "usually" notified by a discharge summary, 31% reported that they are notified by telephone, 12% by fax, and only 4% by e-mail. Although discharge summaries are usually sent, only 33% of PCPs reported that they always or usually arrive before the patient's first follow-up appointment. One of 9 PCPs reported that the discharge summary never arrives before the first follow-up, and 14% of PCPs reported that the discharge summary usually arrives >2 weeks after discharge. Finally, 84% of PCPs agreed that the discharge summaries received are too detailed, whereas 5% agreed that they are not detailed enough.

DISCUSSION

When their patients are admitted to the care of another physician, PCPs prefer telephone communication, at admission and discharge, containing specific information regarding the hospitalization. Furthermore, most PCPs in our sample had experience with hospitalists and most thought hospitalists were a good idea. Although only slightly more than half of these PCPs were satisfied with their communication with hospitalists, a minority of PCPs typically contact their patients admitted to hospitalists. When hospitalists care for their patients, the hospitalist notifies the PCP most commonly by telephone at admission and discharge, demonstrating consistency between PCP preferences and the dominant practice. This concordance may reflect the fact that most hospitalist systems are voluntary, and PCPs choose whether or not to participate.[6] Such systems have incentive for hospitalists to quickly discern a PCP's preference for communication and satisfy it.

Communication about discharge is more problematic. Discharge can be a confusing time for patients, many of whom are still recovering from their illness.[7] Without timely communication, the PCP may be unable to answer patient questions and to provide adequate care. PCPs reported that discharge summaries are too detailed and too often arrive after the patient's first postdischarge appointment. Although we were unable to assess whether PCPs have other ways of obtaining information about the hospitalization (eg, through computer systems), these data suggest gaps that could compromise the quality of care. Discharge summaries serve to inform the PCP about the hospitalization and the new diagnoses and therapies and to document the course of the hospitalization. The detail appropriate to the latter purpose may be excessive for the former. One solution suggested by our findings is a discharge summary that includes a faxed front sheet of key information followed later by the details of the hospitalization. A routine phone call from the hospitalist to the PCP at discharge relaying discharge diagnosis, discharge medications, and pending tests and procedures might also improve the quality of care.

The PCPs in our study clearly prefer telephone contact. Interestingly, the second most preferred method of communication was face to face, and e-mail was relatively unpopular. Although our survey did not assess reasons

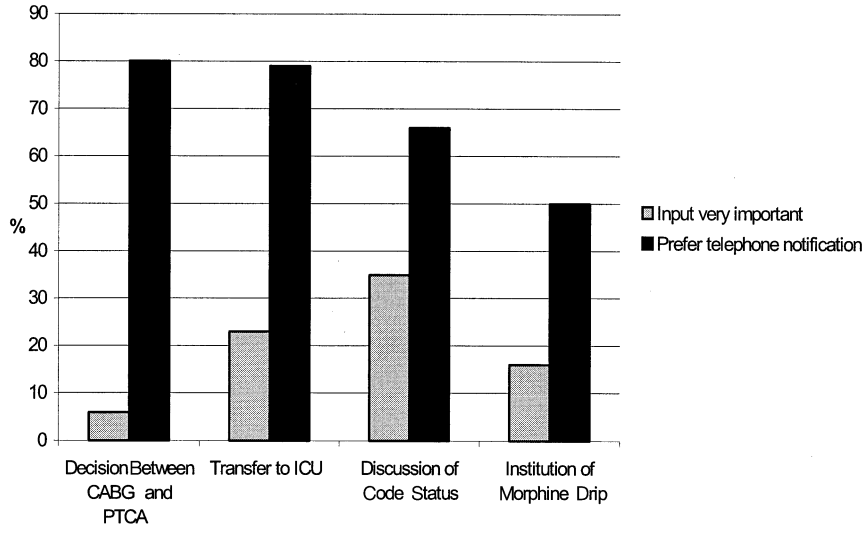

Figure 3. Primary care physician preferences for importance of their input and method of notification about specific patient care scenarios. Abbreviations as in Figure 2.

