Transition of Care for Hospitalized Elderly Patients—Development of a Discharge Checklist for Hospitalists

L. Halasyamani, MD,[1,2]
S. Kripalani, MD, MSc[1,3]
E. Coleman, MD[4]
J. Schnipper, MD, MPH[5]
C. van Walraven, MD[6]
J. Nagamine, MD[1,7]
P. Torcson, MD[1,8]
T. Bookwalter, PharmD[1,9]
T. Budnitz, MPH[1]
D. Manning, MD[1,10]

[1] Society of Hospital Medicine, Philadelphia, Pennsylvania

[2] Saint Joseph Mercy Hospital, Ann Arbor, Michigan

[3] Emory University School of Medicine, Atlanta, Georgia

[4] University of Colorado School of Medicine, Denver, Colorado

[5] Brigham and Women's Hospital and Harvard Medical School, Boston, Massachusetts

[6] University of Ottawa, Ottawa, Ontario, Canada

[7] Safe and Reliable Healthcare, Santa Clara, California

[8] St. Tammany Parish Hospital, Covington, Louisiana

[9] University of California, San Francisco, San Francisco, California

[10] Mayo Clinic College of Medicine, Rochester, Minnesota

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BACKGROUND: Discharge from the hospital is a critical transition point in a patient's care. Incomplete handoffs at discharge can lead to adverse events for patients and result in avoidable rehospitalization. Care transitions are especially important for elderly patients and other high-risk patients who have multiple comorbidities. Standardizing the elements of the discharge process may help to address the gaps in quality and safety that occur when patients transition from the hospital to an outpatient setting.

METHODS: The Society of Hospital Medicine's Hospital Quality and Patient Safety committee assembled a panel of care transition researchers, process improvement experts, and hospitalists to review the literature and develop a checklist of processes and elements required for ideal discharge of adult patients. The discharge checklist was presented at the Society of Hospital Medicine's Annual Meeting in April 2005, where it was reviewed and revised by more than 120 practicing hospitalists and hospital-based nurses, case managers, and pharmacists. The final checklist was endorsed by the Society of Hospital Medicine.

RESULTS: The finalized checklist is a comprehensive list of the processes and elements considered necessary for optimal patient handoff at hospital discharge. This checklist focused on medication safety, patient education, and follow-up plans.

CONCLUSIONS: The development of content and process standards for discharge is the first step in improving the handoff of care from the inpatient to the posthospital setting. Refining this checklist for patients with specific diagnoses, in specific age categories, and with specific discharge destinations may further improve information transfer and ultimately affect patient outcomes. ***Journal of Hospital Medicine* 2006;1:354–360.** *© 2006 Society of Hospital Medicine.*

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Hospital discharge is a critical transition point for many inpatients. Patient recovery from diseases requiring hospitalization is frequently incomplete and requires ongoing management and evaluation after discharge. For hospitalists who focus their practice primarily on inpatient care, the handoff to the outpatient setting frequently involves a change in health care provider and care team. Changes in care environment and care goals can lead to adverse patient- and system-level events.[1] High-risk patients with multiple medical issues and elderly patients are especially vulnerable to the consequences of ineffective discharge handoffs.[2,3]

Several studies have identified the errors that commonly occur around the time of hospital discharge. Forster et al.[4] found that 1 in 5 patients experiences an adverse event (defined as an

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injury resulting from medical management rather than from the underlying disease) in the transition from hospital to home. They also found that approximately 62% of adverse events could be either prevented or ameliorated.[4] Roy et al. examined test results pending at the time of discharge and determined that posthospital providers were frequently unaware of pending test results, with a potentially serious clinical impact.[5] In an analysis of adverse events at 2 large hospitals in the United Kingdom, Neale et al. found that almost 11% of those hospitalized had an adverse event, 18% of which were attributable to the discharge process.[6]

Communication of important transitional care issues to the posthospital care team and to the patient is essential to a safe transition. Studies by van Walraven et al. found that patient follow-up with a physician who had access to the hospital discharge summary was associated with a decreased risk of rehospitalization.[7] Patients not understanding discharge medications,[8] dietary restrictions, or other lifestyle changes such as smoking cessation and exercise can lead to ineffective care transitions. Furthermore, the health system's barriers to effective patient self-management may exacerbate the risk in the transition from the hospital setting.[2,9–13]

