"Out of Sight, Out of Mind": Housestaff Perceptions of Quality-Limiting Factors in Discharge Care at Teaching Hospitals

S. Ryan Greysen, MD, MHS, MA[1,*], **Danise Schiliro, MD**[2], **Leora I. Horwitz, MD, MHS**[3], **Leslie Curry, PhD, MPH**[4], and **Elizabeth H. Bradley, PhD**[4]

[1]Robert Wood Johnson Clinical Scholars Program—Yale University School of Medicine, New Haven, Connecticut

[2]Department of Internal Medicine, New York University School of Medicine, New York, New York

[3]Department of Internal Medicine, Yale University School of Medicine, New Haven, Connecticut

[4]Department of Health Policy and Administration, Yale University School of Public Health, New Haven, Connecticut

Abstract

BACKGROUND—Improving hospital discharge has become a national priority for teaching hospitals, yet little is known about physician perspectives on factors limiting the quality of discharge care.

OBJECTIVES—To describe the discharge process from the perspective of housestaff physicians, and to generate hypotheses about quality-limiting factors and key strategies for improvement.

METHODS—Qualitative study with in-depth, in-person interviews with a diverse sample of 29 internal medicine housestaff, in 2010–2011, at 2 separate internal medicine training programs, including 7 different hospitals. We used the constant comparative method of qualitative analysis to explore the experiences and perceptions of factors affecting the quality of discharge care.

RESULTS—We identified 5 unifying themes describing factors perceived to limit the quality of discharge care: (1) competing priorities in the discharge process; (2) inadequate coordination within multidisciplinary discharge teams; (3) lack of standardization in discharge procedures; (4) poor patient and family communication; and (5) lack of postdischarge feedback and clinical responsibility.

CONCLUSIONS—Quality-limiting factors described by housestaff identified key processes for intervention. Establishment of clear standards for discharge procedures, including interdisciplinary teamwork, patient communication, and postdischarge continuity of care, may improve the quality of discharge care by housestaff at teaching hospitals.

Hospital readmission is a common, costly, and often preventable occurrence in the United States. Among Medicare beneficiaries, 1 out of 5 patients is readmitted within 30 days, and the cost of unplanned readmissions exceeded $17 billion in 2007.[1] As a result, the Centers

Address for correspondence and reprint requests: S. Ryan Greysen, MD, MHS, MA, Division of Hospital Medicine, University of California San Francisco, 533 Parnassus Ave, Box 0131, San Francisco, CA 94113; Telephone: 202-664-6084; Ryan.Greysen@ucsf.edu.

for Medicare and Medicaid Services (CMS) and others have called for focused efforts to reduce hospital readmission rates.[2–4]

The quality of hospital discharge care is a key determinant of readmission rates,[5–7] and many recent interventions to reduce readmission have focused on improving various aspects of the discharge process.[8–10] Although these approaches have shown promise, the role of physicians in improving the quality of discharge care has not been extensively studied. Existing studies have focused on communication barriers between physicians in the hospital and outpatient settings,[11–13] but these have not examined the hospital discharge process itself and the experience of physicians in that process. Physician perspectives on this process are critical to inform strategies to leverage their roles in improving the performance of discharge teams.

Accordingly, we sought to understand physician experiences with the hospital discharge process, focusing on factors that physicians perceived to limit the quality of the discharge process at teaching hospitals. Teaching hospitals provided an ideal setting for this study given their high readmission rates,[14] despite efforts to improve discharge quality of care through multidisciplinary team approaches. We focused on housestaff physicians because of their in-depth involvement in the discharge process at teaching hospitals, which collectively provide 20% of all hospital care in the US.[15] Housestaff perspectives on quality-limiting factors of the discharge process may help identify targets for interventions to improve the quality of inpatient discharge care and to ultimately reduce hospital readmissions.

