

Pediatric Hospitalists and Primary Care Providers: A Communication Needs Assessment

Gregory Harlan, MD, MPH¹
 Rajendu Srivastava, MD, FRCP(C), MPH¹
 Lanny Harrison, MA²
 Glen McBride, MS²
 Christopher Maloney, MD, PhD¹

¹ Division of Pediatric Inpatient Medicine, Department of Pediatrics, University of Utah, Salt Lake City, Utah.

² Intermountain Healthcare, Salt Lake City, Utah.

BACKGROUND/OBJECTIVE: Existing research on hospitalist-primary care provider (PCP) communication focuses mainly on adult hospitalist models with little known about the quality of current pediatric hospitalist-PCP communication. Our objective was to perform a needs assessment by exploring important issues around communication between pediatric hospitalists and PCPs.

METHODS: Six previously identified issues around hospitalist-PCP communication from the adult hospitalist literature were abstracted and incorporated into an open-ended and closed-ended questionnaire. The questionnaire was pretested, revised, and administered by phone to 10 pediatric hospitalists and 12 pediatric PCPs residing in our 5-state catchment area. Interviews were transcribed and openly coded, and themes compared using qualitative methods.

RESULTS: The 6 identified issues were: quality of communication, barriers to communication, methods of information sharing, key data element requirements, critical timing, and perceived benefits. Hospitalists and PCPs rated overall quality of communication from “poor” to “very good.” Both groups acknowledge that significant barriers to optimal communication currently exist, yet the barriers differ for each group. Hospitalists and PCPs agree on what information is important to transmit (diagnoses, medications, follow-up needs, and pending laboratory test results) and critical times for communication during the hospitalization (at discharge, admission, and during major clinical changes). Both groups also agree that optimal communication could improve many aspects of patient care.

CONCLUSIONS: Identifying and addressing barriers to these 6 issues may help both hospitalists and PCPs implement targeted interventions aimed at improving communication. Future studies will need to demonstrate the link between improved hospitalist-PCP communication and improved patient care and outcomes. *Journal of Hospital Medicine* 2009;4:187–193. © 2009 Society of Hospital Medicine.

KEYWORDS: communication, hospitalists, needs assessment, primary care providers.

Hospitalist systems focus on providing acute treatments to patients and expediting hospital discharge, sometimes without regard for the need to work in concert with community providers, leading to fragmentation of care.¹ This fragmentation, particularly at the transitions of care, such as when patients move from the outpatient setting to a hospitalist system and then back to their primary care providers (PCPs), can lead to communication breakdowns and delays in care, and may compromise patient outcomes.² Suboptimal treatments, such as medication errors and the ordering of redundant tests can occur in either setting if prior treatment information is not relayed in a timely and accurate fashion. Landrigan et al.³ described a conceptual model in 2001 that recognized the complexity of the

R.S. was supported by the National Institutes of Child Health and Human Development, National Institutes of Health (NIH) grant K23 HD052553-01A1. This research was supported in part by the Children's Health Research Center, University of Utah and the Primary Children's Foundation. Portions of this study were presented at the Pediatric Academic Societies meeting on May 1, 2006 in San Francisco, CA.

hospitalist-PCP communication system. Specifically, optimal care of hospitalized children includes PCPs, family members, hospitalists, and support staff while meeting the communication needs of families and PCPs. Additionally, mediating a smooth transition into and out of the hospital needs to be measured carefully.³

Previous adult studies have reported that hospitalist systems sometimes create discontinuity of patient care, which can have a negative impact on the quality of care provided to patients if there is poor communication between hospitalists and PCPs.^{2,4,5} Existing research on hospitalist-PCP communication focuses mainly on adult hospitalist models with little known about the quality of current pediatric hospitalist-PCP communication.

The objective of this study was to qualitatively explore issues around communication between pediatric hospitalists and PCPs. Specifically, we sought to explore the quality of communication practices and barriers to optimal communication within the hospitalist-PCP model at a tertiary care children's hospital. The results are serving as a needs assessment to guide the design of a quality improvement project with the aim of improving pediatric hospitalist-PCP communication.

