SAFE PRACTICE 15: DISCHARGE SYSTEMS

The Objective
Ensure that effective transfer of clinical information to the patient and ambulatory clinical providers occurs at the time of discharge from healthcare organizations.

The Problem
The transfer of patient care from a hospital to primary care or other community providers has been characterized as an unsystematic, non-standardized, fragmented process that creates high risk for adverse events postdischarge.

The frequency of a lack of understanding of discharge instructions is secondary to high rates of low health literacy; to a lack of coordination in the hand-off from the hospital to community care; and to gaps in social supports. These and other limitations can affect the frequency of adverse events and rates of readmissions. [Anthony, 2005; Chugh, 2009]

Recent focus on episodes of care and hospitalizations reveals that significant harm occurs after discharge from acute care hospitals, whether to the ambulatory space or to nursing homes. [Jencks, 2009] Many adverse events lead to subsequent rehospitalizations. There is controversy about whether rehospitalization rates are a good measure of the quality of care and the quality of discharge processes. [Benbassat, 2000] However, measuring rehospitalization rates within hospitals and comparing them to predicted rates, based upon national models adjusting for case mix, is a means of determining postdischarge adverse events that are attributable to poor quality. In 2006, there were approximately 34.9 million hospital discharges, excluding infants. [DeFrances, 2008] It was estimated from a large sample of Medicare beneficiaries that approximately 18 percent of these patients were 30-day readmissions. [CWF, 2008] Approximately one out of five Medicare fee-for-service beneficiaries were readmitted within 30 days, and 34 percent within 90 days. Fifty percent of those readmitted within the 30-day timeframe had not seen their physicians since they were discharged. [Jencks, 2009]

Readmissions to hospital from nursing homes pose unique opportunities to improve patient care and save preventable harm and cost to the healthcare system. An evolving area of focus is discharges to nursing homes and extended care facilities, and the reduction of potential readmissions to such facilities through optimization of information transfer and careful matching of facilities to patients’ needs.

The severity of adverse events attributable to discharge systems is similar to measured outcomes associated with typical categories of adverse events. [Levinson, 2008] A study conducted in 2003 directly measured adverse events postdischarge and concluded that 19 percent of patients experience adverse events; of these, 6 percent had preventable adverse events, and 6 percent had ameliorable adverse events. A prospective observational review of discharge summaries found that 66 percent of 577 evaluated had a medication inconsistency of either a drug omission or unjustified medication. Of the drug omissions, 32 percent were considered potentially harmful. [Perren, 2009] In a retrospective study evaluating discharge summaries, Were and colleagues found that 75 percent of discharge summaries lacked information on pending tests, and follow-up provider information was available in only 67 percent of the summaries. [Were, 2009] It has been reported that the readmission and mortality of seniors after acute-care hospital admissions may be much
higher than previously presumed. [Boutwell, 2008; Denham, 2009]

The preventability of many of these events could have been increased by implementing simple strategies at discharge. [Forster, 2003]

Of the postdischarge adverse events, 66 percent were adverse drug events caused by antibiotics (38 percent), corticosteroids (16 percent), cardiovascular drugs (14 percent), analgesics (10 percent), and anticoagulants (8 percent). [Forster, 2003] The discharge process must effectively address the patient’s needs for continuing care and treatment and must effectively communicate this information to patients and responsible caregivers in a timely fashion. [Greenwald, 2007] As part of this process, hospitals should identify the critical components of the discharge plan that pose the greatest patient safety risks; typically, these exist in the area of medication reconciliation. [Williams, 2009]

A recent systematic review uncovered that direct communication between hospital and primary care physicians occurred infrequently (3 to 20 percent of the time), and that the availability of the postdischarge summary at the first postdischarge visit was low (12 to 34 percent), affecting the quality of care in an estimated 25 percent of follow-up visits. [Kripalani, 2007] The Agency for Healthcare Research and Quality has supported research using process mapping, failure mode effect analysis, qualitative analysis, and iterative group process to define a Re-Engineered Discharge (RED). RED is a set of mutually reinforcing components that demonstrates a high-quality hospital discharge. The components of the RED were endorsed by the National Quality Forum (NQF) and form the basis of this practice on hospital discharge. Working with design and health literacy consultants, the RED was operationalized using a tool called the “After Hospital Care Plan” (AHCP). A randomized controlled trial of 749 subjects comparing the impact of the RED process showed a lower rate of hospital utilization in the intervention group compared to usual care. One readmission or emergency department visit was prevented for every 7.3 subjects receiving the intervention. [Jack, 2009; Clancy, 2008]

The cost of rehospitalizations has been estimated to account for 60 percent of hospital charges. [Zook, 1980a; Zook, 1980b] The RED intervention showed a difference between RED intervention group and care as usual to be a total cost of $149,995—or an average of $412 less cost per person who received the intervention. This represents a 33.9 percent lower observed cost for those patients receiving the AHCP. [Jack, 2009]