METHODS

Study Design and Sample

We conducted a qualitative study of internal medicine housestaff at 2 residency programs, with 7 different hospital settings, to ensure breadth of experience and perspectives (Table 1). Both programs train a large number of housestaff, and both are affiliated with prestigious medical schools and major universities. Qualitative methods are ideally suited to examine physician perspectives on discharge care because the inherent complexity of discharge processes, and importance of communication and multidisciplinary teamwork, are difficult to quantify.[16,17] We focused on housestaff because they are responsible for coordinating discharge care at teaching hospitals and have direct experience with the phenomenon of interest.[18] We created a discussion guide (see Supporting Information, "Out of Sight, Out of Mind" Interview Guide in the online version of this article) informed by clinical experience and recent qualitative studies of housestaff, to guide conversation during the interviews.[19–21]

We obtained a list of current housestaff from directors at both residency programs and invited participation from all housestaff with an inpatient rotation in the preceding 6 months, using purposeful sampling to ensure adequate representation by postgraduate year (PGY) and gender. Given that interns are more involved in executing the details of discharge care, we purposefully over-sampled for PGY-1 rather than sampling each PGY equally. As an incentive, participants were entered into a lottery for one of three $100 gift cards at each site. All participants gave informed consent, and all research procedures were approved by the Institutional Review Boards of record for both residency programs.

Data Collection

We conducted in-depth interviews until no new concepts were elicited with successive interviews; this theoretical saturation[22,23] occurred after 29 interviews. To ensure rigor in

---

Additional Supporting Information may be found in the online version of this article.

our approach, we adhered to a focused scope of inquiry, developed a cohesive theoretical sample, and held regular team meetings to assess the adequacy and comprehensiveness of all analytic results.[24] All interviews were digitally recorded and transcribed by a professional transcription service, and all transcripts were reviewed for accuracy. A brief demographic survey was administered after each interview (Table 2).

Data Analysis

We employed the constant comparative method of qualitative data analysis.[16,18] Codes were developed iteratively and refined to identify conceptual segments of the data. The team reviewed the code structure throughout the analytic process, and revised the scope and content of codes as needed. The final code structure contained 22 codes, which we subsequently integrated into the 5 recurrent themes. Two members of the research team (S.R.G., D.S.) coded all of the transcripts; other team members (L.I.H., L.C., and E.H.B.) double- and triple-coded portions of the data. All data were entered into a single database (Atlas.ti version 5.2) to ensure consistent application of codes across all transcripts. Disagreements in coding were resolved through negotiated consensus. Additional strategies to enhance the reliability of our findings included creation of an audit trail documenting the data coding and analysis processes, and seeking participant review and confirmation of the findings.[24,25] We shared summary findings with all participants via e-mail, and sought participant confirmation through in-person conversations with several individuals and responses to findings via e-mail.

RESULTS

Based on interview transcripts from 29 internal medicine housestaff physicians (Table 3), we identified 5 recurrent and unifying themes describing factors perceived to limit the quality of inpatient discharge care: (1) competing priorities in the discharge process; (2) inadequate coordination within multidisciplinary discharge teams; (3) lack of standardization in discharge procedures; (4) poor patient and family communication; and (5) lack of postdischarge feedback and clinical responsibility.

Competing Priorities in the Discharge Process

Housestaff uniformly asserted the importance of consistently performing high-quality discharge; however, they identified several competing priorities that turned their attention elsewhere. Housestaff noted that the pressure to discharge early in the day was palpable, even if this compromised the thoroughness of the discharge process. Illustrating this theme, one participant said:

> One thing that I found very frustrating here is the goal for 11:00 AM discharge …. It's more important to get the patient out than it is to be thorough in the discharge is how it feels a lot of the time. [PGY-1, Program B, Interview #3]

In addition to competing institutional priorities, housestaff also articulated tensions between their roles as learners and providers. Although educational duties, such as noon conference, contributed to general time constraints, they highlighted other patient care responsibilities as the primary competing priority to a high-quality discharge:

> The worst part in discharging is that it takes a lot of time and you're often limited by having to admit new patients …. I don't think people realize how much time it takes … often a lot longer than doing an admission. [PGY-1, Program A, Interview #27]

Participants also described competing priorities in the context of transfers of care or sign-out from the post-call team to the on-call team. Because discharges frequently occurred around

the same time as these sign-outs, housestaff described conflicting institutional priorities that created ambiguity about post-call discharge responsibilities:

> When you're post-call, the hospital administration wants you to be out by 12:00, but then they're also saying "do all the [discharge] stuff." So, which one do you want me to do? They kind of endorse both and that's confusing. [PGY-1, Program B, Interview #7]

Although housestaff articulated patient safety as an essential goal of discharge care, the net effect of these competing individual and institutional priorities was an inconsistent focus on the discharge process and an unspoken or hidden message that discharge care was not of top-level importance.

