Transforming Care at the Bedside

How-to Guide:
Creating an Ideal Transition Home for Patients with Heart Failure

Transforming Care at the Bedside (TCAB) is a national program designed to improve the quality and safety of patient care on medical and surgical units, to increase the vitality and retention of nurses, and to improve the effectiveness of the entire care team. For more information, go to http://www.ihi.org/.

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The Robert Wood Johnson Foundation (RWJF) focuses on the pressing health and health care issues facing our country. As the nation’s largest philanthropy devoted exclusively to improving the health and health care of all Americans, the Foundation works with a diverse group of organizations and individuals to identify solutions and achieve comprehensive, meaningful, and timely change. For more than 30 years the Foundation has brought experience, commitment, and a rigorous, balanced approach to the problems that affect the health and health care of those it serves. When it comes to helping Americans lead healthier lives and get the care they need, the Foundation expects to make a difference in your lifetime.

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Introduction

Launched in 2003, Transforming Care at the Bedside (TCAB) is a national program of the Robert Wood Johnson Foundation (RWJF) and the Institute for Healthcare Improvement (IHI) that engages leaders at all levels of the health care organization to:

- Improve the quality and safety of patient care on medical and surgical units;
- Increase the vitality and retention of nurses;
- Engage and improve the patient’s and family members’ experience of care; and
- Improve the effectiveness of the entire care team.

As of September 2007, ten hospitals are participating in phase III of the TCAB program to continue to create and pilot test new concepts, develop exemplary care models on medical and surgical units, and demonstrate institutional commitment and resources to support and sustain these innovations. In addition to these ten organizations, hospital staffs across the United States are applying TCAB principles and processes to dramatically improve the quality of patient care on medical and surgical units. For more information on the TCAB program and participating sites, please see the following:

- IHI website
  http://www.ihi.org/IHI/Programs/StrategicInitiatives/TransformingCareAtTheBedside.htm
- RWJF website

One of the most promising changes that has been developed within TCAB is “creating an ideal transition home” for patients who are being discharged from medical and surgical units within hospitals. This How-to Guide builds upon relevant research and published literature, and integrates what TCAB hospitals have learned as they strive to dramatically improve the quality of care for patients discharged from the hospital to home or to another health care facility. Although this guide specifically focuses on patients with heart failure (HF), the proposed changes for creating an ideal transition home can be generalized and adapted to improve the discharge process for all patients.
This How-to Guide is divided into three sections:

- **Section One** highlights four key components of an ideal transition home and specifies individual changes that can be tested. Key references and links to resources are included.
- **Section Two** outlines a practical step-by-step sequence of activities to assist staff in testing and adapting many of the proposed changes described in Section One.
- **Section Three** includes tools, resources, practical "real-world" tips, examples from hospitals, and case studies of hospitals that have implemented many of the changes proposed in this guide.
The Case for Creating an Ideal Transition Home

Poorly executed transitions in care negatively impact patients' health and well-being, family resources, and unnecessarily increases the costs incurred by health care systems and the patients, families, and communities they serve. Patients are interested in avoiding hospital admissions and, when possible, minimizing symptoms, regaining optimal functioning, and maintaining a good quality of life. These goals cannot be overlooked by health care professionals, and need to be included in the design of patients' care plans. Maintaining continuity in patients' medical care is especially critical following discharge from the hospital, and for older patients with multiple chronic conditions this "handoff" period takes on even greater importance. Research shows that one-quarter to one-third of these patients have to return to the hospital due to complications that could have been prevented.


Recent studies evaluating hospital discharge have associated the risk of adverse events with deficiencies in health literacy, patient education, communication among health care providers within and between sites of care, appropriate medical follow-up, and any number of issues related to medications. According to Clark et al., 81 percent of patients requiring assistance with basic functional needs failed to have a home care referral, and 64 percent said no one at the hospital talked to them about managing their care at home.


Why Have We Chosen to Focus on Patients Who Have Heart Failure?

Nearly 5 million people in the United States have heart failure (HF). HF can significantly affect a person’s ability to function in daily life, and it is the leading cause of hospitalization among older Americans. Yet, because of inadequate treatment, discharge guidance, and follow-up during times of transition, many patients with HF are caught in a revolving door process, ultimately culminating in clinical deterioration and rehospitalization. The MedPAC *Report to the Congress: Promoting Greater Efficiency in Medicare* (2007) cites a readmission rate of 12.5 percent within 15 days of discharge.

In addition to its human toll, HF carries a substantial economic burden with an estimated direct and indirect cost in the United States for 2006 of $29.6 billion. The unacceptably high readmission rate drives the escalation of costs and signals that current management approaches are less than optimal. Evidence-based care offers opportunities to reduce mortality, morbidity and rehospitalization rates for patients with HF. The MedPAC *Report to the Congress* points out that “for patients who are later readmitted, hospitals have lower margins on both the initial admission and readmission, compared with patients who are not readmitted. By reducing the frequency of these patients’ readmissions, hospitals may be able to fill the beds with other patients who are more profitable.”


The American College of Cardiology (ACC) and the American Heart Association (AHA) both emphasize discharge preparations in their performance measures and in the Get With The Guidelines™ program. Cardiologists and expert panels have reached broad consensus that these care components should be provided to all patients with HF prior to hospital discharge, unless a clear contraindication exists and is documented in the medical record.


In December 2006, the Institute for Healthcare Improvement (IHI) launched the 5 Million Lives Campaign and challenged American hospitals to adopt evidence-based care interventions in a nationwide effort to protect patients from medical harm. One of these interventions is to deliver reliable, evidence-based care for congestive heart failure in order to avoid readmissions. This How-to Guide is designed to build on the initial work of the Campaign and to support teams to achieve improved outcomes for patients with heart failure. Within the next six months, IHI plans to develop an additional How-to Guide for ambulatory care providers to assist them in providing reliable care and self-management support for heart failure patients.

Section One

This section highlights four key components of an ideal transition home and specifies individual changes that can be tested. Key references and links to resources are included.

Creating an Ideal Transition Home

1. Enhanced Admission Assessment for Post-Discharge Needs
   a. Include family caregivers and community providers (e.g., home health nurses, primary care physicians, HF clinic nurses, etc.) as full partners in standardized assessment, discharge planning, and predicting home-going needs.
   b. Reconcile medications upon admission.
   c. Initiate a standard plan of care based on the results of the assessment.

2. Enhanced Teaching and Learning
   a. Identify the learner(s) on admission (i.e., the patient and family caregivers).
   b. Redesign the patient education process to improve patient and family caregiver understanding of self-care.
   c. Use Teach Back daily in the hospital and during follow-up calls to assess the patient’s and family caregivers’ understanding of discharge instructions and ability to do self-care.

3. Patient and Family-Centered Handoff Communication
   a. Reconcile medications for discharge.
   b. Provide customized, real-time critical information to the next care provider(s) that: (a) accompanies the patient to the next institution; and/or (b) is transmitted to the receiving physician and/or home health agency or other care providers at time of discharge.

4. Post-Acute Care Follow-Up
   a. High-risk patients: Prior to discharge, schedule a face-to-face follow-up visit (home care visit, care coordination visit, or physician office visit) to occur within 48 hours after discharge.
   b. Moderate risk patients: Prior to discharge, schedule a follow-up phone call within 48 hours and schedule a physician office visit within 5 days.
1. Enhanced Admission Assessment for Post-Discharge Needs

Accurate and insightful assessment of a patient’s individualized needs on admission contributes to a timely diagnosis and individualized treatment plan. The assessment will also help the individual patient and family caregivers to effectively plan for the patient’s discharge needs. This early assessment can help to ensure a safe transition home.

Typical failures associated with patient assessment include the following:

- Poor understanding of the patient’s capacity to manage in the home environment because the patient and family caregivers are not involved in identifying needs and resources and in planning for the discharge
- Transfer to a care venue that does not meet the patient’s needs due to a lack of understanding of the patient’s functional physical and cognitive health status
- Medication errors and poly-pharmacy
- Worsening clinical status in the hospital is not recognized
- Discharge is ordered too early
- An advanced care directive is not obtained

Recommended Changes

1a. Include family caregivers and community providers (e.g., home health nurses, primary care physicians, HF clinic nurses, etc.) as full partners in standardized assessment, discharge planning, and predicting home-going needs.

Clinicians in the community and family caregivers, who play a critical role in the execution of the care plan following the transfer, should be involved when the discharge and transportation plan is formulated. Recommendations include the following:

i. Identify the appropriate family caregivers. Family members provide insight into the home setting that is crucial to a successful discharge of the patient back to the home. Visitors to the hospital are not necessarily the persons who will fully understand the limitations of the home environment or issues of transferring to another care setting, and they may not be helping the patient with self-care at home.


ii. Partner with home care agencies and primary care offices and clinics to form a safety net for patients transitioning between care settings.


iii. When assessing patients on admission, use a standard assessment process for predicting discharge basic needs and incorporate changes in the patient’s plan of care. Discharge assessment and planning should address the following:

- Medication and dietary (including sodium) restrictions
- Volume status
- Cognitive status
- Psychological state
- Culture
- Access to social and financial resources
- Recommended activity level
- Follow-up by phone or clinic visit after discharge to assess volume status
- Medication and dietary compliance
- Monitoring of body weight, electrolytes, and renal function
- Consideration for referral for formal disease management


iv. Estimate the home-going date on admission and anticipate needs accordingly.

- Re-evaluate the estimated date daily and adjust the plan of care
• Add the estimated discharge date to the white board (see Section Three) in the patient room to encourage involvement of all caregivers, the patient, and the family in preparations.
• Include discussion of preparations toward the discharge date in daily rounds and multidisciplinary rounds.
• Plan ahead to keep the patient safe and comfortable on the trip home (e.g., providing sufficient pain medication to keep the patient comfortable and filling the needed prescriptions before the trip home to avoid a stop at the pharmacy).

v. Establish standard discharge criteria for patients with HF.


1b. Reconcile medications upon admission.

One out of five hospital patients in a follow-up study experienced adverse events due to inadequate medical care after leaving the hospital and returning home. Prescription drugs accounted for the most injuries after discharge, affecting 66 percent of the 400 patients involved in the study. According to the researchers, one-third of the post-discharge events could have been avoided, and another one-third could have been less severe, if patients had received proper medical care. Adverse events ranged from unnoticed laboratory problems to permanent disability. More than half of the patients (64 percent) had symptoms for several days while three percent of patients suffered permanent disabilities.


i. When taking the patient’s medication history, involve the patient and family caregivers, the clinical care provider and/or primary care physician and, if possible, the local pharmacy to ensure the history is complete and accurate on admission.

ii. All medication should be reconciled on admission by a suitably trained professional and a record of the reconciliation should be part of the medical record.
iii. Consider using a tool or document that does not require the patient or caregiver to rely on memory such as a personalized medication list.


1c. Initiate a standard plan of care based on the results of the assessment.

Begin on the day of admission to initiate a standardized plan of care based on the admission assessment.

i. Designate a person who is accountable for the effective discharge of each patient. This may be the patient’s primary nurse, a case manager, a discharge planner, a discharge coach, or a hospitalist.


ii. Provide patients with a “patient-friendly” discharge checklist that focuses on their needs and preferences for discharge from the hospital. A discharge preparation checklist was developed by Dr. Eric Coleman, University of Colorado at Denver and Health Sciences Center, with funding from the John A. Hartford Foundation and the Robert Wood Johnson Foundation. This tool includes tasks that can begin while the patient is in the hospital, and helps the patient and family prepare for a safe transition home.

