Discharge Education for Residents: A Study of Trainee Preparedness for Hospital Discharge

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ABSTRACT

Background: Safe hospital discharges have become a major focus in the national discussion on transitions of care and care coordination. Education on the hospital discharge process is evolving as the needs of trainees are better understood.

Purpose: This study is a cross-sectional survey of residents in a Midwestern residency program about their confidence in safely discharging patients from the hospital, including how they have or have not learned to do so.

Methods: An anonymous paper questionnaire was distributed to a convenience sample of interns and residents at a weekly meeting of the residency program.

Results: Most residents reported a general confidence in their abilities to safely discharge patients from the hospital; however, further probing revealed that their confidence breaks down when required to competently perform specific tasks of the discharge process such as activity restrictions or facilitation of home care. More than 50% of house staff surveyed responded that their education in many specific aspects of the discharge process are lacking.

Conclusion: Interdisciplinary care education, and the discharge summary in particular, warrant further scrutiny as a care transition tool and means of teaching safe hospital discharge to trainees. We present a questionnaire that may serve useful as an anonymous tool to gauge residents' educational needs.

INTRODUCTION

Discharge from the hospital is a precarious time for patients because of the potential for errors in their post-hospitalization care. By some estimates, 1 in 5 patients discharged from the hospital to home experiences at least 1 adverse event.[1] Some of the most common post-discharge adverse events that patients face include medication errors, recurrence of symptoms, and readmission to the hospital.[2-4]

Hospital readmission rates improved only slightly in 2012 with the advent of mandated readmission penalties.[5] Given the high risk of adverse events at the time of hospital discharge, it is unsurprising that national 30-day readmission rates persistently hover around one-fifth of hospital discharges. Without systematic changes to discharge practices and transitional care training for young physicians, further improvements in readmission rates will be difficult to achieve. Attempts to reduce 30-day hospital readmissions are focused largely on increased post-hospitalization care coordination.[6-9] Concurrently, there has been an increased interest in interdisciplinary care.[7,8,10,11] Transitions of care, teamwork, and interdisciplinary collaboration are areas of focus in the Accreditation Council for Graduate Medical Education's (ACGME) Next Accreditation System (NAS) and Clinical Learning Environment Review (CLER) and are fundamental to improving patient care quality and safety at academic medical centers. Efforts at teaching these skills are actively evolving, making it an opportune time to focus on improving education on hospital discharges.[12-14]

Most residency programs report little formal instruction in discharge planning.[15,16] Where there is a need for a formal curriculum in discharge planning, much is left to the informal curriculum. This results in a patchwork education for residents that varies depending on the staff with whom they work, patient census, patient comorbidities, and established local practices regarding hospital discharge.[16] During residency training there is ample opportunity to actively teach about the discharge process. At least one study found that implementing house staff education on

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Figure 1. Sample Questions and Likert Scales

Please choose the best answer for each question

	Strongly Disagree	Disagree	Agree	Strongly Agree
I am confident in my discharge plan when discharging patients from the hospital.	1	2	3	4

Please rate how confident you feel in ordering or identifying the following at patient discharge…

	Not at all	A little	Moderately	Completely
Dietary Restrictions	1	2	3	4

For the full questionaire please see Appendix online: https://www.wisconsinmedicalsociety.org/_WMS/publications/wmj/pdf/114/5/carnahan_114no5_appendix.pdf.

discharge summaries resulted in improved organization, readability, consistency, and inclusion of elements required by the Joint Commission on the Accreditation of Hospital Organizations (JCAHO).[17]

In the current study, we sought to: (1) assess residents' confidence in discharge planning, and (2) better understand the educational milieu within which residents learn about discharging patients from the hospital. Our objective was to lay the groundwork for future discharge planning education.

METHODS

We conducted an anonymous, cross-sectional survey of internal medicine house staff at a large Midwestern residency program. In this program, the house staff rotate at 3 different hospitals. Interns have approximately 7 inpatient ward rotations during the year. Second- and third-year residents have 5 to 6 inpatient ward rotations per year. We intentionally distributed the questionnaire in December so that all of the respondents would have had some experience discharging patients from the hospital when they completed the questionnaire. Institutional Review Board approval was obtained prior to distributing this questionnaire.

At the time of the study, there were 132 house staff in the program, 46 of whom were interns. All internal medicine house staff were eligible, including preliminary year interns.

A 37-question questionnaire was developed after an extensive literature search. The questions were derived from reports in the literature on key elements of a safe discharge, areas that may be lacking in discharge education, including education on documentation, and factors that contribute to adverse post-hospitalization outcomes such as readmissions.[2,4,8,14,18,19] We asked about respondent demographics, confidence in performing various aspects of discharge planning, general approach to discharge planning, and education received about discharge planning. The format was mixed with open-ended, yes/no, and multiple choice questions. Two sample questions with Likert scales are shown in Figure 1. The full questionnaire appears in the Appendix online https://www.wisconsinmedicalsociety.org/_WMS/publications/wmj/pdf/114/5/carnahan_114no5_appendix.pdf. A paper copy of the questionnaire was distributed at a regularly scheduled house staff meeting during a 10 to 15 minute time period allotted for its completion.