Inadequate Coordination Within Multidisciplinary Discharge Teams

Housestaff described difficulties in coordination and communication with multidisciplinary staff involved with the discharge process beyond the physician team. They felt their engagement with other team members was constrained by professional hierarchy and insufficient contact among team members, both of which directly affected hospital efficiency and patient safety:

> On the hospital floor, it still feels like a hierarchy and it's very difficult to fit communication with nurses into our daily rounds …. If we worked together more as a team, we could discharge patients faster and safer. [PGY-3, Program B, Interview #1]

Housestaff also noted that discharge team experiences were diverse. Some discharge teams were described as cohesive, while others were described as fragmented and characterized by last-minute problem solving and lack of cooperation among team members:

> A low-quality discharge is a rushed discharge … for whatever reason, you don't really know that you're discharging the patient until that day. Those are the ones that are really hard. You're pushing social work to get things set up. They're pushing back at you. [PGY-2, Program B, Interview #6]

Housestaff concerns about inadequate discharge planning were exacerbated by role confusion and uncertainty about which components of discharge care were to be performed by other team members. Even when housestaff articulated clear ownership for a particular task such as documenting plans in a discharge summary, they were uncertain how these documents would be used by other team members to communicate these plans to patients:

> Half the time, I'm not sure if the patient gets the discharge summary, because I enter it but I don't actually know what the nurse does with it. I know she goes over their meds with them and gives them appointments, but if she actually gives them the discharge summary, I have no idea. [PGY-1, Program A, Interview #18]

Thus, although housestaff described multidisciplinary teamwork as important, they often did not know how to lead or function effectively within the team, leading to conflict, misunderstanding, delays, and inefficiency. Moreover, uncertainty about roles for team members often led to wide variation in discharge practices observed at their institutions.

Lack of Standards for Discharge Procedures

Housestaff described an overall lack of standardization for the discharge process; a high degree of variation in practices was apparent at several levels. Housestaff noted differences in approaches to arranging follow-up care depending on the hospital where they were rotating:

> At this hospital, making follow-up appointments is intermittent because there are some rotations that have someone help you with that, and others that don't. That is something that I feel should be standardized everywhere. [PGY-1, Program B, Interview #7]

Housestaff also noted differences in approaches to discharge planning across different services within a single hospital, including examples of units that stood out for their ability to consistently provide high-quality discharge care:

> Coordinating with social work is very team-dependent. On the Chest service and Virology services, we've got very good social workers who focus on those conditions … so they know the issues in and out, and it just flows much more smoothly. [PGY-3, Program A, Interview #20]

Lastly, variation was also noted in individual physician practices, especially with respect to attending physician involvement with the discharge team and teaching or supervision of housestaff discharge care:

> The role of the attending totally varies. This month, I don't even think my attending looked at the prescriptions. She just stamped, stamped, signed whatever. But last month … my attending was very involved; she double-checked every prescription. [PGY-1, Program A, Interview #21]

Overall, lack of standardization limited efforts to coordinate discharge procedures and set the stage for poor communication practices between discharge team members and patients and their families.