- Decisions about what needs to happen
- Where the patient is going
- Name and phone number of a person to call if problems arise
- Understanding medications and how to take them
- Potential side effects of medications and whom to call
- Symptoms to watch out for and whom to call
- How to keep health problems from getting worse
- Questions are answered before leaving the hospital
- Whether the family knows what is needed after leaving the hospital
- Follow-up appointments with transportation are scheduled
This recommendation supports the Institute of Medicine (IOM) suggestion in the 2003 *Priority Areas for National Action* report that providers should communicate and reinforce patients’ active and central role in managing their illness.


iii. Communicate to all members of the care team the discharge plan and what needs to happen to enable the transition out of the hospital. For example, list the discharge date and daily care plans on the white board in the patient’s room.

iv. For patients who are at high risk for readmission ensure that the patient and family caregivers have the phone number and know who to call for questions and concerns. See page 24 for discussion on identifying high risk patients.

v. Consider a referral for home care or an Advanced Practice Nurse, or assigning a Transitions Coach.


vi. Consider standardized home care referral criteria, such as the following example excerpted from Iowa Health System standardized protocols for patients with heart failure.

Individuals with at least one of the following should be considered for home care:
- Cognitive impairment
- Chronic Obstructive Pulmonary Disease (COPD)
- Diabetes
- Frequent hospitalization for any cause
- History of depression
- Low output state (classic CHF symptoms)
- Multiple active co-morbidities
- Persistent New York Heart Association Classification III or IV symptoms
- Persistent non-adherence to treatment regimens
- Renal insufficiency
2. Enhanced Teaching and Learning

“Patients’ adherence to discharge instructions also affects hospitals’ readmission rates” (MedPAC 2007). The complexities and jargon of health care are overwhelming to patients and their family caregivers who are stressed by hospitalization. Stresses of illness are exacerbated by feared diagnoses or treatments, frustrations of navigating health care processes and facilities, and hesitation to ask questions of caregivers. Patient and caregiver understanding can be vastly improved by incorporating the techniques offered in the health literacy literature, which helps us grasp the fact that nearly half of the US population struggles with understanding complex messages and reading materials.


Health literacy is defined as the ability to read, understand, and act on health care information. The IOM Priority Areas for National Action report (2003) identifies 20 cross-cutting priorities for improving health care quality and disease prevention. Two of these cross-cutting priorities are care coordination and self-management/health literacy. A critical element of the IOM recommendations for improvement includes ensuring that knowledge sharing between clinicians and patients and their families is maximized, as the “systematic provision of education and supportive interventions to increase patients’ skills and confidence in managing their health problems.”


Typical failures found in patient and family caregiver education include the following:

- Assuming the patient is the key learner
- Poor discharge instructions
- Patient and family caregiver confusion about self-care instructions and medications
- Non-adherent patients, resulting in unplanned readmissions

Recommended Changes

2a. On admission, identify the learner(s) (i.e., the patient and other family caregivers).

i. Identify the appropriate family caregivers. Visitors to the hospital are not necessarily the persons who will be helping the patient with self-care at home.
ii. Be sure that the right learners are involved in all critical patient education.

2b. Redesign the patient education process to improve patient and family caregiver understanding of self-care.

i. Identify how the patient and family caregivers learn best. Provide as many alternatives as possible, including written material, videos, audio recordings, face-to-face discussions, interpretive services, etc.


ii. Use universal health literacy communication principles to redesign written teaching materials such as:

- Simple words (1 to 2 syllables)
- Short sentences (4 to 6 words)
- Short paragraphs (2 to 3 sentences)
- No medical jargon
- Headings and bullets
- Lots of white space
- Highlighted or circled key information


iii. Redesign patient education using the following guidelines:

- Partner with patients and families in all phases of redesigning, implementing, and evaluating patient teaching processes and materials.


- Use plain language, breaking content into smaller, easy-to-learn parts.

- Slow down when speaking to the patient and family and break messages into short statements.
• Use easy-to-learn segments of critical information along with Teach Back to help patients and family caregivers master the learning more easily. For example, focus on diuretics education on the first day of hospitalization using Teach Back (for more on Teach Back see Section One, 2c below).

• Stop and check for understanding using Teach Back after teaching each segment or part of the information.

• During acute care hospitalizations for HF, only essential education is recommended; reinforce within 1 to 2 weeks after discharge and continue for 3 to 6 months.


**2c. Use Teach Back daily in the hospital and during follow-up phone calls to assess the patient’s and family caregivers’ understanding of discharge instructions and ability to do self-care.**

“Asking that patients recall and restate what they have been told” is one of the 11 top patient safety practices based on scientific evidence. Teach Back involves asking the patient or family caregiver to recall and restate in their own words what they thought they heard during education or other instructions.


i. Use Teach Back to close gaps in understanding between health care providers and the patient and family caregivers.
In Teach Back, the caregiver explains important information to the patient or family caregiver and then asks in a non-shaming way for the individual to explain in his or her own words what was understood.

Once a gap in understanding is identified, additional teaching or explanation is offered followed by a second request for Teach Back. “Return demonstration” or “show back” is another form of “closing the loop” where the patient is asked to demonstrate to the caregiver how he or she will do what was taught. This technique is used routinely in diabetic education and physical therapy.

ii. Education should include review and Teach Back to assess the patient’s ability and confidence to perform intended self-care goals, including use of medications; diet; salt intake; nutrition; symptom awareness and management; daily weighing; tobacco and alcohol use; activity; and reasons to call the physician (e.g., weight gain, difficulty breathing, or exhaustion).


iii. Identify multiple opportunities while the patient is in the hospital to review important information to increase patient and family recall and confidence.

iv. Teach Back or return demonstration can be used to assess whether special attention should be given to the patient’s ability to fill prescriptions and adhere to medications. Non-adherence to the medication regimen may be driven by literacy skills and lack of resources, for example, to purchase medications or secure transportation.

v. Ask Me 3 is another useful patient communication and education tool that helps staff to teach and communicate with patients. Ask Me 3 teaches patients to ask three questions at each health care interaction to ensure they get the necessary information about their care: 1) What is the main problem? 2) What do I need to do? 3) Why is it important to do this?
3. Patient and Family-Centered Handoff Communication

Clinicians across the health care continuum often provide care without the benefit of having complete information about the patient’s condition, medical history, services provided in other settings, or medications prescribed by other clinicians (IOM 2001). Inadequate transfer of information (the “handoff”) during care transitions plays a significant role in the problems of quality and safety for patients, contributing to duplication of tests and greater use of acute care services.

Receiving practitioners need a complete view of the patient’s functional status for the purpose of planning care that will prepare patients and family caregivers for the transition out of acute care, and to ensure that the receiving care team has essential information to assume management of the patient.

When appropriate medications are prescribed on discharge from the hospital, the chance of long-term adherence can be significantly higher and associated with reduced mortality.


**Typical failures** in handoff communication include the following:

- Medication discrepancies
- A discharge plan that is not communicated in a timely fashion or does not adequately convey important anticipated next steps
- Discharge instructions that are missing, inadequate, incomplete, or illegible
- Poor communication of the care plan to the nursing home team, home health care team, or primary care physician
- Inadequate or missing current and baseline functional status information about the patient that makes it difficult to assess progress and prognosis
- The patient returns home without life-sustaining medication or equipment (e.g., supplemental oxygen or equipment used to suction respiratory secretions)
- Care provided by the facility “unravels” or breaks down once the patient leaves the hospital
- Poor understanding that social support for the patient is lacking once he or she leaves the facility

**Recommended Changes**

3a. Reconcile medications for discharge.

The process of medication reconciliation upon discharge complements the process of medication reconciliation upon admission that is recommended above (see Section One, 1b). However, key differences need to be considered.

i. All medications should be reconciled on discharge by a suitably trained professionals and a detailed record should be part of the handoff report to the next caregivers.

- Consider new information which may be available regarding the patient’s pre-hospital medication regimen that was not evident at the time of admission.
- Revisit medications that have been withheld and decide to restart the medication or stop it.
• Reconcile substitutions from the institution’s formulary and translate back to the original preparations to avoid duplication, medication errors, or unnecessary expense to the patient.

• Ensure the availability of medications upon discharge to the patient, family caregiver, and the next care team.

• Provide patients and caregivers with a clear, updated, reconciled medication list.

• Communicate clearly to the patient, family caregiver, and the next care team about the following:
  o The name of each medication and the reason for taking it;
  o New medications and pre-hospital medications that the patient is to discontinue;
  o Whether there are any recommended changes in the dose or frequency from the pre-hospital instructions;
  o Pre-hospital medications that are to be continued with the same instructions; and
  o Medications and over-the-counter medications that should not be taken.

• Determine whether patients can read their medication labels, afford the necessary medications and food, and whether they can get to the pharmacy.

3b. Provide customized, real-time critical information to the next care provider(s).

When the patient is transitioned out of acute care into other care settings, all providers and other caregivers (e.g., physicians, home care nurses, physician extenders, long-term care and rehabilitation staff, discharge coaches, and informal or family caregivers) on the receiving care team in those settings need timely, clear, and complete information about the patient. Practitioners need an understanding of the patient’s goals, baseline functional status, active medical and behavioral health problems, medication regimen, family or support resources, durable medical equipment needs, and ability and confidence for self-care. Without this critical information, providers may duplicate services, overlook important aspects of the care plan, and convey conflicting information to the patient and informal caregiver.

i. Provide the patient with written information on what to expect once he or she returns home, easy-to-read self-care instructions, reasons to call for help, and the telephone numbers to call for emergent needs and non-emergent questions.

ii. Transmit critical information to the physician and/or home care clinicians (and others involved) at the time of discharge. Critical information should ideally precede or, at a minimum, accompany the patient to the next care location.

iii. Include anticipated important next steps in the transition (discharge) report, including the following concerns about the patient:
   - Ability to Teach Back self-care instructions
   - Ability to weigh daily (including availability of a working scale at home)
   - Ability to maintain a restricted diet
   - Ability to adhere to medications
   - The patient’s “dry weight” (when volume status is optimized) achieved during the hospital stay
   - Access to transportation, food, medications, and co-pay for medications
   - Referrals for services, including what to expect, and when and who to call with questions
iv. Speak with the emergency contact listed on the discharge instructions before or immediately after discharge and provide critical information for the patient’s safety.

v. Establish cross-venue or continuum collaboration:

- Ask the receiving care teams to share or describe their preferred format and mode of communication, as well as specific information needs about the patient’s prior functional status.
- Share patient education materials and education processes (such as Teach Back) across all care settings.
- Develop creative solutions for bi-directional communication and feedback processes, coordination, and greater understanding of patient needs.
- Continually improve by aggregating and incorporating the experience of patients, families, and caregivers in new designs.
- Plan ahead to keep the patient safe and comfortable on the trip home (e.g., providing sufficient pain medication to keep the patient comfortable and filling the needed prescriptions before the trip home to avoid a stop at the pharmacy).

vi. Consider using shared care plans to communicate between patients and health care professionals to support long-term planned care.

4. Post-Acute Care Follow-Up

Conclusions by McAlister and colleagues in a systematic review of randomized trials (2004) note the positive impact of programs involving specialized follow-up by a multidisciplinary team that helped to reduce mortality, HF hospitalizations, and all-cause hospitalizations. Strategies that used telephone contact and advised patients to attend their primary care visit in the event of deterioration reduced HF hospitalizations, but not mortality. In 15 of 18 trials that evaluated cost, multidisciplinary strategies were found to be cost saving.