In addition to the growing research literature that has identified gaps in the discharge process, the Joint Commission for the Accreditation of Healthcare Organizations (JCAHO) has included discharge instructions as a core performance measure in the care of heart failure patients. Hospital performance on this measure is reported publicly on the Centers for Medicare and Medicaid Services website (www.hospitalcompare.hhs.gov). Furthermore, the 2006 JCAHO patient safety goal of medication reconciliation recognizes the importance of preventing lapses in medication safety at points of care transition.[14,15] JCAHO now requires the development and implementation of processes to collect, review, reconcile, and document prescribed medications at all points of care transition, including hospital discharge.[16]

Older adults are considered more vulnerable to adverse events after discharge.[8] They account for approximately 12% of the total U.S. population, but they make up 70% of hospitalized patients.[17] With these factors in mind, the Society of Hospital Medicine (SHM) identified the elderly as a group especially vulnerable to the clinical care handoffs that occur in the hospital discharge process and therefore the patient population targeted in constructing the required elements of an ideal hospital discharge.

In addition to identifying a target patient population, inclusion of stakeholders primarily responsible for implementation is critical to developing a new process standard. In this instance, the hospitalist was identified as a critical architect of the development of the ideal discharge process, although clearly the hospitalist is just one of many people ultimately responsible for coordinating an effective hospital discharge. Finally, the organizations within which the elderly receive care and at which hospitalists practice are important partners in the implementation of systems of care that facilitate seamless care transitions.

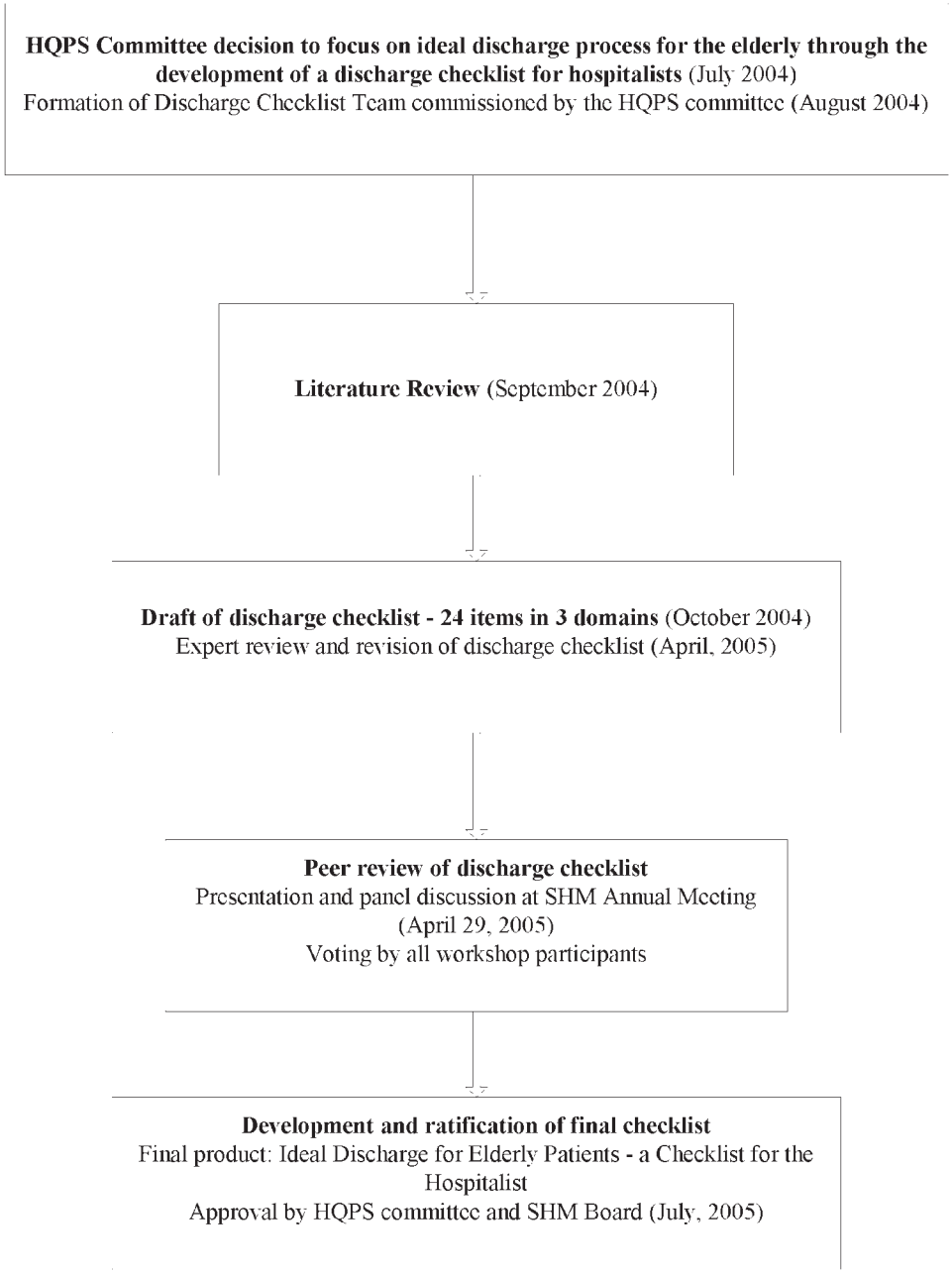
In examining the myriad stakeholders involved in the discharge transition—the patient, the hospitalist, other caregivers involved in hospital care, and the organization—SHM's Hospital Quality & Patient Safety (HQPS) Committee undertook an initiative to develop a practical list of important elements for hospitalists to include in the discharge of elderly inpatients, referred to in this article as the discharge checklist.