Poor Patient and Family Communication

Housestaff described practices for communicating with patients and families, at the time of discharge, as problematic. Although housestaff articulated this communication as critically important, they also recognized that time allocated to achieving this goal was not always commensurate:

> I think, in a perfect world, I would have time to sit down with every single patient and say "take these meds in the morning, these in the evening, and these are the reasons you're taking all of them," but I don't think that you have time to do all of that and I find that frustrating. [PGY-2, Program A, Interview #27]

In addition to direct patient communication, housestaff identified problems with information in printed discharge materials. Although problems could stem from inadequate details in documentation given to patients, "information overload" was also a concern:

> The discharge packet is like a book. I think there's too much extraneous information in it, and it's overwhelming to be discharged with this book of information. [PGY-1, Program A, Interview #18]

Further, housestaff described the execution of discharge communication as perfunctory and lacking in attention to signs of adequate patient understanding:

> Often, all patients get is a handshake and a stack of paperwork. Many of them don't know why they were in the hospital and what was done. [PGY-2, Program B, Interview #2]

Overall, housestaff described patient understanding as a goal for the entire discharge team, but lacked individual accountability for patient and family communication. Housestaff also indicated that responsibilities to assess patient readiness to navigate the transition from hospital to post-hospital care were not clearly defined.

Lack of Postdischarge Feedback and Clinical Responsibility

Housestaff described that the norms and culture of being on service focused on the hospital portion of care, and underemphasized post-hospitalization care. With the extensive workload on inpatient services, housestaff commonly expressed their lack of involvement with a patient's care after discharge:

> So often when you're on service … once the patient is out of sight, they're out of mind. Once they leave our service, we are not the doctor anymore. That's the mentality. [PGY-2, Program A, Interview #19]

Additionally, housestaff indicated that they rarely received feedback concerning postdischarge patient outcomes, and that the only mechanism for learning about outcomes of discharge care was patient readmission:

> There's a lot of uncertainty at the time of discharge which is frustrating. I hope that I sent them out on the right doses, the right medication, to the right sorts of facilities with the right follow-up providers, but I never know. The only way I'll find out if it's wrong is they come back to the hospital. [PGY-1, Program B, Interview #4]

Housestaff also conceded that they could not follow patients postdischarge, given the demands of high turnover on inpatient rotations, and needed to limit their obligations to discharged patients to focus on newly admitted patients:

> It's hard to keep track because sometimes we're discharging 10 patients a day, admitting 10 patients a day …. So, once they leave, you did a good job and they're okay. [PGY-3, Program A, Interview #26]

Furthermore, for patients readmitted to the hospital, housestaff described an approach to workup and management that focused on events during the prior admission, rather than events in the postdischarge period:

> So if I'm admitting someone who's just been discharged, I think, "Is this a new problem? Did we do this to the person?" and if it's the same problem, "Well, what did we do about it last time? Did we do anything?" [PGY-2, Program B, Interview #13]

Thus, although readmissions were described as problematic and undesirable, housestaff described a limited ability to follow up with patients or learn about the impact of the discharge practices on subsequent patient outcomes. More specifically, housestaff portrayed a limited ability to address the root causes for poor outcomes, such as readmission.

DISCUSSION

Housestaff physicians experienced 5 quality-limiting factors that collectively created and reinforced a practice environment in which patients and patient outcomes after discharge remain largely "out of sight, out of mind." In this environment, discharge was often viewed as a summative event that signaled the conclusion of care in one setting rather than a transition in care from one setting to another. Paradoxically, this environment was apparent despite the values and goals participants described for providing high-quality discharge care, working within multidisciplinary discharge teams, and reducing readmissions.

The degree to which housestaff were focused on the hospital portion of patients' care, and viewed postdischarge care as beyond their scope or responsibility, was striking. The tight boundary they drew between hospital and post-hospital care reflected the demanding workload in the hospital, the lack of data feedback about patients post-hospitalization, and professional norms and expectations about housestaff responsibilities. Downstream effects

of this tight boundary may result in confusion for patients and family about who to contact in case of postdischarge complications, and may ultimately catalyze higher emergency department use and readmissions.[26] Efforts to redefine inpatient physician responsibilities, as providing patient care until management has been successfully transferred to a community-based provider, may be necessary to ensure adequate postdischarge continuity of care.[27]

We also found that housestaff physicians reported marked variation in discharge practices across different hospitals and training settings, across different teams within hospitals, and across individual attending physicians. Although guidelines for discharge care currently endorsed by the National Quality Forum[28] and others[4,27,29] provide excellent templates, our findings suggest that the implementation of these standards at the hospital and physician level is limited. Furthermore, while existing single-site interventions to standardize various discharge practices provide a foundational evidence base for high-quality discharge care,[29–32] our study adds insight into the individual and institutional barriers that prevent diffusion of these practices to other hospitals.