Typical failures following discharge from the hospital include the following:

- Medication errors
- Poor discharge instructions
- No follow-up appointment
- A follow-up appointment that is scheduled too long after hospitalization
- Poor outpatient HF management
- Lack of social support
- Patient confusion about self-care instructions and medications
- Patient lack of adherence to medications, therapies, and daily weights
- Key therapies not initiated in the hospital


TCAB teams that conducted chart reviews on HF patients readmitted to the hospital found that a high number of patients returned within four days after discharge, yet the follow-up office visit was not scheduled until two weeks post-discharge.

Careful assessment of a HF patient’s risk of unplanned readmission should determine the timing and type of follow-up visit required. Family caregivers should be included in the assessment to help determine at-home support available after discharge. Although a number of risk-
assessment tools are reported in the literature, their use in the complex acute care environment may lead to unreliable application. The chart below lists simple criteria to assess the patient’s risk for readmission.

<table>
<thead>
<tr>
<th>High-Risk Patients</th>
<th>Moderate Risk Patients</th>
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<tbody>
<tr>
<td>a. Patient has been admitted two or more times in the past year</td>
<td>a. Patient has been admitted once in the past year</td>
</tr>
<tr>
<td>b. Patient failed Teach Back, or the patient or family caregiver has a low degree of confidence to carry out self-care at home</td>
<td>b. Patient or family caregiver has moderate degree of confidence to carry out self-care at home</td>
</tr>
</tbody>
</table>

**Recommended Changes**

4a. **High-risk patients:** Prior to discharge, schedule a face-to-face follow-up visit (home care visit, care coordination visit, or physician office visit), to occur within 48 hours after discharge.

4b. **Moderate risk patients:** Prior to discharge, schedule follow-up phone call within 48 hours and schedule a physician office visit within 5 days.
Section Two
This section outlines a practical step-by-step sequence of activities to assist staff in testing and adapting many of the proposed changes described in Section One.

Step 1. Form a Team

Form a core team of five to seven people to oversee work to improve transitions home. Include key stakeholders, including front-line staff. Use other key people who offer special expertise for ad hoc tests. Recruit team members such as:

- Front-Line Nurse
- Nurse Manager
- Physician (e.g., Hospitalist, Primary Care Physician, Geriatrician)
- At least two or three Patients or Family Caregivers
- Pharmacist
- Nursing Clinical Coordinator or Educator
- Case Manager
- Nursing Home or Long-Term Care Representative
- Rehabilitation Medicine Clinician
- Quality Improvement Specialist or Improvement Advisor
- Dietician
- Physical Therapist
- Occupational Therapist
- Respiratory Therapist

Additionally, create sub-teams to work on specific changes simultaneously and to accelerate improvement. For example, one sub-team may work on testing enhanced patient assessment; another small group may test incorporating patient understanding techniques into existing patient education and working with home care agencies to standardize teaching. Coordinate the work between teams, and collect and share results among all staff. For best results, senior leaders should oversee the entire improvement initiative and call on senior executives to overcome barriers. Three white papers (listed below) and other information available on IHI.org will help your team and senior executives build a successful program. Spend time at the outset helping all team members collaborate effectively with patient and family team members.
Step 2. Identify Opportunities for Improvement

Diagnostic tools will help you pinpoint areas that are a priority for improvement.

1. Review and analyze the last 10 HF readmissions.

Identify failures in the current process; prioritize initial changes from the last 10 HF readmissions. The chart review diagnostic tool (Readmission Worksheet) is located on page 41.

Strive to understand why the readmissions occurred.

- Are there trends in the patient population, patient care unit, number and type of medications, or the time lapse between leaving the hospital and the follow-up physician office visit?
- Ask patients and family members why they think the patient returned to the hospital.
- Was an office visit scheduled before the patient left the hospital?
- Were family caregivers involved in critical education?
- Was there a follow-up phone call after discharge?

Aggregate and analyze the data. Speak with patients and family members, clinicians in the community, the home care agency, or nursing home. Inquire about whether and how the admission could have been prevented and what prompted the decision to readmit the patient to
the hospital. Analyze findings to identify where the gaps in care occur to decide where to begin improvement work.

2. **Create a line chart of the 30-day readmission rate of patients with heart failure.**
Collect historic data of readmissions related to heart failure; include heart failure as a primary diagnosis or secondary, tertiary diagnosis. Display readmission rates over time by months. Include at least 12 months of data, preferably more. Data viewed over time helps evaluate whether improvement has occurred. For example, a line chart (see example below) will show trends such as an increase or decrease in readmissions. It may also show if there is a lack of any improvement at all. Continue to display readmission rates in a line chart during the improvement effort to understand if the changes a team makes result in improvement. Periodic review after the implementation of improvements will help ascertain whether the gains are held.

![30-day Readmission Rate for Patients with HF](image)

Step 3. **Develop a clear aim statement for your improvement work.**

1. **Select a subset of patients for initial focus.**
Clearly define and agree on a subset of patients for which you will begin testing changes (for example, HF patients on one unit). Select a patient population based on the chart review of the ten most recent readmissions, and on interviews with the patient and family, physician office, nursing home, and home care agency. This subset should be easy to identify and have high enough volume to encourage testing almost daily. Select a unit where staff are willing to test changes. Initially limit your improvement work to focus on testing changes with these patients or on a single nursing unit. (Selecting and testing changes are described in more detail in Step 6.)
2. Write an aim statement.

Develop a clear aim statement for reducing readmissions of HF patients. The aim should be time-specific and measurable; it should also define the specific population of patients that will be affected. An example aim statement might include: “Reduce unplanned readmissions of patients with heart failure on medical/surgical units, beginning first with 3West, from 15 percent to 5 percent or less by July 4, 2008”; or “By December 2009, patients with heart failure who are discharged from ABC hospital to home health will decrease urgent care visits by 80 percent and hospital admissions to no more than 5 percent per year.” State the aim so everyone easily understands the desired magnitude of change. Articulate the patient group for whom you intend to improve care (i.e., patients with heart failure or patients on a specific medical unit). Include a date as a deadline, the project’s purpose, a population of focus, and name the pilot unit.

Step 4. Create a High-Level Flowchart of the Process

Clarify and agree on the actual discharge process, then create a flowchart of the major steps in the discharge or transition home process.

- Identify all the major steps in the process (the maximum number of steps should be no more than five).
- Identify all care providers and disciplines involved within this part of the process.

For more information on flowcharts, see http://www.ihi.org/IHI/Topics/Improvement/ImprovementMethods/Tools/Flowchart.htm.

Example of a High-Level Flowchart

```
Patient Assessment ➔ Enhanced Learning ➔ Patient-Centered Handoff ➔ Enhanced Follow-up
```

Identify the core processes that need improvement. For example, one team might select the day of admission and create a flowchart to reflect the current activities for identifying and assessing the transition home needs of patients readmitted for heart failure. This includes identifying patients with heart failure by admitting diagnosis or by using BNP lab tests as a trigger to look closely for HF. Then, extend the flowchart. The team asks, “What happens next?” and continues to ask this question to complete the assessment process flowchart. Interview patients, family members, and organizations that transfer patients to the hospital such as nursing homes, rehabilitation centers, the primary care physician, or home health agency. Ask what prompts
readmissions of patients with heart failure and what might prevent hospitalization, for example, whether inadequate education of the patient, family, or providers is resulting in a knowledge shortfall that is suboptimizing care post-discharge.

Focus on a sub-process of the high-level flow chart, for example, patient assessment. A flowchart of the current sub-process should include the typical process as described by the staff that do the work, and indicate who is responsible for each step of the process (see the example below). The first step might begin with a functional status assessment of the HF patient for activities of daily living and a functional independence measure. The next step in the process may include a cognitive status assessment of the patient and family caregiver, followed by a psychological and depression screening of the patient. A preliminary plan that includes the approximate discharge date and location is prepared.

Example Flowchart of the Current HF Patient Assessment Process

Customize this flow chart for your selected high-risk patient population.
Commit to a level of reliability in writing and describe the process you will standardize. For example, “Ninety-five percent of the time patients with heart failure will receive a thorough assessment for transition home needs on the day of admission.” Expect variations in the patient journey, but record the “typical” care (i.e., what happens most of the time). Maintain a patient-centered focus and avoid temptations to fixate on other aspects of care such as administrative processes. Focus primarily on the patient’s care experience throughout the process, and work to prioritize improvements to those aspects of the process. Mapping core processes will stimulate change ideas. Be sure the team discusses the typical process and agrees that it is the current standard process (i.e., the actual process). Next, begin to identify the steps in the process that require redesign in order to establish a process that achieves reliable results (i.e., 95 percent of HF patients receive a thorough assessment for transition home needs on the day of admission). Start with current process failures, where most common defects occur.

In the flowchart example above, failures often occur in the handoff process between steps in the process — for example, between the admit nurse and the social worker, or between the social worker and the discharge planning nurse. These failures produce delays in the preliminary transition plan and result in patients who are not always assessed for depression prior to discharge or delays in discharge to complete the depression screen. (See Section One, 3b for specific changes to improve handoff communication.)

**Step 5. Standardize the Sub-Process and Measure Its Reliability**

To standardize a large, complex process, begin with one sub-process to learn what it takes to move to a high level of reliability. People who know the process best develop the first standardized process. Use small tests of change to modify these standardized processes by using ideas from front-line staff and from process failures identified during testing. Standardization should achieve at least 80 percent reliability of the process; it is sometimes possible to reach 90 percent or higher with this level of process redesign.

Assess whether and how staff executes the standard process for every patient by interviewing five to ten staff members who are involved in the process regularly. Ask staff to describe the aim or goal for preventing unplanned readmissions and the steps in the standard process. Each instance in which the description varies from the defined standard process reveals an opportunity for failure. Notice when the staff say “it depends” during their process description;
ambiguity or variations in the process require subsequent review. Each staff member with a process role should describe in detail exactly what to do at every process step. Clarifying roles and processes leads to standardization and reliable processes. Use staff ideas to conduct small tests of change and eliminate opportunities for failures, or build in ways to catch failures before they reach the patient.


**Step 6. Process Redesign and Testing Changes**

Based on learning from tests in Step 5 (e.g., how to begin the transition home process on the day of admission), the team redesigns the process for greater reliability. To do this, the team must:

- Make process failures visible so that staff involved in the process can immediately mitigate the failures before they reach the patient;
- Take advantage of habits and patterns to allow staff to avoid dependence on memory; and
- Design forcing functions that make the right action the only action possible.

For example, during the admission process part of the transition home assessment includes recording on a white board in the patient’s room the provisional day of discharge and what needs to happen before discharge. This helps the entire care team, including the patient and family, communicate and plan for the day of discharge. Several tests of change may be required to learn the most useful information to post on the white board. One way to take advantage of habits and patterns is for the multidisciplinary team to incorporate updating the white board as part of their daily bedside rounds. A prompt on the rounding worksheet will signal the rounding leader to make sure this happens and makes process failures visible, enabling real-time review of failures and updating of the white board in the patient’s room.

To ensure that changes result in improvement and greater reliability, IHI recommends using the Model for Improvement — a simple, powerful tool for accelerating improvement. The Model for Improvement poses three questions: 1) What are we trying to accomplish? 2) How will we know if a change is an improvement? 3) What changes can we make that will result in improvement? Deming’s Plan-Do-Study-Act (PDSA) cycle is used to inform testing and learning from testing.
small-scale tests of change in order to determine how to make further refinements and improvements to the process, and to create a reliable and safe design. The PDSA cycle conducts small-scale tests of change in real work settings — by planning a test, trying it, observing the results, and acting on what is learned. This is the scientific method used for action-oriented learning and to produce reliable improvement. Both the Model for Improvement and PDSA rapid-cycle testing are grounded in the improvement science of W.A. Shewhart and W.E. Deming.