Safe Practice Statement

A “discharge plan” must be prepared for each patient at the time of hospital discharge, and a concise discharge summary must be prepared for and relayed to the clinical caregiver accepting responsibility for postdischarge care in a timely manner. Organizations must ensure that there is confirmation of receipt of the discharge information by the independent licensed practitioner who will assume the responsibility for care after discharge. [Jack, 2009; JCR, 2010]

Additional Specifications

Discharge policies and procedures should be established and resourced and should address: [Clancy, 2009; SHM, 2008]

- explicit delineation of roles and responsibilities in the discharge process;
- preparation for discharge occurring, with documentation, throughout the hospitalization;
• reliable information flow from the primary care physician (PCP) or referring caregiver on admission, to the hospital caregivers, and back to the PCP, after discharge, using standardized communication methods; [Sherman, 2009]

• completion of discharge plan and discharge summaries before discharge; [Jack, 2009]

• patient or, as appropriate, family perception of coordination of discharge care; and

• benchmarking, measurement, and continuous quality improvement of discharge processes.

A written discharge plan must be provided to each patient at the time of discharge that is understandable to the patient and/or his family or guardian and appropriate to each individual’s health literacy and English language proficiency. [Chugh, 2009; Were, 2009] At a minimum, the discharge plan must include the following:

• reason for hospitalization;

• medications to be taken postdischarge, including, as appropriate, resumption of pre-admission medications, how to take them, and how to obtain them;

• instructions for the patient on what to do if his or her condition changes; and

• coordination and planning for follow-up appointments that the patient can keep and follow-up of tests and studies for which confirmed results are not available at the time of discharge. [Cook, 2009; Sherman, 2009]

A discharge summary must be provided to the ambulatory clinical provider who accepts the patient’s care after hospital discharge. [IHI, 2009b] At a minimum, the discharge summary should include the following:

• reason for hospitalization;

• significant findings;

• procedures performed and care, treatment, and services provided to the patient;

• the patient’s condition at discharge;

• information provided to the patient and family;

• a comprehensive and reconciled medication list; [IHI, 2009a] and

• a list of acute medical issues, tests, and studies for which confirmed results are unavailable at the time of discharge and require follow-up.

Original source documents (e.g., laboratory or radiology reports or medication administration records) should be in the transcriber’s immediate possession and should be visible when it is necessary to transcribe information from one document to another.

The organization should ensure and document receipt of discharge information by caregivers who assume responsibility for postdischarge care. This confirmation may occur through telephone, fax, e-mail response, or other electronic response using health information technologies. [Zsenits, 2009]

Applicable Clinical Care Settings
This practice is applicable to Centers for Medicare & Medicaid Services care settings, to include ambulatory, ambulatory surgical center, emergency room, dialysis facility, home care, home health services/agency, hospice, inpatient service/hospital, outpatient hospital, and skilled nursing facility.
Example Implementation Approaches
[Greenwald, 2007]

- Before discharge, present a clear explanation that the patient understands that addresses postdischarge medications, how to take them, and how and where prescriptions can be filled. [AHRQ, 2009b] This information must also be communicated to the accepting physician.
- Discharge policies and procedures should include processes for educating patients [AHRQ, 2009a] and caregivers about: 1) the diagnoses and comorbidities; 2) post-discharge follow-up appointments that are scheduled on days and times that allow the patient to attend; 3) plans to follow up tests performed during the hospitalization for which results have not been finalized, as well as tests or studies to be completed after discharge; 4) plans for postdischarge home care, such as physical therapy, occupational therapy, speech therapy, and visiting nurses; 5) durable medical equipment needs and the means to obtain them; and 6) assessment of the degree of understanding. [Kanaan, 2009]
- Put in place systematic and timely processes to monitor and provide feedback to discharging and accepting practitioners about discrepancies in adherence to such guidelines. [Bergkvist, 2009] This should reduce the number of patients discharged with plans that do not conform to accepted national guidelines for care of that condition (e.g., ACE inhibitor for congestive heart failure, aspirin or beta blocker for cardiac disease).
- The time from discharge to the first appointment with the accepting physician represents a period of high risk. All patients discharged from hospitals should be told what to do if a question or problem arises, including whom to contact and how to contact them. Guidance should also be provided about resources for patients’ questions once they are discharged.
- Patients discharged to nursing homes and extended care facilities pose unique problems and opportunities for improvement. Careful documentation at discharge, and selection of nursing home facilities, can improve readmission rates to hospitals and can reduce preventable harm at nursing home facilities. [Kramer, 2008]
- Prospectively identify and provide a mechanism to contact patients (via phone or home visit) with incomplete or complex discharge plans after discharge to assess the success of the discharge plan, address questions or issues that have arisen surrounding it, and reinforce its key components, in order to avoid post-discharge adverse events and unnecessary readmissions. [Boutwell, 2009; Williams, 2009]