METHODS

Study Design

Phone interviews of pediatric hospitalists and PCPs were conducted. The study was approved by the University of Utah and Primary Children's Medical Center (PCMC) Institutional Review Boards.

Setting

PCMC is a 232-bed, tertiary-care referral center and community hospital in Salt Lake City, UT, which serves a catchment area of approximately 1,000,000 children in 5 Intermountain West states (Utah, Idaho, Nevada, Montana, and Wyoming). In 2005, there were more than 40,000 emergency department visits and more than 11,000 hospital admissions. At the time of this study, the Division of Pediatric Inpatient Medicine (hospitalist division) included 11 full-time equivalents. All hospitalists play a teaching role and are on faculty at the University of Utah School of Medicine. In 2005, approximately 45% of medical inpatients at PCMC were cared for by the hospitalist division, with approximately 95% cared for by resident teams.

Participants

Ten University of Utah pediatric hospitalists and 12 PCPs within our catchment area completed interviews. Verbal consent was given before study participants began the phone interview. All hospitalists from the hospitalist division, excluding the first author, completed an interview. PCPs who had referred patients to the hospitalist division in the year preceding this study (2004) were identified through a referring database kept by the hospitalist division. An attempt was made to interview physicians in multiple practice settings and geographic locations.

Inclusion criteria for PCPs included their willingness to complete the interview as well as having had patients cared for by the hospitalist division in the preceding year (2004). There was no preference given to any physicians, including physicians well-known by the research team or more frequent users of the hospitalist division.

Instrument

To develop our questionnaire, we conducted a detailed literature search to identify issues surrounding hospitalist-PCP communication in the adult and pediatric hospitalist literature. Search terms included: hospitalists, interprofessional relations, patient discharge, communication, follow-up care, transitions, and primary care provider using the PubMed database, limited to English language articles from 1990 to 2005. The 6 issues for the final questionnaire were identified from published hospitalist survey questions (in both adult and pediatric literature) and published articles addressing themes regarding hospitalist and PCP attitudes (specifically in regard to the communication process).^{1,2,4,6} These 6 issues (quality of communication, barriers to communication, methods of information sharing, key data element requirements, critical timing, and perceived benefits) were incorporated into the open-ended and closed-ended questionnaire (Table 1). The original draft of the questionnaire was pretested on 2 hospitalists and 3 PCPs by L.H., who has graduate level formal training and experience in the design, refinement, implementation, and evaluation of questionnaires.

Data Collection/Analysis

After consent, participants were administered the phone questionnaire by L.H. during April, May, and June 2005. Interviews were transcribed verbatim

TABLE 1
Questions for Primary Care Providers/Hospitalists

Questions
1. Do you use the hospitalist system at PCMC? <i>yes/no</i>
1a. If <i>yes</i> : For what % of your patients that are hospitalized do you use the hospitalist system?
2. How would you rate the quality of communications between hospitalists and Primary Care Providers? a: excellent; b: very good; c: good; d: fair; e: poor.
2a. Why did you give it that rating?
3. What barriers, if any, have you experienced in communicating with hospitalists/ Primary Care Providers?
4. What communication methods have been effective in the past? What suggestions do you have for improving communication methods?
5. What information would you like to receive from hospitalists/Primary Care Providers regarding your patients' hospital care?
6. At what points in the care process would you like to receive communications from hospitalists/Primary Care Providers?
7. What suggestions do you have for improving overall communications between hospitalists and Primary Care Providers?
8. Do you have access to e-mail and use it regularly in your practice?
8a. Do you have access to a fax machine and use it regularly in your practice?
8b. Do you have access to a telephone and use it regularly in your practice?
8c. Considering e-mail, fax, and telephone, which of these methods do you think would be the most effective for communicating with hospitalists/Primary Care Providers?
9. Do you believe that improving communications between hospitalists and Primary Care Providers would improve the quality of patient care?
9a. If <i>yes</i> : How?
9b. If <i>no</i> : Why not?
10. Any other comments/feedback?