For more information on the Model for Improvement and on selecting and testing changes, see http://www.ihi.org/IHI/Topics/Improvement/ImprovementMethods/HowToImprove/.

First Tests of Change
Teams conduct small tests of change to start improvement work. With this approach, team members can learn quickly what works or how changes need to be refined before full implementation.

The size and scale of the test is important — be very focused and specific. It should not take much time to plan the test (Plan), implement it (Do), learn what affect it has on the process (Study), refine the test as necessary (Act), and then test the change again on the same scale or expand the scale of the test (the next PDSA cycle). For example, a team might try several approaches to conducting thorough transition home assessments for patients on the day of admission. One test might be to have the admitting team conduct the assessments while admitting the patient. A second test could invite the family and the discharge planning nurse to participate in the admission assessment for transitions home. A third test might be how to incorporate a white board in the patient room and the necessary information to post on the board for the rounding team, patient, and family.

Example of a Small Test of Change Using PDSA Cycles

- **Cycle 1:** One nurse, on one day, with one patient uses Teach Back to evaluate the effectiveness of patient and family caregiver education regarding reasons to call the physician for help after discharge (e.g., weight gain, difficulty breathing, or exhaustion). Following the test is a review of what happened, what went well, and what could be improved.

- **Cycle 2:** The same nurse uses Teach Back with a patient to assess if the video used for education improved the patient’s understanding of self-care.
• **Cycle 3:** The same nurse tests use of the Teach Back method with different patients on one day to learn whether it has broader application, for example, with both younger and older patients.

• **Cycle 4:** A different nurse tests the new Teach Back process with one patient on each day of the patient’s stay to reinforce safety at home after discharge.

Each test should build systematically on the previous test and help move the team closer to achieving the ultimate aim. Multiple test cycles help staff learn what differs among patients and care teams, and to make refinements to changes that will improve the process.

**Measurement and Multiple Tests of Changes**

The second question in the Model for Improvement asks how a team knows if a change is an improvement. The answer requires measurement for learning, both at the process and outcome level. Continue to evaluate and measure unplanned readmissions, along with measures of the reliability of processes the team redesigns. Standardize the processes and measure for reliability to determine whether and how your changes are making a difference. Using rapid-cycle PDSAs for small tests of change will help identify useful process changes that are worth further testing and implementation. It will also help the team adapt and adopt ideas that work and abandon those that don’t.

An example of a series of small tests follows. One hospital team conducted a series of small tests of change with patients on the telemetry unit because many HF patients received care there. Unit staff were interested in testing how incorporating family members in the initial transition home assessment might facilitate the transition home for these patients. A question was added to the admission assessment checklist to ask family members: “Who will assist the patient at home after discharge?” Next the team tested scheduling the follow-up office visit and began using Teach Back to ensure that patients knew when and why to call their physician for help after returning home. Based on their learning from the tests, Teach Back proved to be a useful method for educating HF patients and their family caregivers about self-care and the transition home. Eventually the team included all HF patients, not just those on the telemetry unit, in using daily Teach Back to educate about medications, weighing daily, and reasons to call the physician after returning home.
The team’s learning can be enhanced by providing feedback about defects in the process and anomalies identified during testing. This feedback informs additional testing and creates an iterative system of continuous improvement. Emerging knowledge should be shared liberally and systematically throughout the hospital and health care system. This includes sharing with staff, leaders, customers (patients and families), and medical staff members and their office staff.

**Implementation**

After testing each change on a small scale, learning from each test, and refining the change through several PDSA cycles, the team can implement the change on a broader scale — for example, for an entire pilot population or on an entire unit. Implementation can be more challenging than testing because it requires making the change permanent — such as creating policy and procedure, developing in-service education, and making changes to new hire orientation — and monitoring to ensure the gains are being maintained.

**Step 7. Identify Failures in the Redesigned Standard Processes**

Once assessment of HF patients on admission using a new standardized checklist becomes the standard process, and is executed as intended over 80 percent of the time, move to the next design step to achieve 95 percent process reliability.

- Identify failures in the process and plan to mitigate them before they reach the patient.
  - Build steps to intercept those defects and ensure that the process achieves its aim. Ask staff what gets in the way of doing it right every time.
  - Use human factors tools like decision aids and reminders and build these into the system to establish the desired evidence-based action as the default (the standard).
- Create redundant processes.
  - Take advantage of habits and patterns to identify process flaws and address resulting failures. A common approach is to use redundancies such as double checks. The goal is to achieve 95 percent process reliability.
  - Example: A unit testing improved reliability of medication reconciliation upon admission for HF patients designed a redundant process with a case manager (who was already reviewing charts daily — a habit and pattern). The case
manager identifies unreconciled medications in the chart after admission and when the patient transfers to another unit.

**Step 8. Increase Reliability: Redesign the Process to Eliminate Failure**

When a redesigned process becomes standardized and achieves reliable performance 95 percent or more of the time, review each and every failure with the improvement team. Conduct a unit-based team huddle to learn what happened with a newly readmitted patient with HF. How did the failure occur, and why? What caused the mitigation step to fail? Use what the team learns to improve the design and reliability.

For example, when a key step in a highly reliable process does not occur — such as Teach Back for patient education and handoff communication to convey vital information to the receiving caregiver — gather your team immediately to assess the defect or failure, determine what went wrong, how it happened, and why. Avoid blame and look for system problems instead. Identify and test ideas to remedy the process failure, and feedback results of the redesign to the entire hospital through various established communication networks.

**Step 9. Measure Your Progress and Learn**

Establish key performance measures to identify if a change is an improvement. In this example for creating the ideal transition home for HF patients, measures might include the following:

- Percentage of Congestive Heart Failure Patient Discharges with Readmission Within 30 Days [for more detailed information see: http://www.ihi.org/NR/rdonlyres/708DEB586082453AB26A3391290EC0AD/0/MIFCHFPercentofCongestiveHeartFailurePatientDischargeswithReadmissionWithin30Days.doc]

- Patient and Family Satisfaction with Transition: Percentage of HF patients and family caregivers who rate their satisfaction with discharge planning or the transition home at the highest level

- Receiver Satisfaction with Transition: Percentage of receivers (home health providers, nursing homes, rehabilitation units) who rate their satisfaction with the amount of patient information and patient and family self-activation related to HF patient transitions home at the highest level
• Teach Back Patient Education Success: Percentage of time HF patients can Teach Back 75 percent or more of the content related to the transition home and self-management of heart failure

Develop process measures based on specific improvements. For example, a team working on scheduling physician visits prior to discharge may measure the number of HF patients discharged in a month who have a physician office visit scheduled prior to discharge that will occur within two days after discharge.

Data provides an opportunity to confirm whether a change resulted in improvement. Measures should be sensitive enough to reflect this. The purpose of testing, measurement, and review of data is to constantly learn and increase knowledge, and to use this knowledge to refine the process. Plotting data over time is a simple and effective way to determine whether the changes you are making are leading to improvement. Annotate run charts with interventions and tests conducted by the team.

Share data with unit and medical staff, as well as with senior leaders. Data reinforces positive change, shows results, and can inspire a group to achieve even better results. Reflect on learning from both successful and failed tests. Develop habits of challenging assumptions and use stories with staff that reflect learning from the project.

**Step 10. Spread the Reliable Design and Processes**

Quickly spread what is learned from the initial tests on the pilot unit to other shifts. Make any changes part of the standard unit operation. Some hospitals use a team project communication board while others use email or staff newsletters to disseminate the process changes.

Identify the most frequent failures and redesign the process to eliminate the potential for future similar failures. Once the changes have been successfully implemented for all shifts on the pilot unit, spread the pilot unit learning to other hospital units that care for patients with HF. The entire organization learns from the work of the improvement team.

Section Three
This section includes tools, resources, practical real-world tips, and examples from hospitals for each of the four key changes of an ideal transition home described above. Three case studies of hospitals that have implemented many of the changes proposed in this guide are also included.

1. Enhanced Admission Assessment for Post-Discharge Needs

Tips
1. Collaborate with patients and family caregivers to co-design improvements in patient assessment for discharge. Use stories of the “old way” of working with patients and the “new way” to help staff imagine or simulate the enhanced process. Example:
   - In our “old way” patients are asked during admission assessment whether they have family assistance at home, assistive devices, oxygen, and whether they think they can manage self-care at home.
   - In our “new way” patients and their family caregivers are part of the assessment for discharge discussion where they identify needs and resources at home; who will provide assistive care and transportation to the first physician office visit; how they learn best and their learning priorities. Patient and family members participate in all discharge planning, including multidisciplinary rounds. The expected discharge date and planning needs are listed on the communication white board in the patient’s room. All clinicians, the patient, and their family list their needs and questions on the white board daily.
2. More ideas on using stories to illustrate how we can engage patients and families as partners are illustrated in Patients as Partners: Toolkit for Implementing National Patient Safety Goal 13 (Chicago: Joint Commission Resources; 2007).
3. Complete a review of 20 readmitted patients with heart failure as described in Section 2. The readmission worksheet is located in the tools section on page 41 below.
4. Invite the patient and designated family caregivers to HF classes and clinics and involve them in multidisciplinary rounds at the patient’s bedside.
5. Add discharge planning to the agenda of all multidisciplinary rounds to ensure the process of discharge flows continuously.
6. Use the Blaylock Discharge Planning/Risk Assessment Screening to identify patients with special needs following discharge (see Tools and Resources below).
7. Predict the day of discharge on the day of admission and include the initial discharge plans in the plan of care.

8. Use a Journey Home or Ticket Home white board to communicate with the patient, care team, and family caregivers to highlight checklists of specific patient needs for a smooth transition home (see Tools and Resources below).

9. Review all BNP tests daily as a trigger to look closer for undiagnosed HF.

10. Assign the role of discharge advocate to all nurses planning HF discharges.

11. Provide a cardiologist consultation as needed to nurses planning the discharge for HF patients.

12. ThedaCare uses an Admission Process called “The MD, RN, and Pharmacist: The Trio”:
   - Observations of trials by the trio demonstrated:
     - Interdisciplinary collaboration and teamwork
     - Proactive involvement of RN and Pharmacist
     - Reduction in rework
     - Patient involvement
   - Reduction in cycle time achieved:
     - From 5 to 12 hours down to 45 to 90 minutes
     - Admission cart with laptop and supplies eliminated the need to leave the room
   - Improved quality of assessment
     - 288 items reduced to 135 of the “right” items
       - 78 duplicate items eliminated
       - Documentation of assessment in one place from 4 places

**Tools and Resources**

*Ticket Home White Board*

The Ticket Home (or Journey Home) white board is placed in each patient’s room and captures important information about the patient’s progress on specific requirements for leaving the hospital, as well as the preliminary discharge date and time. The white board is used as a communication tool for all caregivers and the patient and family. An example is included below and more information is available at:

http://www.ihi.org/IHI/Topics/MedicalSurgicalCare/MedicalSurgicalCareGeneral/ImprovementStories/ShesGotaTicketToGoHome.htm.
Blaylock Discharge Planning/Risk Assessment Screening Tool

The Blaylock tool (used by United Hospital in St. Paul, Minnesota) assesses each client’s needs and derives an aggregate score of risk.
Readmission Worksheet

This tool is used to identify opportunities to improve the discharge process and reduce unnecessary readmissions. Instructions are described in Step 2 and specific details of chart selection and chart review instructions are included on page 41.
Readmission Worksheet

**INTERVIEW THE PATIENT:**
What did the patient or family think contributed to this readmission? 

Are there any self-care instructions that may have been misunderstood?