Finally, the lack of coordination within discharge teams, described by housestaff physicians in our study, also suggests a need for improved leadership in the hospital overall and at the level of the discharge team. Studies of high-performing hospitals have shown that top-level institutional support is a necessary substrate for the creation and maintenance of high-performance teamwork.[33] At the level of the discharge team, creating a culture of high-quality discharge care will require greater focus on defining team-member roles and responsibilities. At the individual level, changes in physician training to provide discharge care are critical, especially since practice patterns learned in residency may predict quality of care over physicians' careers.[34] Recent examples of curricular innovations for discharge care are encouraging,[35] but more research on how physicians learn about discharge care and related systems-based practice, learning, and improvement is needed to enable changes on a national scale.

Our findings should be interpreted in light of several limitations. First, we recruited housestaff from 1 specialty at 2 large training programs; experiences of housestaff in other specialties and other training programs may differ. Second, we cannot quantify the frequency of specific discharge procedures or outcomes described by our participants, as this was beyond the scope of our qualitative approach. Nevertheless, our aim was to explore the range of quality-limiting factors, rather than their prevalence, and this in-depth analysis has extended previous work by identifying factors that may influence the quality of discharge care. Third, social desirability bias[36] could have led participants to exaggerate or minimize aspects of quality-limiting factors identified in this study. To minimize this potential bias, we included specific prompts for both negative and positive aspects of providing discharge care in our interview guide. Finally, our analytic decisions to over-sample for interns, and to not include physicians who have completed training (eg, hospitalists), may introduce bias towards inexperience; however, our objective was to study the culture of discharge care at teaching hospitals, and our sample reflects the distribution of labor for tasks of discharge care at such institutions. Future research should address important questions raised by this study about the role of attending physicians in discharge care at teaching and non-teaching hospitals.

Improving the quality of discharge care is an important step to improving overall outcomes of hospitalization, including reduced adverse events and unnecessary admissions. Our study suggests important quality-limiting factors embedded in the norms for discharge care at teaching hospitals. These factors are unlikely to change without interventions at multiple levels of hospitals, discharge teams, and individual providers. Targeted interventions to

change these practices will be necessary to achieve higher overall quality of care for hospitalized patients at teaching hospitals.

Acknowledgments

References

1. Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. N Engl J Med. 2009; 360:1418–1428. [PubMed: 19339721]

2. Axon RN, Williams MV. Hospital readmission as an accountability measure. JAMA. 2011; 305(5): 504–505. [PubMed: 21285430]

3. Hospital to Home (H2H) Initiative. Available at: http://www.h2hquality.org/.

4. Better Outcomes for Older adults through Safe Transitions (Project BOOST). Available at: http://www.hospitalmedicine.org/boost.

5. Ashton CM, Kuykendall DH, Johnson ML, Wray NP, Wu L. The association between the quality of inpatient care and early readmission. Ann Intern Med. 1995; 122(6):415–421. [PubMed: 7856989]

6. Ashton CM, Del Junco DJ, Souchek J, Wray NP, Mansyur CL. The association between the quality of inpatient care and early readmission: a meta-analysis of the evidence. Med Care. 1997; 35(10): 1044–1059. [PubMed: 9338530]

7. Benbassat J, Taragin M. Hospital readmissions as a measure of quality of health care: advantages and limitations. Arch Intern Med. 2000; 160(8):1074–1081. [PubMed: 10789599]

8. Greenwald JL, Denham CR, Jack BW. The hospital discharge: a review of a high risk care transition with highlights of a reengineered discharge process. J Patient Saf. 2007; 3:97–106.