into a Microsoft Word document by a trained transcriptionist. Responses were openly coded and then grouped into the respective main topics of interest. No further interviews were conducted when theoretical saturation was obtained (ie, respondents did not identify any new themes). Themes were compared using qualitative methods.^{7,8}

RESULTS

Only 1 physician per practice was interviewed. No PCP who was able to be contacted declined an interview, although some did require multiple phone attempts to schedule the interview. PCPs were located in Salt Lake County (n = 6), in other Utah counties (n = 3), and in surrounding Intermountain West states (n = 3). From January 1, 2004 to December 31, 2004, we estimate that the hospitalist division cared for patients from approximately 35 practices (~50% in Salt Lake County, ~30% in other Utah counties, and ~20% in surrounding Intermountain West states).

TABLE 2
Summary of Hospitalist and PCP Thoughts on 6 Communication Issues

	Hospitalists	Primary Care Providers
Quality of communication		
Poor	0%	33%
Fair	50%	17%
Good	40%	8%
Very good	10%	42%
Excellent	0%	0%
Barriers to communication	<ul style="list-style-type: none"> • Lack of PCP directory; • Lack of access to patients' medication or problem list; • Lack of standardized system 	<ul style="list-style-type: none"> • Not knowing name and contact information of hospitalist taking care of their patient; • Teaching hospital with numerous residents and students
Methods of information sharing	<ul style="list-style-type: none"> • Electronic medical record ideal for sharing information 	<ul style="list-style-type: none"> • Electronic medical record ideal for sharing information; • Phone calls and faxes effective, especially if pager numbers were included
Key data elements	<ul style="list-style-type: none"> • Diagnoses; • Medications; • Follow-up plans 	<ul style="list-style-type: none"> • Diagnoses; • Medications; • Follow-up plans
Critical timing	<ul style="list-style-type: none"> • At discharge; • After admission; • Major clinical changes 	<ul style="list-style-type: none"> • At discharge; • After admission; • Major clinical changes
Perceived benefits	<ul style="list-style-type: none"> • Improved patient satisfaction; • Improved follow-up; • Decreased medication errors; • Increased efficiency 	<ul style="list-style-type: none"> • Improved patient satisfaction; • Improved follow-up; • Decreased medication errors; • Increased efficiency

Hospitalists and PCPs agreed that overall quality of communication ranged from "poor" to "very good" (Table 2). Both parties acknowledged that significant barriers to optimal communication exist, yet the barriers differed for each group. Hospitalists and PCPs also agreed that optimal communication could improve many aspects of patient care and should take place upon discharge and admission of patients and with major clinical changes. Both hospitalists and PCPs also wanted accurate and timely information. One priority that the participants emphasized is the timely transfer of admission notification and the receipt of accurate and timely discharge summaries by PCPs.

Quality of Communication

Overall, both groups rated communication quality from “poor” to “very good” (Table 2). Notably, no hospitalists or PCPs rated overall quality as “excellent,” but 33% of PCPs rated it as “poor” compared with 0% of the hospitalists. Fifty-eight percent (7/12) of PCPs used the hospitalists for $\geq 80\%$ of their admissions to the hospital.

For hospitalists, lack of communication stemmed from busy schedules, not knowing who the PCP was, or not having the PCP contact information. Similarly, PCPs commented that they often found out their patient was admitted to the hospital only when the patient showed up in their office for a follow-up visit. Both hospitalists and PCPs felt it was the hospitalist’s job to inform and update PCPs on their patient’s status while hospitalized. However, if the patient was admitted via the emergency department (ED), hospitalists felt that it was the ED’s responsibility to inform the PCPs of their patients’ admission.