Can the patient teach back 3 critical self-care instructions?

Did the patient have a physician visit scheduled after discharge?

When was the last doctor’s appointment?

**INTERVIEW THE PHYSICIAN or NURSE (OFFICE, CLINIC, HOME CARE, NURSING HOME):**
What contributing causes are known for the patient’s readmission? Would you have predicted a readmission on this patient?

**REVIEW THE CHARTS OF THIS AND THE PREVIOUS ADMISSION (30 days or less between admissions)**
Note the number of days between the previous discharge and this readmission date:
Did patient have a follow-up physician visit scheduled?  
Were there any urgent clinic/Ed visits?

The Previous Admission:
When discharged from previous admission, the patient went:  
- Home  
- Home w/ Homecare  
- Nursing Home  
- Other: 

Functional status of the patient on discharge:  
- Fully Dependent  
- Somewhat Dependent  
- Independent  

Was a clear discharge plan documented?  
Does documentation exist for appropriate patient education?  
Was there evidence of Teach Back (checking patient understanding or recall)?

This Readmission:
Admission was related to previous admission (above)  

Note Reason(s) for readmission:

**Category of Readmission**
- Foreseen or planned; chemo- or radiation therapy, treatment follow-up, planned surgery, etc.
- Unforeseen caused by a new problem
- Unforeseen related to problems in the previous admission

**Potential Hospital Problems:** Care given in the hospital was either directly or indirectly responsible for the readmission  
Example: Post operative infection causing the readmission

**Potential Outpatient Problems:** Caused or contributed to by the environment into which the patient was discharged  
Example: Patient went home and had much poorer social support than indicated by the patient during discharge planning

Notes on any opportunities or circumstances of the patient that may help determine reasons for this readmission:

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This form and documentation contained herein are not completed pursuant to this committee’s Peer Review Policy. The provider completing this form is doing so as part of the committee for the purpose of reviewing the committee to improve the provision of health care. It is noted that this form, any accompanying documentation, minutes, originating documents, records of investigation, medical procedure or conclusion by this committee will be privileged to the fullest extent under Wisconsin Statute Sections 632.32 and 632.34, any amendment thereof, and any applicable federal or state statutory peer review.
# Readmitted Patients Chart Selection and Chart Review Instructions

<table>
<thead>
<tr>
<th><strong>Purpose</strong></th>
<th>The goal is to determine why readmissions occur in order to test changes to eliminate failures in the discharge process.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Peer Review</strong></td>
<td>Note that there is a peer review protection note on the form that you can borrow or use your own.</td>
</tr>
<tr>
<td><strong>Reviewers</strong></td>
<td>Reviewers should be physicians or nurses experienced in the clinical setting and chart review for quality and safety.</td>
</tr>
<tr>
<td><strong>Reviewer Frame of Mind</strong></td>
<td>Reviewing these charts is intended to identify opportunities to improve processes and the quality of care by flagging safety issues, avoiding future unnecessary readmissions and potentially avoiding future adverse events. The intent is not to place blame on any individuals.</td>
</tr>
<tr>
<td><strong>Instructions</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Chart Selection:</strong></td>
<td>Select HF patients (in your area of focus for Transitions &quot;Home&quot;) who have been readmitted (for any cause) following a previous admission for HF. Indicate &quot;yes&quot; or &quot;no&quot; on whether the admission is related to the previous admission. Review all readmissions beginning with today's date and working backward until you reach the desired sample size.</td>
</tr>
<tr>
<td><strong>Sample Size:</strong></td>
<td>Review 10 charts as a diagnostic and then continue to review every readmission in your specified subset of the population. Note: Choose as many current readmissions (patients are still in the hospital) as possible in order to interview the patient (and family) to ask what they think contributed to the unplanned readmission.</td>
</tr>
<tr>
<td><strong>Chart Reviews</strong></td>
<td>Using the chart review tool attached to this file, look through the chart for the items listed on the tool and anything else that suggests something that might have contributed to the patient's unplanned return to hospital.</td>
</tr>
</tbody>
</table>
| **Potential Hospital Problems:** | Problems seen in care or care delivery systems in the hospital that either directly or indirectly contributed to the readmission.  
- Example: Patient misunderstood instructions given in the hospital for weighing daily and waited too long to call the physician; no Teach Back used.  
- Example: Exacerbation of the patient's condition on the day of discharge was not recognized in hospital; patient was discharged home. |
| **Potential Outpatient Problems:** | Problems seen in the environment into which the patient was discharged.  
- Example: Patient did not continue to weigh daily and failed to keep the post-discharge physician office visit (lack of transportation).  
- Example: Patient went home and had much poorer social support than described by the patient and family during the index admission. |
| **Patient Interviews** | Interview the patient to clarify the reason for readmission. Those using this tool so far have found a number of cases where the environment to which the patient was discharged was not sufficiently supportive or understood when the patient assessment was conducted. Recently we have added questions to clarify what the patient understood at discharge. It is helpful for reviewers to have the patient teaching materials in hand during the interview in order to attempt to determine what the patient thinks he/she understood at the index discharge. |
| **Findings** | What did you learn? What surprised you? What new questions do you have? |
Discharge Criteria for Patients with HF*

<table>
<thead>
<tr>
<th>Recommended for all HF patients</th>
<th>Should be considered for patients with advanced HF or recurrent admissions for HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Exacerbating factors addressed</td>
<td>• Oral medication regimen stable for 24 hours</td>
</tr>
<tr>
<td>• At least near optimal volume status achieved</td>
<td>• No intravenous vasodilator or inotropic agent for 24 hours</td>
</tr>
<tr>
<td>• Transition from intravenous to oral diuretic successfully completed</td>
<td>• Ambulation before discharge to assess functional capacity after therapy</td>
</tr>
<tr>
<td>• Patient and family education completed</td>
<td>• Plans for post-discharge management (scale present in home, visiting nurse or telephone follow-up generally no longer than 3 days after discharge)</td>
</tr>
<tr>
<td>• At least near optimal pharmacologic therapy achieved</td>
<td>• Referral for disease management</td>
</tr>
<tr>
<td>• Follow-up clinic visit scheduled, usually 7–10 days post-discharge</td>
<td></td>
</tr>
</tbody>
</table>


2. Enhanced Teaching and Learning

Tips

1. Identify the patient’s actual family caregivers during multidisciplinary rounds by asking who will be helping with care in the home.

2. Standardize HF teaching materials and use of Teach Back across all care settings.

3. Use easy-to-understand teaching materials in multiple delivery methods such as written, visual (videos), audio (media and phone recordings), and face-to-face discussion.

   • Use health literacy principles to simplify and clarify education materials (e.g., use colors such as green, yellow, and red to signify critical information for patients).

   • Engage patients and families in critiquing and improving the clarity and usefulness of written and other educational materials, as well as the education process itself in all care settings (hospital, physician offices, outpatient heart failure and cardiac rehabilitation clinics).
Check with local community care clinics about their simple and effective education materials.

Use simulation or a training video to educate staff on how to use the Teach Back method to build their confidence and skills in enhancing patient education.

Draw on the example from the airline industry that has changed in-flight safety brochures to eliminate written words in favor of simple pictorial images.

4. Use Teach Back not just once but every day to identify what patients and family caregivers understand about the critical information they need after discharge for a successful transition home.

Use refrigerator magnets as a reminder of critical information and who to contact with questions or concerns. Begin in the hospital to help patients plan where the magnet will be placed at home.

Use post-discharge follow-up calls to ask where the magnet is located in the house, further reinforcing the importance of ease of access to critical information.

Have Advanced Practice Nurses who coordinate HF care in the hospital conduct the follow-up phone calls to ensure continuity of care.

Provide patients with a binder containing all critical progress, treatment, medication, and teaching information. Encourage them to bring the binder to subsequent hospitalizations to assist with continuity and reinforcement of education.

Use “agenda-setting question cards” to help patients feel comfortable speaking up and asking questions (see Tools and Resources below). An example is included in Case Study 2 below.
Tools and Resources

**Essential Elements of Patient Education with Associated Skills and Target Behaviors**

<table>
<thead>
<tr>
<th><strong>Elements of Education</strong></th>
<th><strong>Skill Building and Critical Target Behaviors</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition of HF (linking disease, symptoms, and treatment) and cause of patient’s HF</td>
<td>• Discuss basic HF information, cause of patient’s HF, and how symptoms are related</td>
</tr>
<tr>
<td>Recognition of escalating symptoms and selection of appropriate treatments in response to particular symptoms</td>
<td>• Monitor for specific signs and symptoms (e.g., increasing fatigue doing usual activities, increasing shortness of breath with activity, shortness of breath at rest, need to sleep with increasing number of pillows, waking at night with shortness of breath, edema) • Perform and document daily weights • Develop action plan for how and when to notify the provider • Institute flexible diuretic regimen, if appropriate</td>
</tr>
<tr>
<td>Indications and use of each medication</td>
<td>• Reiterate medication dosing schedule, basic reason for specific medications, and what to do if a dose is missed</td>
</tr>
<tr>
<td>Importance of risk factor modification</td>
<td>• Plan for smoking cessation • State blood pressure goal and know blood pressure from recent measurement • Maintain normal HgA1c, if diabetic • Maintain specific body weight • Reiterate recommended sodium intake • Demonstrate how to read a food label to check sodium amount per serving and sort foods into high- and low-sodium groups</td>
</tr>
<tr>
<td>Specific diet recommendations: individualized low-sodium diet; recommendation for alcohol intake</td>
<td>• Reiterate limits for alcohol consumption or need for abstinence if history of alcohol abuse</td>
</tr>
<tr>
<td>Specific activity/exercise recommendations</td>
<td>• Reiterate goals for exercise and plan for achieving</td>
</tr>
<tr>
<td>Importance of treatment adherence and behavioral strategies to promote</td>
<td>• Reiterate ways to increase activity level • Plan and use a medication system that promotes routine adherence • Plan for refills</td>
</tr>
</tbody>
</table>


**Adult Literacy Estimates**

Review your local population data on low and basic adult health literacy. Data is available from the National Adult Literacy Survey (NALS) at [https://www.casas.org/lit/litcode/Search.cfm](https://www.casas.org/lit/litcode/Search.cfm).
University of North Carolina at Chapel Hill Simplified HF Patient Teaching Materials
The “Managing Your Health with Heart Failure” teaching materials include explicit images and clear, health literate language. Available at http://www.hsl.unc.edu/Services/Guides/focusonhealthlit.cfm

Boston Medical Center Project RED
The Project RED (Re-Engineered Discharge) initiative is attempting to improve the workflow process and safety for patients discharged from a community health center. The intervention provides a set of 11 discrete components provided by a Discharge Advocate and re-enforced by a telephone call after discharge by a clinical pharmacist. Available at http://www.bu.edu/fammed/projectred/index.html.

Ask Me 3
Ask Me 3 is a communication tool using three simple but essential questions that patients should ask their providers in every health care interaction. Materials are available from the Partnership for Clear Health Communication, which offers free posters and brochures in English and Spanish. Available at http://www.askme3.org.