9. Naylor MD, Brooten DA, Campbell RL, et al. Transitional care of older adults hospitalized with heart failure: a randomized, controlled trial. J Am Geriatr Soc. 2004; 52(5):675–684. [PubMed: 15086645]

10. Phillips CO, Wright SM, Kern DE, Singa RM, Shepperd S, Rubin HR. Comprehensive discharge planning with postdischarge support for older patients with congestive heart failure: a meta-analysis. JAMA. 2004; 291:1358–1367. [PubMed: 15026403]

11. Key-Solle M, Paulk E, Bradford K, Skinner AC, Lewis MC, Shomaker K. Improving the quality of discharge communication with an educational intervention. Pediatrics. 2010; 126(4):734–739. [PubMed: 20876170]

12. Harlan GA, Nkoy FL, Srivastava R, et al. Improving transitions of care at hospital discharge—implications for pediatric hospitalists and primary care providers. J Healthc Qual. 2010; 32(5):51–60. [PubMed: 20854359]

13. Kripalani S, LeFevre F, Phillips CO, et al. Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. JAMA. 2007; 297:831–841. [PubMed: 17327525]

14. Press MJ, Silber JH, Rosen AK, et al. The impact of resident duty hour reform on hospital readmission rates among Medicare beneficiaries. J Gen Intern Med. 2011; 26(4):405–411. [PubMed: 21057883]

15. American Association of Medical Colleges. What Roles Do Teaching Hospitals Fullfill?. Available at: http://www.aamc.org/about/teachhosp_facts1.pdf.

16. Bradley EH, Curry LA, Devers KJ. Qualitative data analysis for health services research: developing taxonomy, themes, and theory. Health Serv Res. 2007; 42(4):1758–1772. [PubMed: 17286625]

17. Pope C, Mays N. Reaching the parts other methods cannot reach: an introduction to qualitative methods in health and health services research. BMJ. 1995; 311(6996):42–45. [PubMed: 7613329]

18. Patton, MQ. Qualitative Research and Evaluation Methods. Thousand Oaks, CA: Sage Publications; 2002.

19. Horwitz LI, Moin T, Krumholz HM, Wang L, Bradley EH. Consequences of inadequate sign-out for patient care. Arch Intern Med. 2008; 168(16):1755–1760. [PubMed: 18779462]

20. Horwitz LI, Moin T, Krumholz HM, et al. What are covering doctors told about their patients? Analysis of sign-out among internal medicine house staff. Qual Saf Health Care. 2009; 18:248–255. [PubMed: 19651926]

21. Lisa C, Diamond LC, Schenker Y, Curry L, Bradley EH, Fernandez A. Getting by: underuse of interpreters by resident physicians. J Gen Intern Med. 2008; 24(2):256–262. [PubMed: 19089503]

22. Morse JM. The significance of saturation. Qual Health Res. 1995; 5(2):147–149.

23. Glaser, BG.; Strauss, AL. The Discovery of Grounded Theory: Strategies for Qualitative Research. Chicago, IL: Aldine; 1967.

24. Crabtree, BF.; Miller, WL. Doing Qualitative Research (Research Methods for Primary Care). Thousand Oaks, CA: Sage; 1999. p. 33-46.

25. Miles, MB.; Huberman, M. Qualitative Data Analysis. 2nd ed.. Thousand Oaks, CA: Sage; 1994.

26. Koehler BE, Richter KM, Youngblood L, et al. Reduction of 30-day post-discharge hospital readmission or ED visit rates in high-risk elderly medical patients through delivery of a targeted care bundle. J Hosp Med. 2009; 4:211–218. [PubMed: 19388074]

27. Snow V, Beck D, Budnitz T, et al. Transitions of Care Consensus Policy Statement American College of Physicians–Society of General Internal Medicine–Society of Hospital Medicine–American Geriatrics Society–American College of Emergency Physicians–Society of Academic Emergency Medicine. J Gen Intern Med. 2009; 24(8):971–976. [PubMed: 19343456]

28. Clancy CM. Reengineering hospital discharge: a protocol to improve patient safety, reduce costs, and boost patient satisfaction. Am J Med Qual. 2009; 24(4):344–346. [PubMed: 19502567]

29. Coleman EA, Mahoney E, Parry C. Assessing the quality of preparation for post-hospital care from the patient's perspective: the care transitions measure. Med Care. 2005; 43(3):246–255. [PubMed: 15725981]

30. Hansen LO, Strater A, Smith L, et al. Hospital discharge documentation and risk of rehospitalisation. BMJ Qual Saf. 2011; 20(9):773–778.