Strategies of Progressive Organizations

- Some organizations have provided to patients access to the entire medical record online. Others provide a personal health record repository for patients to keep digital versions of their records. In addition to providing medical records online, some organizations monitor the quality of the discharge summaries by collecting data on whether critical elements are accurate and complete. Collaboration between acute-care hospitals and nursing homes improves continuity of care and benefits all stakeholders, including families, across the care settings. The Care Transition Intervention provided a “transition coach” to work with discharge patients over a four-week period to improve
patient care outcomes. This intervention focused patient support in four key areas: managing medications, maintaining updated health record information and sharing with providers as needed, scheduling follow-up physician appointments, and assessing for worsening of clinical condition and how the patient should access assistance. [Coleman, 2006]

Opportunities for Patient and Family Involvement

- Engage patients in survey feedback, including the NQF-endorsed® 3-Item hospital care transition measure and NQF-endorsed HCAHPS survey questions about discharge.
- Include patients and family members on the discharge/transition of care planning committee.
- Encourage patients and family members to ask questions about the medical plan and medications and be active participants in their healthcare planning. [Boling, 2009].
- Engage patient and family members to carry accurate medication lists and medical diagnoses to share with healthcare professionals during all health-related office visits, hospitalizations, and community pharmacy encounters.
- Use the “teach-back” process to ensure patient understanding of transition-of-care planning.

Outcome, Process, Structure, and Patient-Centered Measures

These performance measures are suggested to support internal healthcare organization quality improvement efforts and may not all necessarily address external reporting needs.

- Outcomes Measures include reduction in direct harm associated with adverse drug events and treatment misadventures, including death, disability (permanent or temporary), or preventable harm requiring further treatment; missed diagnoses and delayed treatment; and inaccessible prior test information and medical records.
- Process Measures include the percent of discharge summaries received by accepting practitioners; the number of patients who have and attend a posthospital follow-up appointment; and the timeliness of receipt and discussion of posthospital follow-up tests with the accepting provider.

- NQF-endorsed process measures:

1. #0338: Home Management Plan of Care Document Given to Patient/Caregiver [Hospital]: Documentation exists that the Home Management Plan of Care (HMPC), as a separate document, specific to the patient, was given to the patient/caregiver, prior to or upon discharge.

2. #0045: Osteoporosis: Communication with the Physician Managing Ongoing Care Post-Fracture [Ambulatory Care (office/clinic)]: Percentage of patients aged 50 years and older treated for a hip, spine, or distal radial fracture with documentation of communication with the physician managing the patient’s on-going care that a fracture occurred and that the patient was or should be tested or treated for osteoporosis.
3. #0136: Heart Failure (HF): Detailed discharge instructions [Hospital]: Material given to patient or caregiver at discharge or during the hospital stay addressing all of the following: activity level, diet, discharge medications, follow-up appointment, weight monitoring, and what to do if symptoms worsen.

4. #0375: VTE Discharge Instructions [Hospital]: This measure assesses the number of patients diagnosed with confirmed VTE who are discharged to home, to home with home health, or home hospice on warfarin with written discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions.

5. #0557: HBIPS-6 Post discharge continuing care plan created [Hospital]: Patients discharged from a hospital-based inpatient psychiatric setting with a continuing care plan created.

6. #0558: HBIPS-7 Post discharge continuing care plan transmitted to next level of care provider upon [Hospital]: Patients discharged from a hospital-based inpatient psychiatric setting with a continuing care plan provided to the next level of care clinician or entity.

7. #0560: HBIPS-5 Patients discharged on multiple antipsychotic medications with appropriate justification [Hospital]: Patients discharged from a hospital-based inpatient psychiatric setting on two or more antipsychotic medications with appropriate justification.

- **Structure Measures** include verification of the existence of a systematic hospital discharge performance improvement program and explicit organizational policies and procedures addressing communication of discharge information; verification of educational programs; and the existence of formal reporting structures for accountability across governance, administrative leadership, and frontline caregivers.

- **Patient-Centered Measures** include surveys of patient satisfaction about hospital discharge at the time of and after discharge. The NQF-endorsed HCAHPS survey includes two relevant measures: “During your hospital stay, did hospital staff talk with you about whether you would have the help you needed when you left the hospital?” (Q19); and “During your hospital stay, did you get information in writing about what symptoms or health problems to look out for after you left the hospital?” (Q20).