Agenda-Setting Communication Cards
This communication tool was designed in the UK in collaboration with diabetic patients to help empower patients to set the agenda in health care discussions. Each card presents a common issue faced by patients with diabetes (e.g., managing exercise, healthy lifestyle choices, monitoring vital measures, etc.). The patient selects six to eight cards that represent the issues of most priority, and these cards are then used to guide the discussion with the provider during the patient visit. One TCAB hospital has creatively adapted the agenda-setting cards for use with CHF patients and is using them for discharge communication (see page 68). More information on the cards is available at http://www.design-council.org.uk/en/Case-Studies/All-Case-Studies/RED---Diabetes-/.
3. Patient and Family-Centered Handoff Communication

Tips

1. On discharge, provide the patient and family caregiver with a copy of the most recent medication list from the health record and indicate next to each medication whether it is to be stopped or continued. Instructions for how medications should be taken must be clearly stated. Concurrently, convert intravenous medications to oral medications.

2. Add continuity questions to interdisciplinary team rounds’ patient care plans:
   - Where will the patient likely go after discharge?
   - Who will be providing the care — is this likely to be adequate or does the patient require a higher intensity of care?
   - What are the patient’s needs after discharge?
   - What are the potential discharge barriers?

3. Provide the patient and family caregiver with a card or keyring that provides the contact name and phone number of the discharging unit or nurse to call with questions. Encourage patients and family to call the unit should questions arise after returning home.

4. Collect and track the questions patients ask when calling the hospital after discharge to gain insight on how discharge efforts might be improved.

5. Partner with primary care and specialty practices to do the following:
   - Schedule the post-hospital follow-up office visit prior to discharge.
   - Enable discharge summaries to reach the physicians’ offices within one day of the patient’s discharge.
   - Learn whether physicians get clearly articulated, timely patient information in the handoff from the hospital; whether the information and mode of information meet their needs; and whether they have sufficient opportunity to clarify patient information.
   - Establish a relationship with a cardiology group to provide nurses with easy access to a cardiologist for questions on management concerns and on distinguishing heart failure from other disorders.
   - Consider developing and testing protocols and guidelines for those HF patients who can learn and practice self-titration of medications (e.g., diuretics).
   - Redesign the handoff communication process for information that is most critical to the care of HF patients following discharge. Receiving physicians may need a brief
summary in addition to patient records and test results. For example, use SBAR (see Tools and Resources below) or other scripting to help focus on what happened and what’s critical for the physician to know. Copies of the patient chart can be attached with a simple summary.

- Design checklists that assist physicians and staff in hospitals and physician offices to manage complex care protocols and processes.
- Provide information to physicians on how their readmission rates compare to others and encourage dialogue about changes that can be implemented to improve care.

6. Partner with home care agencies, visiting nurses, and skilled nursing facilities to clarify patient assessment and redesign handoff communication tools, forms, and processes.

- Ask a liaison from the home health care agency to attend interdisciplinary team discharge planning on select patients that have been referred to and have agreed to work with that particular agency. This approach fosters better communication with an opportunity for bi-directional communication and potentially a better match between the patient’s needs and the services an agency is able to provide.
- Allocate modest time (e.g., two hours) for the hospital team to visit the skilled nursing facility team on site and vice versa. Affectionately referred to as “welcome to my world day,” this activity fosters greater mutual understanding for the constraints each set of professionals operate under; recognizes that the patients are transferring to dedicated and caring professionals and not merely faceless institutions; and also encourages greater cross-setting communication at an interpersonal level.
- Provide the receiving nursing home with a patient education packet along with the standardized interagency transfer forms.
- Consider providing complementary home visits for CHF patients who might be at risk for readmission but do not typically qualify for home care. Additional considerations may be discovered through these visits that qualify these patient for home care.
- Partner with home care services to use common education methods and materials, and to improve channels of communication across settings.
- Create a reciprocal arrangement where hospital staff inform the home health care agency team when the patient is discharged and, conversely, the home health care agency informs the hospital when HF patients are readmitted to hospital.
- When patients are referred to a home care agency, send copies of the patient educational materials to both the patient and the home care staff.
Tools and Resources

Core Functions for Meeting the Needs of Patients in Transition

Developed by the HMO Care Management Workgroup and stemming from their 2004 report, “One Patient, Many Places: Managing Health Care Transitions,” the table below represents a framework for ensuring timely and effective handoff communication. The Workgroup comprised operations leaders from exemplar health care organizations.

<table>
<thead>
<tr>
<th>Both the Sending and Receiving Care Teams Are Expected To:</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Shift their perspective from the concept of a patient discharge to that of a patient transfer with continuous management.</td>
</tr>
<tr>
<td>▪ Begin planning for a transfer to the next care setting upon or before a patient’s admission.</td>
</tr>
<tr>
<td>▪ Elicit patient and caregiver preferences and incorporate these preferences into the care plan, where appropriate.</td>
</tr>
<tr>
<td>▪ Identify a patient’s system of social support and baseline level of function (i.e., how will this patient care for him or herself after discharge?).</td>
</tr>
<tr>
<td>▪ Communicate and collaborate with practitioners across settings to formulate and execute a common care plan.</td>
</tr>
<tr>
<td>▪ Use the preferred mode of communication (i.e., telephone, fax, email) of collaborators in other settings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Sending Health Care Team Is Expected to Ensure That:</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ The patient is stable enough to be transferred to the next care setting.</td>
</tr>
<tr>
<td>▪ The patient and caregiver understand the purpose of the transfer.</td>
</tr>
<tr>
<td>▪ The receiving institution is capable of and prepared to meet the patient’s needs.</td>
</tr>
<tr>
<td>▪ All relevant sections of the transfer information form are complete.</td>
</tr>
<tr>
<td>▪ The care plan, orders, and a clinical summary precede the patient’s arrival to the next care setting. The discharge summary should include the patient’s baseline functional status (both physical and cognitive) and recommendations from other professionals involved in the patient’s care.</td>
</tr>
<tr>
<td>▪ The patient has a timely follow-up appointment with an appropriate health care professional.</td>
</tr>
<tr>
<td>▪ A member of the sending health care team is available to the patient, caregiver, and receiving health care team for 72 hours after the transfer to discuss any concerns regarding the care plan.</td>
</tr>
<tr>
<td>▪ The patient and family understand their health care benefits and coverage as they pertain to the transfer.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Receiving Health Care Team Is Expected to Ensure That:</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ The transfer forms, clinical summary, discharge summary, and physician’s orders are reviewed prior to or upon the patient’s arrival.</td>
</tr>
<tr>
<td>▪ The patient’s goals and preferences are incorporated into the care plan.</td>
</tr>
<tr>
<td>▪ Discrepancies or confusion regarding the care plan, the patient’s status, or the patient’s medications are clarified with the sending health care team.</td>
</tr>
</tbody>
</table>

IOM “Safe Practices” List of Items for Handoff

SBAR Communication Tools
SBAR (Situation-Background-Assessment-Recommendation) is a critical communication tool that structures concise information exchange. SBAR offers a simple way to help standardize communication and allows parties to have common expectations related to what is to be communicated and how the communication is structured. Available at http://www.ihi.org/IHI/Topics/PatientSafety/SafetyGeneral/Tools/SBARToolkit.htm.

Prevent Adverse Drug Events (Medication Reconciliation) How-to Guide
This How-to Guide developed as part of IHI’s 5 Million Lives Campaign explains how to prevent adverse drug events (ADEs) by implementing medication reconciliation at all transitions in care — at admission, transfer, and discharge. Available at http://www.ihi.org/nr/rdonlyres/98096387-c903-4252-8276-5bfc181c0c7f/0/adehowtoguide.doc.

CTM-3 Patient Interview Tool
Under the leadership of Dr. Eric Coleman, the University of Colorado at Denver and Health Sciences Center 3-Item Care Transition Measure (CTM-3) discovers how patients and family caregivers experience discharge procedures in the hospital and assesses whether the patients might be readmitted. The Care Transitions Program website is an excellent resource for learning more about patient and family needs during transitions in care. More information is available at http://www.caretransitions.org. A copy of the interview tool appears on pages 51-53.
Diagnostic Interviews

Interview all readmitted patients on the pilot unit for one week using the following questions. (Note: At least 10 patients; if you have too few patients with HF, include other patients with chronic care diagnoses and unplanned readmissions.) Patients with negative findings on the CTM-3 (Q2 & Q3) need intervention to prevent readmission; please record any interventions implemented.

**CARE TRANSITIONS MEASURE (CTM-3)
QUESTIONS FOR READMITTED PATIENTS**

Patient Name: ________________________________ Date: ______________

1. The hospital staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know/Don’t Remember/Not Applicable</th>
</tr>
</thead>
</table>

2. When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know/Don’t Remember/Not Applicable</th>
</tr>
</thead>
</table>

3. When I left the hospital, I clearly understood the purpose for taking each of my medications.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know/Don’t Remember/Not Applicable</th>
</tr>
</thead>
</table>

4. What do you think caused you to end up back in the hospital? _______________________
________________________________________________________________________________
________________________________________________________________________________

5. Did you see a physician in his/her office before you came back to the hospital?

   Yes___ No___ Comments______________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

6. If yes, which physician did you see?_____________________________________________

7. Describe any difficulties scheduling or getting to that visit?
________________________________________________________________________________
________________________________________________________________________________
### Patient Satisfaction with Communication:
For the last 3 or 6 months, what were the scores for the communication questions on your patient satisfaction survey for the pilot unit? Press Ganey examples:

- Extent to which you felt ready to be discharged
- Speed of discharge process after you were told you could go home from hospital
- Instructions given about how to care for yourself at home
- Help with arranging home care services (if needed)

### Partnership Surveys for Home Care or Nursing Home Services and Physicians’ Offices:
To learn about problems patients encounter after discharge from your unit, interview a nurse, physician or manager and complete this brief survey:

- Handoff information from our hospital to your facility is accurate
- Handoff information from our hospital to your facility is timely
- Handoff information from our hospital to your facility is useful
- Information critical to understanding patient’s condition is effectively communicated
- Care plans are known to patients being transferred from this hospital

What do you need from us that would help you more?

What are we doing now that helps you most?

Is there an existing partnership with this facility or office?

### Root Cause Analyses (RCAs):
Describe the findings from any RCAs completed in the past two years on a failure in the discharge process.
**Medication Reconciliation**: What is the reconciliation rate for the pilot unit?

Calculation definition:
Numerator: Number of charts reconciled on admission, transfer, or discharge
Denominator: Number of charts reviewed

<table>
<thead>
<tr>
<th>Reconciliation</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission</td>
<td>_______________</td>
</tr>
<tr>
<td>Transfer</td>
<td>_______________</td>
</tr>
<tr>
<td>Discharge</td>
<td>_______________</td>
</tr>
<tr>
<td>Completed</td>
<td>_______________</td>
</tr>
</tbody>
</table>

If the medication reconciliation rates for your unit are not known, complete the data collection during the readmission chart review process.

Adverse drug event rate: ________________

If the ADE rate for your units are not known, complete the data collection during the readmission chart review process.


http://www.ihi.org/NR/rdonlyres/98096387-C903-4252-8276-5BFC181C0C7F/0/ADEHowtoGuide.doc
4. Post-Acute Care Follow-Up

Tips
1. Establish follow-up phone calls to patients within 24 to 48 hours after discharge as a permanent part of the discharge process. Calls can be conducted by various caregivers such as Advanced Practice HF Nurses, a call center, a case manager, or the nurse who cared for the patient while in the hospital.