Barriers to Communication

PCPs and hospitalists noted different barriers to optimal communication. Hospitalists identified the lack of a PCP directory, the lack of access to patients’ medication and problem lists, and the lack of a standardized system to communicate with PCPs as major barriers. The delayed receipt of the discharge summary by PCPs was also viewed as a barrier by hospitalists. Pediatric hospitalists found the large variation in PCP availability as well as the variation in PCP preferred methods of communication (phone call, fax, or e-mail) to be additional barriers. PCPs, on the other hand, struggled with the complexity of the hospital system. The fact that PCMC is a teaching hospital with numerous residents and students assisting in their patients’ care, as well as not knowing the names and contact information of the hospitalists taking care of their patients, served as barriers to optimal communication. Additionally, PCPs noted the delay in receiving discharge summaries as a barrier and a source of frustration.

Methods of Information Sharing

All PCPs and hospitalists had access to telephones and faxes and used them regularly in their practices (100% for both groups). A majority of PCPs believed phone calls and faxes were effective means of information sharing, especially if pager

numbers of the hospitalists were included. Some PCPs and a larger number of hospitalists thought an electronic medical record was an ideal tool for sharing information. However, PCPs appeared to have a lower rate of e-mail access and usage compared with hospitalists.

Key Data Elements

There was agreement among PCPs and hospitalists regarding which data elements were important to be relayed among providers. PCPs and hospitalists were most interested in the following data elements upon patient discharge: diagnoses from the hospitalization, medications the patient was to take, and follow-up plans for the patient. Hospitalists also thought PCPs could help by providing a list of current medications and a detailed past medical and social history upon admission. This information could be easily provided to the accepting hospitalist attending by phone or fax from the PCP.

Critical Timing and Perceived Benefits

Hospitalists and PCPs agreed that the most critical times for optimal hospitalist-PCP communication were primarily at time of discharge from the hospital, after admission to the hospital, and when major clinical changes occurred. The majority of hospitalists and PCPs thought that improved communication would improve the quality of patient care through: (1) improved patient satisfaction; (2) improved quality and quantity of follow-up; (3) decreased medication errors; and (4) increased efficiency for the PCPs and hospitalists.

DISCUSSION

Both pediatric hospitalists and PCPs agree on what information is important to transmit (diagnoses, medications, follow-up needs, and pending laboratory test results) and critical times for communication during the hospitalization (at discharge, admission, and during major clinical changes). However, there was discrepancy in the barriers to optimal communication for each group. Identifying and addressing these barriers can help both hospitalists and PCPs implement targeted interventions aimed at improving communication. As the number of pediatric hospitalist programs increases, the risk for hospitalist-PCP communication breakdowns, which can have a negative impact on patient care, also increases.

Previous adult studies describe the scope of the problem around poor communication between

hospitalists and PCPs.^{1,9-12} Kripalani et al.¹⁰ reported recently that delays and omissions in communication are common at hospital discharge among adult hospitalists and that computer-generated summaries, educational interventions, and standardized formats may facilitate more timely transfer of pertinent information. However, there is limited data on pediatric hospitalist-PCP communication. Srivastava et al.⁵ found that 60% of community physicians thought hospitalist systems may impair communication with PCPs when evaluating community and hospital-based physicians' attitudes regarding pediatric hospitalist systems.

PCPs can feel left out when their patients are cared for by hospitalists.¹³ One PCP in our study commented: "Include the referral doc as part of the team. We're the ones who will take care of them after discharge. It seems like an autonomous thing down there and we're excluded from the patient care team." Additionally, patients want their PCPs to remain involved in their care as they transition into and out of the hospital setting.^{1,13}