METHODS

In a process similar to that used by professional societies in the development of clinical guidelines, the SHM HQPS Committee used a combination of evidence-based review and expert panels to develop a discharge checklist for elderly patients. Given that the focus of this project was a process improvement rather than a specific clinical condition, the SHM also believed it was critical to share the draft checklist with academic and community-based practitioners knowledgeable in both the myriad logistical issues of and potential barriers to improving the discharge transition. The detailed process for checklist development is outlined below and summarized in Figure 1.

Literature Review

A Medline search was performed using the keywords "patient discharge" and either "quality indicators," "health care," or "quality of health care." Articles included were those written in English and published between January 1975 and January 2005. We also reviewed the abstracts submitted to the SHM's 2003-2005 annual and regional meetings in and reviewed those that included the desig-



HQPS: Hospital Quality and Patient Safety Committee
SHM: Society of Hospital Medicine

FIGURE 1. Process of development of the discharge checklist.

nated keywords in their content focus. The number of articles selected was narrowed from 274 to 32 by including only studies of specific discharge elements, articles describing adverse events associated with but not including specific discharge elements, descriptions of tools to gather and report important data at the time of hospital discharge, or recommendations of experts or medical associations about methods of improving the discharge process.

DRAFT Checklist and Expert Review

Two members of the discharge checklist team (S.K. and D.M.) reviewed all 32 relevant reports and assembled a list of possible items for inclusion in an ideal hospital discharge. Inclusion of items was based on clinical relevance to elderly patients and impact on postdischarge care. This list initially contained 24 items in 3 domains—discharge planning, medications, and the discharge summary document.

The list was sent to 3 experts, selected on the basis of their academic expertise in the fields of geriatrics and care transitions. Each independently reviewed the list, and then all 3 experts met several times by conference call. Items approved by at least 2 of the 3 experts were retained. The revised checklist transformed the 3 domains originally identified into 9 main elements, each with 2-5 subelements.

Peer Review at SHM Annual Meeting

In a workshop at the 2005 SHM Annual Meeting, a facilitator presented the checklist and moderated a discussion among several experts from the task force and expert panel. The expert panel shared relevant background literature and key findings from their own research. Audience members included community and academic hospitalists, case managers, and pharmacists. Many attendees responded to the checklist and raised relevant issues. In all, 120 clinicians participated in this 90-minute workshop.