RESULTS

There was a 75% response rate (n = 62) of the 82 house staff who attended the meeting during which the questionnaire was distributed. There were 132 house staff in the program, thus 47% of total house staff completed the questionnaire. Women comprised 63% of respondents and 37% were men. Senior residents were 53% of respondents and 47% were interns. The mean age of respondents was 28.3 years old.

Most house staff (93.5%) agreed that they were moderately to completely confident in their discharge plan when discharging patients from the hospital, with 23% reporting being completely confident in their discharge plans. Three of the four house staff who admitted they were not confident in their discharge plan were interns.

When queried about specific aspects of the discharge process, the house staff responses indicated areas of greater and lesser confidence (Figure 2). House staff were most confident when ordering discharge medications, with 53% being completely confident; one-third of those were interns, which was just over one-third of the total intern respondents. Less than half of the total house staff (42%) were completely confident in educating their patients about danger signs that would necessitate a trip to an emergency department or readmission to the hospital. Roughly one-fourth of the intern respondents were completely confident in their ability to appropriately warn patients about danger signs. Only 40% of respondents were completely confident in ordering post-hospitalization dietary restrictions. Forty-five percent of residents were completely confident, while only 34% of interns were completely confident.

Close to 28% of interns were completely confident in ordering fluid restrictions and 40% of senior residents were completely con-

fident in fluid restriction orders. Combining intern and resident responses results in approximately a third (34%) of the total cohort who were completely confident when ordering fluid restrictions. Internal medicine house staff were least confident in ordering activity restrictions at discharge (24% completely confident). A quarter of intern respondents and a quarter of resident respondents reported being completely confident in ordering discharge activities.

When asked about their experience with formal education in 9 key aspects of the discharge process, 63% of house staff reported no formal instruction in any of the 9 areas (Figure 3). Most respondents reported that the discharge plan was reviewed with them at least once during internship, with 98% reporting this occurring at least half of the time. Thirty-nine percent reported that a resident, fellow, or attending physician never reviewed a discharge summary with them during their intern year.

At the end of the questionnaire, house staff were asked to list any aspects of the discharge process for which they would like to have more education. More than 50% of respondents reported wanting more instruction on specific aspects of the discharge process: 16% requested more information on home health care options, 16% on activity restrictions, 10% on diet restrictions, and 6% on fluid restrictions. Of those who wanted more instruction, a little more than half were interns and comprised 56% of the total intern cohort of respondents. One respondent said in general regarding the discharge process, "I feel like it has been a lot of guess work that I have gotten a little better at with practice."

When questioned on the means by which a primary care provider learns of a patient's hospital course, 93% reported that they believed it was via the discharge summary. However, less than three-quarters of house staff (74%) believed that primary care providers have access to their patients' discharge summaries prior to a post-hospitalization follow-up appointment. Four of the 62 respondents identified the patient as the primary care provider's main source of information about their recent hospitalization. Free text responses revealed frustration regarding communicating with patients' primary care providers and with arranging follow-up appointments for 6 of the 62 respondents.

Figure 2. House Staff Confidence in Specific Aspects of Discharge Planning

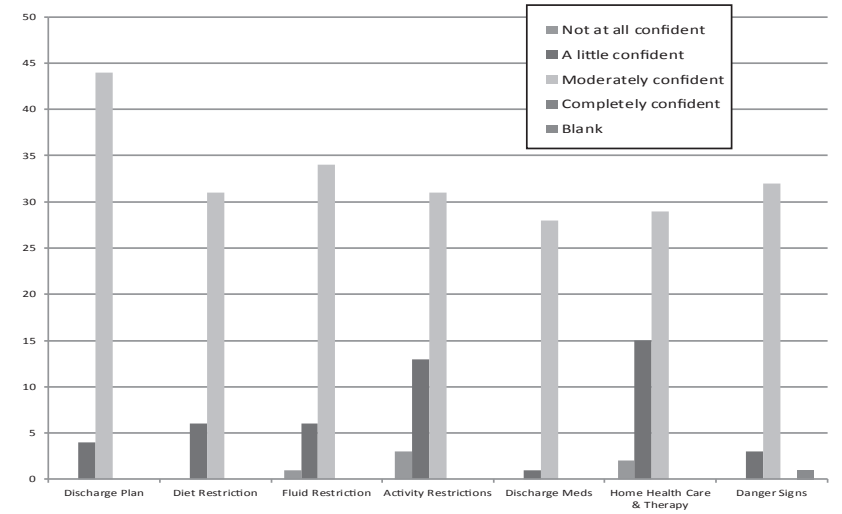
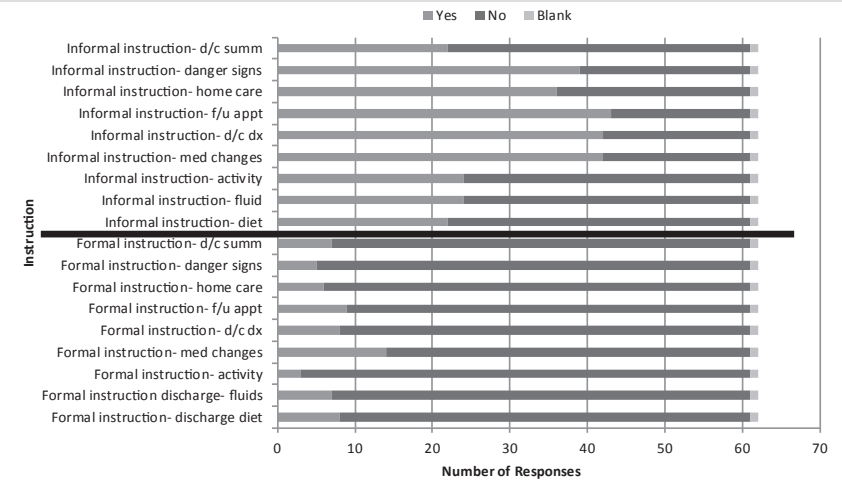