The "continuity visit" model has been proposed by Wachter and Pantilat¹⁴ to describe a clinical encounter between the primary physician and hospitalized patient, when the patient has a different physician of record. In this model, the PCP can endorse the hospitalist model and the individual hospitalist, notice subtle findings that differ from the patient's baseline, and help clarify patient preferences regarding difficult situations by drawing on their previous relationship with the patient. This visit may also benefit the PCP by providing insights into the patient's illness, personality, or social support that he or she was unaware of previously. However, in order for the "continuity visit" to exist, the PCP has to be informed of their patient's admission in the first place. Ethical dilemmas also have been raised regarding who bears primary responsibility for maintaining open lines of communication when patients are hospitalized.¹⁵ Lo¹⁵ advocates that PCPs can and should be involved in meaningful ways in the inpatient care of their patients even when they are not acting as the treating physicians. Specifically, he suggests that PCPs personally visit particularly ill patients or those with difficult diagnoses and use frequent phone calls to all admitted patients.

Beyond telephone calls and "continuity visits," hospitalists and PCPs rely on discharge summaries as a key part of the information transfer about a patient's hospitalization.^{1,16,17} These documents are rendered useless if they are inaccurate, illegi-

ble, or not delivered in a timely manner.¹⁸ In a study of California family physicians, discharge summaries were thought to be too detailed by 84% of PCPs, and reportedly arrived before the patient's first follow-up appointment only 33% of the time.¹ O'Leary et al.¹⁹ found that 41% of the Department of Medicine physicians surveyed believed that at least 1 of their patients hospitalized in the previous 6 months had experienced a preventable adverse event related to poor transfer of information at discharge. In our study, PCPs noted that discharge summaries often arrived in their offices well after the patient had been seen for their follow-up appointment.

Both hospitalists and PCPs agree that a concise and precise discharge summary should include an overview of the hospitalization with important details highlighted. Similar to the findings of Pantilat et al.,¹ in our study PCPs specifically want detailed information with regard to diagnoses, discharge medications, and what to expect when they see the patient in their clinic. Follow-up phone calls to PCPs to see that they received written information and if they require further details is 1 solution to ensuring good follow-up, yet this adds to the burden of communication and could be an additional barrier.

The teaching institutions in which physicians train also pose unique obstacles to optimal communication. In academic medical centers, medical students and residents perform a majority of the discharge duties (eg, writing prescriptions, dictating discharge summaries, making follow-up appointments, and calling PCPs), and teaching these trainees the importance of timely and accurate communication becomes an added challenge. Educators have to find novel ways of providing incentives to residents and medical students to get them to effectively participate in this process. Plauth et al.²⁰ reports that hospitalists feel they needed better training in residency around communicating, noting a "meaningful underemphasis during residency training" in regard to communication with referring physicians. These skills should be taught in medical school and supported by both hospitalists and PCPs throughout residency training.

Both hospitalists and PCPs also want easy and reliable ways to access their colleagues, which ideally would be automatic. One PCP commented: "a weekly or semiweekly phone call would be nice." Another suggested to: "fax a short note."

One hospitalist acknowledged: “a systematic approach would be better—whether a fax or telephone call and make sure there is a way of checking to make sure the communication has happened.” Another hospitalist simply remarked: “it needs to be done on every patient.”

Thus, it seems an improved communication system should be flexible enough to accommodate unique provider preferences, such as communication via phone, fax, or e-mail. This is demonstrated by 1 PCP who preferred the “phone, but most convenient is the periodic fax updates. I don’t have to be taken away from seeing patients.”

Lo¹⁵ calls for a “standard” to be established for delivering care within the patient-PCP-hospitalist triad. Phone calls and faxes are 2 readily available methods of communication. However, the frequent back-and-forth of missed calls, unreturned calls, and days-off is certainly a factor in determining efficiency and effectiveness of phone calls.

E-mail, if it is widely used by all participants, may be an effective option for delivery that could provide confirmation of receipt. However, the lack of universal e-mail usage by all providers remains a barrier. Questions as to which method is more time consuming and for whom, need to be studied further. Patient confidentiality also requires that this protected health information arrive in the proper hands. Personal relationships can also contribute to successful communication. One provider may be more likely to contact another if they know each other through some personal connection, such as medical school, residency, or a social group.