After reviewing the checklist, workshop attendees gave both formal and informal input into the checklist content. Through group discussion and individual suggestions, items were added to the checklist. This process resulted in the addition of 1 main element and 3 subelements. At its completion, each workshop participant was allowed up to 3 votes for items that they believed should be removed from the modified checklist. The results were tallied, and the checklist was further reviewed and critiqued by the workshop faculty. Elements of the discharge checklist were designated as "required" for optimal handoffs if there was consensus among the committee members and workshop attendees. Elements that did not have unanimous support were discussed further and designated as "optional." The final checklist was then developed with both required and optional elements and endorsed by the HQPS Committee and the SHM board.

RESULTS

The final discharge checklist is shown in Figure 2. It contains required and optional data elements and processes for 3 types of discharge documents: the discharge summary, patient instructions, and communication (by phone, e-mail, or fax) on the day of discharge to the receiving provider. Other documents, such as transfer orders for a rehabilitation facility or nursing home, were considered outside the scope of this project.

The literature review identified medications as a significant source of adverse events for patients upon hospital discharge.[4,8,14,18–20] The expert panel and workshop participants all endorsed the need for additional detailed attention to reviewing and reconciling medications during the discharge process. The use of standardized tools was suggested by the group to improve the medication review process.[21] The required elements include not only a list of discharge medications but also attention to high-risk medications that require closer postdischarge follow-up and monitoring (such as warfarin,[22] diuretics, nephrotoxic medications, corticosteroids, hypoglycemic medications, and narcotic analgesics), reconciliation of the discharge medication regimen with preadmission medications and designation of medications as "new," "modified," or "discontinued,"[23] and emphasis on assessing patient understanding of medication self-management plans.[24] Several published studies found that pharmacist oversight of discharge medications or postdischarge telephone calls improved patient outcomes.[18–20] However, not every health system has the resources and infrastructure necessary to implement these types of programs. Moreover, methods of implementation of each of these discharge elements were believed to be beyond the scope of this project, so pharmacist involvement was not specifically included in this checklist.

The expert panel and workshop participants found items related to cognition and functional status to be important for patients whose usual cognitive or functional status was changed or whose status at discharge was not within normal limits.[25,26] Clinicians seeing patients in follow-up would then have an important reference point for evaluating progress and the need for additional home support or therapy. Patients with limited literacy or language barriers may need these issues assessed with the help of family members and/or

Data Elements	Processes		
	Discharge Summary	Patient Instructions	Communication to follow-up clinician on day of discharge
Presenting problem that precipitated hospitalization	x	x	x
Key findings and test results	x		x
Final Primary and Secondary Diagnoses	x	x	x
Brief Hospital Course	x		x
Condition at discharge, including functional status and cognitive status if relevant[25, 26]	x—functional status o -- cognitive status		
Discharge destination (and rationale if not obvious)	x		x
Discharge Medications: Written schedule Include purpose and cautions (if appropriate) for each[24] Comparison with pre-admission medications (new, changes in dose/freq, unchanged, "meds should no longer take"[23])	 x o x	 x x x	 x o x
Follow-up appointments with name of provider, date, address, phone number, visit purpose, suggested management plan[31]	x	x	x
All pending labs or tests, responsible person to whom results will be sent[5]	x		x
Recommendations of any sub-specialty consultants	x		o
Documentation of patient education and understanding	x		
Any anticipated problems and suggested interventions	x	x	x
24/7 call-back number	x	x	
Identify referring and receiving providers	x	x	
Resuscitation Status And any other pertinent end-of-life issues[20]	o		

FIGURE 2. Ideal discharge of the elderly patient: a hospitalist checklist. x = required element; o = optional element.

translators to identify changes from their baseline level of functioning.

In addition, resuscitation status was viewed by the group as an important data element for some patients,[27] particularly those who had been critically ill. Development of disease or population-specific content, for example, for patients with heart failure or pneumonia, was also identified as critical to the safe discharge of elderly patient, with the understanding that there may be a need to modify and individualize the content for patients with complex conditions and multiple comorbidities.