Figure 3. Formal and Informal Instruction in Specific Aspects of the Discharge Process



DISCUSSION

Overall, internal medicine house staff reported high levels of confidence in the discharge plans for their inpatients. However, when queried on more specific aspects of discharge planning, they revealed variable levels of confidence. Their greatest level of confidence in a specific aspect of the discharge process was in regard to ordering discharge medications, yet health services researchers have found evidence of inadequate discharge medication reconciliation in numerous studies.[2,20,21] While the house staff confidence may indicate that the message about the need for improved medication reconciliation has infiltrated residency training, it also may reveal false confidence on the part of the trainees. Certainly one area for future investigation is physician

confidence in discharge medication reconciliation and how that relates to medication errors.

Respondents also reported that the informal education that they do receive is inconsistent and nonstandardized, which indicates a need for more formal instruction on executing safe hospital discharge. This need has been identified as a gap elsewhere in medical education literature, however, there are few resources available for instructing house staff in effective hospital discharge.[22]

House staff also identified communication with primary care providers, especially via discharge summaries, to be of great importance in the transition of care from hospital to home. Interestingly, many house staff did not believe that discharge summaries were usually available for primary care providers at the time of hospital follow-up. This disconnect may be an important barrier to making sustained changes in the quality of the discharge summary. Prior work suggests that improved instruction on discharge summaries is one of the key ways that house staff can learn to foster an appreciation for their role in the larger medical care system.[17] Our data suggests that the respondents not only perceive a lack of formal training from supervising physicians on how to write discharge summaries, but they also may not believe that the discharge summaries are useful at the point of care. They view discharge summaries as a potential vehicle for providing minimal information to primary care providers, but not as essential for post-hospital care. Both the lack of discharge summary authorship training and utility of the discharge summary should be addressed by education designed to improve discharge quality.

Trainees want to have a better understanding of patients' home environment needs and challenges. Home health and activity restrictions at discharge were the two areas residents identified in an open-ended question on aspects of the discharge process for which they desired more education. Knowledge of how to designate appropriate post-hospital health restrictions can be gained by more strategic involvement of the interdisciplinary team such as dieticians and physical therapists. These disciplines may contribute directly to house staff education through case conferences. As part of our residency program's efforts to comply with NAS and CLER mandates, we have increased interdisciplinary team member participation in existing educational forums such as the noon report. The focus of these educational sessions is often on hospital discharge practices by disciplines, including physical and occupational therapy, nutrition, and social work. Residents' discharge care plans benefit from what they learn during these sessions on how to assess patients' abilities to manage at home.

This study has limitations. One is that it represents a single residency training program. Another limitation is that the questionnaires relied on self-report, which may have contributed to house staff under- or overestimating their ability to safely discharge hospitalized patients. Furthermore, house staff earlier in their training may not yet have received some of the program's education on discharge practices. In all of the specific aspects of the discharge process except for activity restrictions, interns were consistently less confident about their abilities than residents. Interns' responses to the questionnaire may reflect their medical school education more than their residency training. To mitigate this potential effect, we did administer the questionnaire approximately half-way through the academic year. This timing still may have been too early in the academic year and proximate to medical school to reflect the effects of residency training. A benefit of this study is that it directly queries house staff about their perceived educational needs rather than conjecturing what their needs are or continuing to relegate these issues to the hidden curriculum.

CONCLUSION

This study is positioned within the current state of the literature on what is known about hospital discharge. Our study is unique in that it uses both qualitative and quantitative data to describe the perspectives of physicians in training and provides their anonymous concerns about these practices. Interns are less confident than residents, but ultimately, both types of trainees described gaps in their education on safe discharges. To truly change the way we practice medicine and ensure safer patient discharges from the hospital, we need to train future physicians better in these skills.

Internal medicine residency programs should enhance their curricula with more thoughtful and explicit instruction on safe patient care transitions, especially with regard to the hospital discharge process. This represents an excellent opportunity to highlight the importance and contribution of the interdisciplinary team to ensure safe patient care. Additionally, increased education on patients' social and functional context outside of the hospital, and how that affects their health will improve residents' patient discharge outcomes. For programs that are contemplating the implementation of care transitions education, our questionnaire could be used as a needs assessment and monitoring tool for this component of the curriculum.

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