Our study has several limitations. The sample size was small. We obtained responses from a sample of key stakeholders in the hospitalist-PCP communication process. We were limited by the number of hospitalists at our institution as well as the interest and availability of PCPs to respond. We are unable to determine the total number of patients by respondent PCP practice cared for by the hospitalist division. This could influence the results depending on whether the respondent PCP was a frequent or infrequent utilizer of the hospitalist system. However, we feel reassured that we are not missing important information, because in our methods, a priori, we had intended to stop interviewing PCPs once theoretical saturation had been reached (ie, respondents did not identify any new information). In our study, that occurred with 12 PCPs.

We attempted to interview a single physician in a number of different practice settings in order

to gain insight into the perceptions of that individual as well as those of their partners. The views expressed by these individuals may not represent the views of hospitalists and PCPs outside of our practice area. Furthermore, PCMC serves as both a community pediatric hospital and a tertiary-referral center for a large area, yet the current experience of 1 hospitalist division and 1 cohort of referring PCPs may contain regional variation that contributed bias to the responses.

Selection bias may have been introduced in our study by the inherent nature of phone interviews. We interviewed only providers with previous communication experience with our hospitalist division. These providers may have had a vested interest in the communication process. We did not interview those PCPs who did not have any communication with our hospitalist division or those who may have used the hospitalist division previously and decided to no longer use the division. Interviewing these groups may have provided additional insight into the communication issues mentioned here. Additionally, useful information could have been gleaned from trying to find out more from the 33% of PCPs who felt communication was poor. We anticipate further studies exploring this issue in more depth.

Future Directions

As a result of this study, we have implemented several interventions to improve information sharing between hospitalists and PCPs, including: 1) we updated current contact information (including names of physicians, office addresses, phone numbers, fax numbers, and e-mail addresses) for all PCPs in our catchment area along with their preferred methods of communication; 2) we worked with the transcription services to automatically add PCP addresses, phone numbers, and fax numbers to dictated notes, eliminating time wasted searching for contact information; and 3) we standardized key data elements in admission history and physicals and discharge notes to increase the efficiency of the communication process.

Furthermore, we have implemented a standardized system to facilitate communication with PCPs. This system includes an automated process to notify PCPs of their patient’s hospital admission, including the admission date, preliminary diagnoses, and responsible physician’s contact in-

formation. We are currently undertaking a quality improvement project aimed at achieving timely transfer of discharge information to PCPs, including medications, follow-up appointments, and a succinct hospital summary. Finally, establishing an evaluation process to monitor both successes and failures will be paramount to any interventions.

CONCLUSIONS

Hospitalists and PCPs agree that overall quality of communication ranges from “poor” to “very good.” Both PCPs and pediatric hospitalists acknowledge that significant barriers to optimal communication exist, yet the barriers differ for each group. They also agree that optimal communication would improve many aspects of patient care and should take place upon discharge and admission of patients and with major clinical changes.

Pediatric hospitalists and PCPs identified issues around optimal communication similar to those noted in the adult hospital medicine literature. Interventions to improve pediatric hospitalist-PCP communication should at least address these 6 issues: (1) quality of communication; (2) barriers to communication; (3) methods of information sharing; (4) key data element requirements; (5) critical timing; and (6) perceived benefits. Such interventions will likely improve hospitalist-PCP communication and potentially improve the quality of patient care. However, future studies will need to demonstrate the link between improved hospitalist-PCP communication and improved patient care and outcomes.

ACKNOWLEDGMENTS

The authors are indebted to Flory Nkoy, MD, MPH, MS, for his help in manuscript preparation and critical review.

Address for correspondence and reprint requests: Gregory Harlan, MD, MPH, Primary Children's Medical Center, Division of Pediatric Inpatient Medicine, University of Utah School of Medicine, 100 North Mario Capecchi Drive, Salt Lake City, UT 84113; Telephone: (801) 662-3645; Fax: (801) 662-3664; E-mail: gregory.harlan@hsc.utah.edu

Received 16 February 2008; revision received 3 July 2008; accepted 23 October 2008.