- NQF-endorsed patient-centered measures:
  1. #0166: HCAHPS [Hospital]: 27-item survey instrument with 7 seven domain-level composites including: communication with doctors, communication with nurses, responsiveness of hospital staff, pain control, communication about medicines, cleanliness, and quiet of the hospital environment, and discharge information.
  2. #0228: 3-Item Care Transition Measure (CTM-3) [Hospital]: Uni-dimensional self-reported survey that measures the quality of preparation for care transitions.

**Settings of Care Considerations**

- **Rural Healthcare Settings:** All requirements of the practice are applicable to rural acute care settings. Although small and rural
acute care settings are resource constrained, the transmission of appropriate discharge information is often more important in these settings, because many patients receive part of their diagnostic work-up in small communities and then require more complex care in larger centers. Such information transfer can be vital to patient safety bi-directionally—both when patients go to larger centers and when they return to be seen by primary practitioners in their home communities. Patients must have access to their records to help with the transfer of information.

- **Children’s Healthcare Settings:** All requirements of the practice are applicable to children’s acute care settings. Parents need access to medical records to facilitate the transfer of information, especially in the case of young children who cannot communicate the information to caregivers.

- **Specialty Healthcare Settings:** All requirements of the practice are applicable to specialty acute care settings. Such organizations must transmit medical records and critical care information, because patients will likely be admitted to other centers when they have conditions that cannot addressed in specialty settings. Diagnostic test and procedural information can have a direct and substantial impact on future treatment.

- **Outpatient Testing Facilities:** Imaging centers and other test facilities providing services to patients receiving care by other organizations must address closure of communication loops about test results. Incomplete closure can lead to missed and delayed diagnosis. Incomplete access to prior tests leads to less-than-optimal interpretation of such studies. When such diagnostic services are provided to patients while they are in acute care or in extended care facilities requiring transportation offsite, significant opportunities for breakdowns in information loops exist, leading to incomplete discharge information sets.

### New Horizons and Areas for Research

Improving and standardizing discharge processes is critical in preventing harm, whether a patient is discharged as an outpatient or to a nursing home. The processes undertaken by caregivers assuming the care of patients, in private practice or in institutions such as nursing homes, must also be optimized and supported by new tools. Federal payers are establishing value-based purchasing demonstration programs for nursing homes to develop incentives in order to reduce potentially preventable readmissions to acute-care hospitals. [White, 2009]

The development of information technology systems to collect discharge information and create discharge plans from existing hospital databases could enable components of the discharge plan to be easily collected. [Graumlich, 2009] The development of interactive health information technologies could enhance patient education before discharge.

### Other Relevant Safe Practices

Refer to Safe Practice 1: Leadership Structures and Systems; Safe Practice 2: Culture Measurement, Feedback, and Intervention; Safe Practice 3: Teamwork Training and Skill Building; and Safe Practice 4: Identification and Mitigation of Risks and Hazards. Other relevant practices include Safe Practice 12: Patient Care Information and Safe Practice 16: Safe Adoption of Computerized Prescriber Order Entry.
Notes


June 1, 2010

Dear Healthcare Leader:

We are delighted to announce that the National Quality Forum has graciously given us permission to distribute copies of the *NQF Safe Practices for Better Healthcare – 2010 Update*. This section has been provided to you in the interest of helping you implement, and/or educate others to adopt the suggestions and implementation examples into your safe practices.

The National Quality Forum is dedicated to providing evidence-based practices as ready-to-use tools to improve safety. The practices in the *NQF Safe Practices for Better Healthcare – 2010 Update* have been evaluated, assessed and endorsed to guide large and small healthcare systems in providing the safest care in every area of patient safety. We give our highest recommendation for them as a valuable resource toward patient safety from hospital bedside to boardroom. It is in the fulfillment of this mission that NQF makes the gift of this to you in your pursuit of your quality journey.

We hope that you will recommend that others purchase the report from NQF. The home page of the National Quality Forum can be accessed at the following link: [http://www.qualityforum.org/](http://www.qualityforum.org/) and an abridged report of the *NQF Safe Practices for Better Healthcare—2010 Update* can be downloaded free online at: [http://www.qualityforum.org/Publications/2010/04/Safe_Practices_for_Better_Healthcare--_2010_Update.aspx](http://www.qualityforum.org/Publications/2010/04/Safe_Practices_for_Better_Healthcare--_2010_Update.aspx). To obtain the full report for a cost of $29.99, please contact NQF by phone during business hours at 202-783-1300 or via e-mail at info@qualityforum.org and their staff will contact you for payment details.

If you want to have a free copy of the entire set of practices, you may receive one if you fill out a web-based survey that may be filled out at [http://www.safetyleaders.org/2010nqfResearchStudy/index.jsp](http://www.safetyleaders.org/2010nqfResearchStudy/index.jsp).

We want to acknowledge you and your institution for your current efforts in patient safety. We hope you enjoy this important information and find it useful in your future work.

Sincerely,

Charles R. Denham, M.D.
Chairman