31. Showalter JW, Rafferty CM, Swallow NA, Dasilva KO, Chuang CH. Effect of standardized electronic discharge instructions on post-discharge hospital utilization. J Gen Intern Med. 2011; 26(7):718–723. [PubMed: 21499825]

32. Roy CL, Poon EG, Karson AS, et al. Patient safety concerns arising from test results that return after hospital discharge. Ann Intern Med. 2005; 143(2):121–128. [PubMed: 16027454]

33. Curry LA, Spatz E, Cherlin E, et al. What distinguishes top-performing hospitals in acute myocardial infarction mortality rates? A qualitative study. Ann Intern Med. 2011; 154(6):384–390. [PubMed: 21403074]

34. Asch DA, Nicholson S, Srinivas S, Herrin J, Epstein AJ. Evaluating obstetrical residency programs using patient outcomes. JAMA. 2009; 302(12):1277–1283. [PubMed: 19773562]

35. O'Leary KE, Liebovitz DM, Feinglass J, et al. Creating a better discharge summary: improvement in quality and timeliness using an electronic discharge summary. J Hosp Med. 2009; 4:219–225. [PubMed: 19267397]

36. Sudman, S.; Bradburn, NM.; Schwarz, N. Thinking About Answers: The Application of Cognitive Processes to Survey Methodology. San Francisco, CA: Jossey-Bass; 1996.

TABLE 1

Hospitals Affiliated With Participating Residency Programs

Hospital	Residency Program	Ownership	Setting	Teaching Intensity
A	A	Private, nonprofit	Urban	High
B	B	Private, nonprofit	Semi-urban	High
C	A	Private, nonprofit specialty (oncology)	Urban	High
D	B	Private, nonprofit community hospital	Rural	Low
E	A	Public (Veterans Affairs)	Urban	High
F	B	Public (Veterans Affairs)	Semi-urban	High
G	A	Public (county hospital)	Urban	High

TABLE 2

Participant Characteristics

Characteristic	Total N = 29
Age	Mean: 29.6 yr
	Range: 26–34 yr
Gender	
Female	19 (66%)
Male	10 (34%)
Residency program	
A	12 (41%)
B	17 (59%)
Year in training	
PGY-1	17 (59%)
PGY-2	7 (24%)
PGY-3	5 (17%)

Abbreviation: PGY, postgraduate year.

TABLE 3

Unifying Themes and Supporting Codes

Theme: Competing priorities of timeliness and thoroughness

Supporting codes

   Professional or hospital norms about discharge

   Time pressures including early discharge rules

   Balancing multiple priorities or responsibilities

   Duty hours and off hours including weekends and cross-cover

Theme: Lack of coordination within multidisciplinary discharge team members

Supporting codes

   Teamwork including individual roles, communication and coordination between team members

   Clinical complexity or specific complexities of the healthcare system

   Specific difficulties arranging for follow-up care

Theme: Uncertainty about provider roles and patient readiness for discharge

Supporting codes

   Uncertainty about provider roles or discharge timing

   Readmissions and "bounce-backs"

   Clinical complexity or specific complexities of the healthcare system

Theme: Lack of standardization in discharge procedures

Supporting codes

   Teamwork

   Readmissions and "bounce-backs"

   Patient safety including the concept of "safe discharge" and mistakes or errors

   Clinical complexity or specific complexities of the healthcare system

   Checklists or other specific procedures/aids or "clever systems" to improve quality

   Discharge documentation

Theme: Poor patient communication and postdischarge continuity of care

Supporting codes

   Lack of continuity of care after discharge

   Specific difficulties arranging for follow-up care

   Information technology including electronic medical records

   Patient communication, education, or understanding

   Discharge documentation