REFERENCES

1. Pantilat SZ, Lindenauer PK, Katz PP, Wachter RM. Primary care physician attitudes regarding communication with hospitalists. *Am J Med.* 2001;111(9B):15S-20S.
2. Auerbach AD, Nelson EA, Lindenauer PK, Pantilat SZ, Katz PP, Wachter RM. Physician attitudes toward and prevalence of the hospitalist model of care: results of a national survey. *Am J Med.* 2000;109(8):648-653.
3. Landrigan C, Srivastava R, Muret-Wagstaff S, Dyck IJ, Homer CJ, Goldmann DA. Pediatric hospitalists: what do we know, and where do we go from here? *Ambul Pediatr.* 2001;1(6):340-345.
4. Auerbach AD, Davis RB, Phillips RS. Physician views on caring for hospitalized patients and the hospitalist model of inpatient care. *J Gen Intern Med.* 2001;16(2):116-119.
5. Srivastava R, Norlin C, James BC, Muret-Wagstaff S, Young PC, Auerbach A. Community and hospital-based physicians' attitudes regarding pediatric hospitalist systems. *Pediatrics.* 2005;115(1):34-38.
6. Pantilat SZ, Wachter RM. The patient provider relationship and the hospitalist movement. Introduction. *Dis Mon.* 2002;48(4):189-190.
7. Mays N, Pope C. Rigour and qualitative research. *BMJ.* 1995;311(6997):109-112.
8. Ratnapalan S, Hilliard R. Needs assessment in post graduate medical education: a review. *Med Educ Online.* 2001;7:1-8.
9. Auerbach AD, Aronson MD, Davis RB, Phillips RS. How physicians perceive hospitalist services after implementation: anticipation vs reality. *Arch Intern Med.* 2003;163(19):2330-2336.
10. Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. *JAMA.* 2007;297(8):831-841.
11. Stille CJ, Primack WA, Savageau JA. Generalist-subspecialist communication for children with chronic conditions: a regional physician survey. *Pediatrics.* 2003;112(6 Pt 1):1314-1320.
12. Gandhi TK, Sittig DF, Franklin M, Sussman AJ, Fairchild DG, Bates DW. Communication breakdown in the outpatient referral process. *J Gen Intern Med.* 2000;15(9):626-631.
13. Hruby M, Pantilat SZ, Lo B. How do patients view the role of the primary care physician in inpatient care? *Dis Mon.* 2002;48(4):230-238.
14. Wachter RM, Pantilat SZ. The “continuity visit” and the hospitalist model of care. *Dis Mon.* 2002;48(4):267-272.
15. Lo B. Ethical and policy implications of hospitalist systems. *Dis Mon.* 2002;48(4):281-290.
16. Schabetsberger T, Ammenwerth E, Andreatta S, et al. From a paper-based transmission of discharge summaries to electronic communication in health care regions. *Int J Med Inform.* 2006;75(3-4):209-215.
17. Moore C, McGinn T, Halm E. Tying up loose ends: discharging patients with unresolved medical issues. *Arch Intern Med.* 2007;167(12):1305-1311.
18. Paterson JM, Allega RL. Improving communication between hospital and community physicians. Feasibility study of a handwritten, faxed hospital discharge summary. Discharge Summary Study Group. *Can Fam Physician.* 1999;45:2893-2899.
19. O'Leary KJ, Liebovitz DM, Feinglass J, Liss DT, Baker DW. Outpatient physicians' satisfaction with discharge summaries and perceived need for an electronic discharge summary. *J Hosp Med.* 2006;1(5):317-320.
20. Plauth WH 3rd, Pantilat SZ, Wachter RM, Fenton CL. Hospitalists' perceptions of their residency training needs: results of a national survey. *Am J Med.* 2001;111(3):247-254.