2. Make physician appointments for high-risk heart failure patients within 48 hours of discharge. Follow-up appointments for patients with lower risk patients can be scheduled within 1 to 2 weeks based on patients’ needs.

3. Provide hospital unit clerks with a script to schedule office visits based on pre-established criteria to ensure standardization.

4. Schedule and conduct scripted follow-up phone calls to verify (using Teach Back) that the patient recalls why, when, and how to recognize worsening symptoms, and when and who to call for help.

5. Use the follow-up calls to confirm that the patient will keep the physician appointment and to verify if the patient understands the medications and other critical elements of self-care.

6. Provide scripting to nurses and others who make follow-up calls.

7. Develop outreach mechanisms to local nursing homes to improve diuretic management and diet for patients with HF.

8. Survey patients and families to learn how to improve transitions for patients discharged to nursing homes.

9. Collaboratively create and update a care plan with the patient and family caregivers, specialty and primary care physicians, home health care, palliative care, and others engaged in multidisciplinary care of heart failure patients. Critical components of the care plan include a list of care team members and contact information; information supplied by the patient; diagnoses; next steps; health log; medications, reactions and history; and advanced care directives.
Tools and Resources

**Patient-Powered Care Plans**


**The Care Transitions ProgramSM: Transitions Coach**

A “Transitions Coach” assists patients with learning self-management skills and ensures their needs are met during the transition from hospital to home. More information is available at [http://www.caretransitions.org/care_program.asp](http://www.caretransitions.org/care_program.asp).

**Advanced Practice Nurse-Driven Transitional Care**

This article describes an Advanced Practice Nurse (APN) implementation of an evidence-based protocol, guided by national heart failure guidelines and designed especially for this patient care group and their caregivers.


**Guided Care**

**Medicine Management Tool**

Name: ___________________________  Date: ___________________________

**MANAGING YOUR MEDICINES**

Many people need help in managing their medicines. One of our goals in home care is to help you understand the purpose of your medicines and how to take them correctly.

You can help your home care nurse or therapist understand the type of help you might need by completing the table below.

<table>
<thead>
<tr>
<th>Place a ☑ in the box if the statement applies to you</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have new medicines.</td>
</tr>
<tr>
<td>I have changed medicines.</td>
</tr>
<tr>
<td>I don’t understand the instructions related to my medications.</td>
</tr>
<tr>
<td>I am not sure how my medicines help my condition.</td>
</tr>
<tr>
<td>I don’t think that my medicines help me.</td>
</tr>
<tr>
<td>I am concerned about side effects.</td>
</tr>
<tr>
<td>I don’t always remember to take my medicines at the right time.</td>
</tr>
<tr>
<td>I have trouble reading or seeing small print instructions on medicine bottles.</td>
</tr>
<tr>
<td>I have trouble holding the small pills or opening the packaging or the medicine bottles.</td>
</tr>
<tr>
<td>I have trouble paying for my medicines.</td>
</tr>
</tbody>
</table>

Please write down any other concerns you may have:

_____________________________________________________________________________
Exemplar Case Studies: Promising Results

Case Study 1:
St. Luke’s Hospital (Cedar Rapids, Iowa) — Senior Affiliate of Iowa Health System

Aim Statement
By January 1, 2007, St. Luke’s Hospital’s Telemetry Unit and Medical Unit will reduce unplanned readmissions by 50 percent (from 12 percent to 6 percent) by improving the transition home process for all heart failure patients.

Methodology
Include the patient and caregiver — ensuring that they fully understand the diagnosis, plan of care, and follow-up care with the physician.

Results
Readmissions of Patients with HF within 30 Days as a Percentage of Patients Discharged

Changes Tested and Implemented
For 10 years prior to joining TCAB’s innovation project on designing the ideal transition home, St. Luke’s Hospital nursing units scheduled the HF patient’s follow-up physician visit before discharge. In March 2006, St. Luke’s began testing working with TCAB teams on the ideal discharge process, and in August major tests of change were underway in their discharge process as described below.
1. Home care nurses (VNA) provide complementary visits within 24 to 48 hours after discharge.

The hospital partnered with its home health care agency to provide HF patients who do not qualify for home care, but for whom discharging nurses have reasons for concern, with complementary post-hospital home assessment visits within 24 to 48 hours after discharge. This process has benefited patients through greater support and education. The home health care agency has recognized that even with a thorough discharge assessment, patients with HF can be discharged without a home care referral but may otherwise be eligible. The home visit provides additional reinforcement and also can provide a good in-home assessment to determine adherence to self-care regimen or need for further home care services. Visiting Nurse Association (VNA) visits were tested and implemented for patients in 24 to 48 hours after discharge (with a goal of 24 hours). The visits use Teach Back to verify patient understanding of care instructions. These complementary visits are paid for by the joint effort of the hospital and VNA. Tests of this process change began in November 2006 and were hardwired for all patients in January 2007.

2. Partnership with physician offices resulted in the redesign of scheduling follow-up visits within 3 to 5 days for all HF patients.

- Two internal medicine clinics and a cardiology group are now scheduling the follow-up appointment for all HF patients 3 to 5 days after discharge. The scheduling is occurring approximately 80 percent of the time and includes 80 percent to 90 percent of the hospital’s HF population.
- The goal for high-risk patients (particularly any patient that has a readmission) is to have an office visit within 3 days; and the goal for other patients is to have an office visit within 4 days (current actual is 3 to 5 days).

3. Advanced Practice Nurse follow-up phone calls on the seventh day after patient discharge were added in March 2007.

An Advanced Practice Nurse (APN) was added to the continuity program. She sees the patient while in the hospital, calls the patient on the seventh day post-discharge and uses Teach Back to determine patient or family caregiver understanding of critical self-care instructions.
4. In August 2006, patient education processes and materials were revised to incorporate health literacy concepts for written materials, Teach Back, and involvement of patients and families. The patient education material provides the framework needed to utilize Teach Back in the hospital, and in the home care or long-term care settings.

- Written materials were redesigned with plain language, use of color, and only “need to know” concepts that patients can understand and recall.
- Teach Back (see Section One, 2c above), the process of asking patients to recall and restate in their own words what they have been taught, was incorporated at the patient’s bedside, in the 24 to 48 hours post-discharge follow-up visit by the VNA, and in the seven-day post-discharge phone call to the patient by the APN.
  - Currently, the Teach Back rate of correct patient responses is greater than 80 percent. (The follow-up phone calls Teach Back study began in August 2006; VNA Teach Back started in March 2007.)

![Graph showing Teach Back rates]

- Teach Back questions:
  - What is the name of your “water pill”?
  - What weight gain should you report to your doctor?
  - What foods should you avoid?
  - Do you know what symptoms to report to your doctor?
- Teach Back is also used to identify failures in helping patients understand weight gain and symptoms for which the patient should call the physician. The graph below...
reports the percent of symptoms patients could recall and restate from what they had been taught. Staff used patients’ failed Teach Back responses to improve teaching methods.

The team tested and implemented VNA nurses’ use of Teach Back techniques for patient and family caregiver education. Nurses ask patients where the critical information magnet (see tool below) is located in the house to discover whether the patients can quickly find the reminders about when and why they should contact their physician for help and whom to call.

The HF team improved patient and family involvement using focus groups with their caregivers, and by working with the attendees at the monthly HF class. This process elicited insights into the best presentation of information for patient understanding.

5. Patient satisfaction with discharge instructions improved based on patient responses about unanswered questions.
Information was obtained during the seven-day follow-up phone call from the APN. The questions asked are “Do you have any questions about your discharge instructions?” and “Did they meet your needs?”

6. Medication reconciliation improved through greater compliance with discharge instructions. A year ago the compliance rate was 75 percent to 88 percent. In the last six months the compliance rate is around 94 percent, with the last three months at 100 percent.

7. The hospital partnered with its own home care agency and two long-term care facilities to standardize and enhance the quality of the handoff communication process.
   - Provided education for home care and long-term care RNs and CNAs on HF, continuity processes, and the HF education tools. CNAs often observe symptoms while spending time with patients.
   - The HF Advanced Practice Nurse (APN) and Cardiac Rehabilitation nurse continue to visit other long-term facilities in the community to provide HF education to their staffs.
   - Provided the receiving nursing home facilities with the patient education packet and standardized interagency transfer form.

8. The hospital recently appointed a medical director for heart failure who will work closely with the APN and HF team to review care processes. He will also work with the medical staff to emphasize utilization of order sets and improved handoffs.

9. In October 2007 a reminder to use Teach Back was added to standard HF admission and discharge order sets.

10. In August 2007 review of a readmitted patient helped staff realize the need for referral to Palliative Care for patients with advanced stages of HF; going forward criteria for referral will continue to be tested.
11. There is ongoing monitoring to look for opportunities for continued improvement for each hospital care unit and housewide through readmissions and other failures in the discharge process.

**St. Luke’s Heart Failure Tools**

**Critical Information Refrigerator Magnet**

[Image of a refrigerator magnet listing signs of heart failure]
Heart Failure

Heart failure means your heart is not pumping well. Symptoms of heart failure may develop over weeks or months. Your heart becomes weaker over time and not able to pump the amount of blood your body needs. Over time your heart may enlarge or get bigger.

Your heart
When you have heart failure, it does not mean that your heart has stopped beating. Your heart keeps working, but it can't keep up with what your body needs for blood and oxygen. Your heart is not able to pump as forcefully or as hard as it should to move the blood to all parts of your body. Heart failure can get worse if it is not treated. Do what your doctor tells you to do. Make healthy choices to feel better.

Changes that can happen when you have heart failure
- Blood backs up in your veins
- Your body holds on to extra fluid
- Fluid builds up, causing swelling in feet, ankles, legs or stomach
  This build up is called edema
- Fluid builds up in your lungs
  This is called congestion
- Your body does not get enough blood, food or oxygen

Signs of heart failure
- Shortness of breath
- Weight gain from fluid build up
- Swelling in feet, ankles, legs or stomach
- Feeling more tired. No energy
- Dry hacky cough
- It's harder for you to breathe when lying down

Some causes of heart failure
- Heart attack damage to your heart muscle
- Blockages in the heart’s arteries which doesn’t let enough blood flow to the heart
- High blood pressure
- Heart valve problems
- Cardiomyopathy
- Infection of the heart or heart valves
Heart Failure Zones

Every day:
- Weigh yourself in the morning before breakfast and write it down.
- Take your medicine the way you should.
- Check for swelling in your feet, ankles, legs and stomach
- Eat low salt food
- Balance activity and rest periods

Which Heart Failure Zone are you today? Green, Yellow or Red

GREEN ZONE
All Clear—This zone is your goal
Your symptoms are under control
You have:
- No shortness of breath
- No weight gain more than 2 pounds
  (it may change 1 or 2 pounds some days)
- No swelling of your feet, ankles, legs or stomach
- No chest pain

YELLOW ZONE
Caution: This zone is a warning
Call your doctor’s office if:
- You have a weight gain of 3 pounds in 1 day or a weight gain of 5 pounds or more in 1 week
- More shortness of breath
- More swelling of your feet, ankles, legs, or stomach
- Feeling more tired. No energy
- Dry hacky cough
- Dizziness
- Feeling uneasy, you know something is not right
- It is harder for you to breathe when lying down. You are needing to sleep sitting up in a chair

RED ZONE
Emergency
Go to the emergency room or call 911 if you have any of the following:
- Struggling to breathe. Unrelieved shortness of breath while sitting still
- Have chest pain
- Have confusion or can’t think clearly

7/12/2006
Ejection Fraction
- One measurement your doctor may use to see how well your heart is working is called ejection fraction or EF.
- The ejection fraction (EF) is the amount of blood your heart pumps with each heart beat.
- The normal EF of the pumping heart is 50% to 60%.
- Heart failure may happen if the EF is less than 40%.