The content of the hospital discharge summary deemphasized the need for a complete history of the present illness at the time of hospital admission or an exhaustive hospital course. Instead, it highlighted the need to identify a patient's condition at discharge, pending issues and interventions requiring ongoing and focused monitoring, contingency planning, and contact information of knowledgeable providers in case questions arise after discharge.[28–30]

Postdischarge care was emphasized with the need for a follow-up appointment within at most 2

weeks of discharge or sooner for patients with fragile clinical conditions.[31] Although this was not recommended because of a published study, it was the consensus of the expert panel and peer review process that close follow-up after hospital discharge was critical in ensuring medication safety. Transportation limitations and other logistical problems with access to a follow-up clinician were identified as important issues to be resolved in the discharge planning process in order for timely follow-up to occur. In addition, it was deemed critical that the follow-up provider receive the key information about the hospitalization with any necessary follow-up instructions as soon after discharge as possible[13] and certainly before the first postdischarge visit. Instructions to patients about medication schedules and follow-up care need to be in writing at a 6th-grade reading level; furthermore, processes to identify a patient's level of understanding of the follow-up plan and areas for targeted education need to be established.[24]

DISCUSSION

We believe the development of a checklist of required elements to be communicated at discharge is a key step toward standardizing the hospital discharge process. The checklist highlights what is believed to be the key information about the transition of care and its process. The checklist is intended to standardize what is required for a successful hospital discharge. However, each institution will need to further refine this list according to local factors such as patient population, resources, and culture and to determine how best to implement the necessary changes to their current discharge process. Local modification of the checklist also allows for the addition of other elements that are patient- or population specific. Elderly patients discharged home from the hospital are the primary patient population targeted by this checklist ; there may be unique and additional elements necessary for an ideal discharge for a patient who is discharged to a subacute or acute rehabilitation facility. These elements are not described in this checklist but will be the focus of future work.

Establishing the critical elements of a hospital discharge transition sets the stage for improving patient outcomes in the immediate postdischarge period. Most important, the checklist conveys the message that the discharge process requires critical thinking, collaboration, and goal setting and that this coordination of care takes *time*. However, the discharge checklist must reside within a hospital culture that in general does not value the discharge process in the same way it values the admission process. The latter is more standardized and incorporates expectations about content and communication. In the same way, the current discharge is an "admission" to the next health care setting and deserves at least as much time and effort as a hospital admission. Furthermore, if institutions examine their current discharge processes, they may find that the time necessary to complete the discharge may be similar to the time necessary to admit a patient to the hospital. Finally, organizations need to develop internal policies and procedures that monitor and provide feedback about important dimensions of the discharge process, including content, patient understanding, information transfer, and clinical and service outcomes including satisfaction of the patient and the postdischarge provider. Hospital discharge is truly a team process involving nurses, pharmacists, case managers, and other hospital personnel, so performance measurement should be at the team or unit level, unlike other areas for which individual physicians may receive feedback on performance.

The limitations of the checklist development process include the paucity of randomized, controlled trials focused on the study of health care delivery processes and the lack of an industry "gold standard." Furthermore, the heterogeneity of health care delivery systems makes it difficult to recommend specific interventions without understanding the myriad local issues. Those who provided input into this checklist included members of the inpatient team, a scope that can be broadened in the future to include outpatient physicians, patients, and caregivers in the home and long-term care environments. However, the elements defined through the checklist serve as a starting point for developing discharge transition standards for older adults.

As leaders in hospital care, hospitalists are positioned to raise awareness of the importance of hospital discharge and to lead multidisciplinary efforts to improve the discharge process within their organizations. The first step in that process should be understanding the required elements and local facilitating factors and barriers in achieving a predictable, seamless transition of care for hospitalized patients.

Address for correspondence and reprint requests: Lakshmi K. Halasyamani, MD, Associate Chair, Department of Internal Medicine, 5333 McAuley Drive, RHB 5112, Ypsilanti, MI 48197; E-mail: halasyal@trinity-health.org

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