Table 2. Primary Care Physician (PCP) Experiences with Communication Regarding Their Patients Admitted to the Care of Hospitalists

	Percent* (n = 556)				
	Always	Usually	Sometimes	Never	No Answer
PCP notified that patient was admitted to a hospitalist's care	27	33	33	5	2
PCP notified by					
Hospitalist	30	28	28	8	5
Nurse	5	16	24	35	20
Patient/patient's family	5	17	50	15	14
PCP notified at					
Admission	28	31	29	7	4
Discharge	20	29	36	9	5
When status changes	8	16	35	30	10
For major therapeutic decisions	8	13	35	34	10
Daily	3	8	21	54	13
PCP notified via					
Telephone	29	34	28	5	4
Fax	6	16	26	39	14
Face-to-face exchange	2	7	32	45	14
E-mail	2	4	6	56	32
PCP visits patient in the hospital	9	25	45	14	6
PCP telephones patient in the hospital	6	15	48	24	7

* May not total 100% because of rounding.

for this preference, PCPs may desire the real-time interchange that telephone calls and face-to-face meetings allow. This interchange might be especially important at the inception of hospitalist programs when PCPs are unfamiliar with the hospitalist. The dislike for e-mail may reflect concerns about confidentiality, lack of ready access to a computer, or the cumbersome nature of e-mail for back-and-forth conversations. E-mail may gain favor as it becomes more commonly used and may be particularly useful for simple notification once confidentiality issues are resolved. Face-to-face communication, although preferred by 1 in 5 PCPs, seems unfeasible because it undermines an advantage of hospitalist systems: PCPs can stay in their offices to improve the quality of outpatient care, whereas hospitalists focus on inpatient care.

We also found that few PCPs visit their inpatients cared for by hospitalists and fewer telephone them. Although at times a PCP visit to a hospitalized patient may

be crucial,[8] frequent visits seem unnecessary. It is surprising, however, that PCPs do not telephone patients more often given that patients appreciate such calls.[9]

Many PCPs we surveyed wanted to participate in management decisions. For each scenario, most PCPs wanted notification the same day that the decision was made. As the issues moved from choice of cardiac procedure to code status, PCPs expressed a greater desire for input though a lesser sense of urgency about notification, likely reflecting the pace of decision making. Timely notification avoids the embarrassment of being caught unaware by a patient or family member. Discerning the right amount of communication in such situations requires more research. Future studies may reveal that when requested by the patient or family or for specific situations such as code status discussions, PCP involvement in decision making should be routine.

Our study has several limitations. First, we had a response rate of only 26%, which limits the generalizability of our results. Nonetheless, we believe these results reflect the attitudes of physicians broadly, because our responders resemble the entire cohort of CAFP members in age and sex and because it is likely that those physicians who feel most strongly about hospitalists are most likely to respond. Second, we had no way to verify the experiences reported by PCPs. In particular, we could not independently confirm how often PCPs visit or call their hospitalized patients or how soon discharge summaries arrive. Our results may over- or underestimate the true numbers. To limit the bias, we asked for responses in broad categories of "always," "usually," "sometimes," or "never," assuming that true values would be unlikely to be off by >1 category (for example, that physicians who never visit their patients would answer "usually" or "always"). Third, we surveyed family physicians only in California and our results may not apply to PCPs in other states. However, family physicians face the same issues as any PCP regarding hospitalists, half our responders have experience with hospitalists, and California has the greatest number of hospitalists, so our results may apply broadly. In addition, although geographic and economic issues are important in the structure and evolution of hospitalist systems, issues about communication may be more universal. Finally, we conducted our survey 3 years ago. Since then, both hospitalist systems and the Internet have expanded rapidly, and increasing experience with both may change some of our results.

CONCLUSION

We found that only 56% of PCPs are satisfied with communication with hospitalists and that communication about discharge is often delayed. In addition, PCPs vary in their desire for information about and involvement in decision making for their patients cared for by hospitalists. Increased PCP–patient contact and improved PCP–hospitalist communication may mitigate the potential harms of discontinuity. To start, hospitalists should telephone PCPs at admission and discharge and limit the information they provide. Further, discharge communication should be consistent and timely to provide the PCP with the information needed to reassume care of the patient. Our survey suggests that it could be possible to tailor communication to individual PCPs according to their preferences, providing daily updates by facsimile to one, notification at admission and discharge by e-mail to another, and telephone calls to a third. Ultimately, whether systems adopt a 1-size-fits-all approach to communication or an individualized approach, it will be important to assess the impact of communication content and methods on patient outcomes and satisfaction.

ACKNOWLEDGMENT

We wish to thank Jim McDonnell and Steve Tolle for their assistance with the survey. We also wish to thank Laura Johnson-Morash at the California Academy of Family Physicians (CAFP) for her assistance. Finally, we are grateful to the CAFP for endorsing this study; Paulette Adams, MD, at CAFP who signed letters to her members; and the many physicians who participated in this survey.

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