Treatment for Heart Failure
- Eat less salt and salty type foods.
- Take medicines to strengthen your heart and water pills to help your body get rid of extra fluid.
- Balance your activity with rest. Be as active as you can each day, but also take rest periods.
- Do not smoke.

Medicines You Might Take
- Diuretic “water pills” help your body get rid of extra fluid.
- Beta blocker lowers blood pressure and slows your heart rate.
- Ace inhibitor decreases the work for your heart and lowers blood pressure.
- Digoxin helps your heart pump better.

Things for You to Do to Feel Better Each Day
- Follow the guidelines on the St. Luke’s Heart Failure Zone paper.
- Check yourself each day. Which heart failure zone are you in today?
- Watch for warning signs and symptoms, and call your doctor if you are in the yellow zone. Catch the signs early, rather than late.
- Do not eat foods high in salt.
- Do what your doctor tells you to do.

To Learn More About Heart Failure
- Attend St. Luke’s FREE heart failure class
  Phone (319) 369-7736 for more information
- Visit the following web sites
  www.americanheart.org  American Heart Association
  www.abouthf.org  Heart Failure Society of America
  www.heartfailure.org  Heart Failure Online

A better place to be
Reducing Sodium in Your Diet

Why do I need less sodium?
Restricting sodium in your diet will help keep you from gaining “water weight,” also called edema. This will also help you control blood pressure.

How much sodium do I need?
This depends on your medical needs. Limiting sodium to 2000–3000mg of sodium per day are common restrictions. Ask your doctor if you are unsure how much sodium you need.

What should I do first?
- Do not add salt to your foods. Salt is very high in sodium. One teaspoon of salt has 2000mg sodium.
- Start with fresh foods and cook your foods without adding salt.
- Do not eat foods with salt toppings that you can see.

What foods should I not eat?
- Breads and crackers with salt toppings you can see
- Vegetable juice and tomato juice
- Cheese spreads and dips; leave cheese off of your sandwiches
- Ham, deli ham, hot dogs, sausage, bacon
- Choose frozen dinners with less than 600mg sodium per package. Read labels.
- Almost all fast food is high in sodium. Choose foods without breading, pickles, cheese or sauces
- Canned or packaged foods such as soups or noodle mixes
- Snack chips, pickles, olives, salted nuts

What should I eat and drink at my meals?
Try these sample menus for ideas:
Breakfast - 1 cup Shredded Wheat, banana, 1 cup milk, 2 slices whole wheat bread, jelly, margarine
Lunch – Sliced roast beef on bun, 2 tsp mayonnaise, lettuce & sliced tomatoes, fresh melon, cooked or raw carrots, 1 cup milk.
Supper – Green salad, 1 TBSP dressing, skinless chicken breast, small baked potato with 1 tsp margarine, frozen mixed vegetables without adding salt, dinner roll, ½ cup sherbet, 1 cup milk.
Snack – vanilla wafers or dish of canned fruit or a fresh apple.

What else can I do to get more information about eating healthier?
It is hard to change the foods you eat. Learning about low sodium eating can be difficult. If you have questions or would like more help in making changes please call a St. Luke’s Dietitian.

Workshops are held at St. Luke’s every other month on Saturdays to give people help with controlling Heart Failure. Please call St. Luke’s Cardiac Rehab Department to find the date of the next workshop. This is a FREE class that includes helpful tips on following a low sodium diet.

If you need help shopping for reduced sodium food choices, local grocery stores may also give information.

ST. LUKE’S HOSPITAL IOWA HEALTH SYSTEM
Dietitian: 369-8085
Heart Failure Workshop 369-7736

6/2006
Case Study 2:  
Cedars Sinai Medical Center, Los Angeles, California

Aim Statement
Short-term reduction in readmission by 50 percent; long-term target readmission rate at 5 percent.

Methodology
1) Improve patient understanding; 2) increase referrals to palliative care for patients with advanced stage HF; 3) improve reliability of completion and accuracy to medication reconciliation; and 4) partner with patients and families in the redesign of care.

Results

Changes Tested and Implemented
1. Partnered with patients and family members to understand patient needs when leaving the hospital
   - Designed a letter given to patients on admission which suggest how to make going home easier, including keys to the house and clothing for the trip
   - Developed a Journey Home communication board
2. Collaboration with physicians on how to improve the discharge process resulted in outlining suggestions for physician on how to make the process smoother. Recommendations include:
   • The physician should speak with the nurse during each round regarding care and discharge plans
   • Identify specific direct communication between physicians and nurses on rounds or by phone regarding orders for discharge

3. Roles and responsibilities of nurses and clinical partners are explicitly described in discharge guidelines.
   • The discharge action plan is completed within 24 hours of patient admission; in March 2007 the completion rate was 93 percent.

4. Creatively adapted the “agenda-setting cards” (mentioned in Section One) to improve discharge communication.
   • Each card in the deck has a question frequently asked by patients with HF. Questions were gathered from patients by HF nurses. The agenda-setting cards reduce hesitation to ask questions and assist patients with driving the learning agenda.
   • Patients are given the card deck to keep and are encouraged to choose 2-3 cards for discussion at each learning opportunity across care settings. To date the cards have been very successful in the hospital settings and the team has plans to move them into the ambulatory setting next.

5. Nurses identify the patient’s family caregivers during multidisciplinary rounds and ask who will be helping with care in the home.

6. Improved medication reconciliation upon discharge.
   • Integrated into the larger hospital-wide medication reconciliation initiative. On discharge, the staff members print the most recent medication list from the electronic health record and then indicate next to each medication whether it is to be stopped
or continued. Instructions for how medications should be taken must be clearly stated. Concurrently, intravenous medications are converted to oral medications.

- Small tests of change were used to improve admission and discharge reconciliation. Intake reconciliation form accuracy and completeness was initially improved to 85 percent and was subsequently improved to 95 percent for the last three quarters. The electronic discharge reconciliation form accuracy and completeness was initially improved to 90 percent and subsequently reduced to 100 percent for the last three quarters.

7. Revamped the interdisciplinary team rounds (where patients are typically discussed on hospital Day Two). For each patient, the team must answer four questions:
   - Where will the patient likely go after discharge?
   - Who will be providing the care—is this likely to be adequate or does patient require a higher intensity of care?
   - What are the patient's needs after discharge?
   - What are the potential discharge barriers?

8. Give patients a business card with the contact name and phone number of the discharging unit, and encourage the patients and families to call the unit should questions arise after returning home.
   - Nurses recognized that collecting and tracking these questions would provide insight on how their discharge efforts might be improved. Over half of the calls have been related to medications and as a result, the discharge team is now enhancing education in this area. Data gathered from calls received from patients and families:

   **Call Backs from Unit Business Cards (N=13)**
   - Seeking medication clarification 83%
   - Directed to call the physician 8%
   - Directed to seek ER care 9%

9. Partnered with a skilled nursing facility (SNF) that receives the largest proportion of the hospital's discharges to develop a standard transfer form. Developed a discharge algorithm for discharge to the SNF or home.

10. Increased palliative care referrals from seven to ten per month between December 2006 and February 2007.
Transforming Care at the Bedside
How-to Guide: Creating an Ideal Transition Home for Patients with Heart Failure

11. Reinforced the use of the SBAR critical communication tool in the discharge planning process.

SBAR Rollout (Scale of 1-5, 5 being very satisfied)
Has the SBAR rollout been successful? 4.73
Has SBAR improved communication? 4.40
I always use SBAR in patient handoffs. 4.53
Aim Statement
Reduce readmissions related to patient misunderstanding of medications.

Methodology
1) Redesign patient teaching and use Teach Back to discover what they understand; and 2) improve reliability of compliance with evidence-based care measured through Core Measures.

Results

Changes Tested and Implemented
1. During chart reviews using the IHI Global Trigger Tool on randomly selected medical records, reviewers noted misunderstanding of medications was a theme in the unplanned readmission of patients with heart failure and pneumonia.
   - A nurse on the TCAB unit developed an improvement project to reduce these unplanned readmissions see:
     [http://www.ihi.org/IHI/Programs/StrategicInitiatives/TransformingCareAtTheBedside.htm](http://www.ihi.org/IHI/Programs/StrategicInitiatives/TransformingCareAtTheBedside.htm).
• The TCAB RN researched medications typical for patients with HF and pneumonia and developed scripting for patient education using easy-to-understand terminology.

2. In December 2006, tests of change were initiated on the use of Teach Back with patients with HF or pneumonia:
   • Improved terminology was used to teach patients.
   • The focus of Teach Back was to discover what patients understood about their discharge medications.
   • A checklist was developed to enable verification of patient understanding of critical teaching points (see the form on page 75).

3. In January 2007, the team began review of cases for readmitted patients using the IHI Global Trigger Tool as a guide.

4. Morning discharge rounds were implemented to review completion of evidence-based care protocols.

5. In March 2007, the team began rounding on patients on the pilot unit with a hospitalist.
   • Each morning a hospitalist assigned to the nursing unit visited with each nurse and reviewed his or her patients in order of triaged criticality.
   • The senior nursing leadership (Chief Nurse Officer, Patient Care Services Directors) typically attended triage rounds.
   • Triage included review of the patient’s vitals, plan of care and progress toward the plan, medications, activity, and completion of best practice protocols and standard order sets (see the checklist on page 74).
   • Special focus for learning was designed for patients with primary or secondary diagnoses of pneumonia or HF.

6. The method changed from giving pneumovax at discharge to giving pneumovax on Day One or Day Two for all eligible patients 65 years or older.

7. A discharge planner and unit head nurse began building skill sets for improved readmissions.
• The discharge planner coached staff daily based on her findings.
• The nursing manager attended daily triage rounds between nurses and physicians to look for opportunities to offer coaching toward the ideal discharge process.

8. In September 2007, a discharge checklist was introduced in the rounding of nurses with the hospitalist.

9. The Health Connect electronic medical record was improved to allow greater data access in the outpatient clinics and specialists’ offices. Data access is online and immediately accessible, including patient assessment, condition, medications, and plan of care.
Kaiser Permanente Roseville
Nursing Reference Sheet for Morning Triage Rounds with Hospitalist
(Promising Fom – Still being tested)

For all patients previously seen by physician:
- Significant overnight events/new problems
- 24-hour vitals [qualitative description (e.g., “stable”) unless specific values requested]
- Concerns or issues

For new patients only:
- Brief background (admission date and time, reason for admission, relevant diagnoses)
- Information above

**DIAGNOSIS-SPECIFIC GUIDELINES (for most frequent diagnoses)**
*Nurses should be prepared to address questions and, eventually, proactively report on the following:*

<table>
<thead>
<tr>
<th>DIAGNOSIS</th>
<th>HISTORY</th>
<th>EXAM</th>
<th>LABS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-FIB WITH RVR</td>
<td>CP, SOB, Maximum activity level, Medications given, Rhythm on tele</td>
<td>HR range, BP range</td>
<td></td>
</tr>
<tr>
<td>CP</td>
<td>Ruled in or out? If in: Beta Blk, ASA, statin, ACE Inhibitors, If out: functional studies ordered &amp; time scheduled</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHF</td>
<td>CP, SOB, Maximum activity level, ECHO done or ordered</td>
<td>BP control, Is/Os, Weight change</td>
<td>Cr: change in K</td>
</tr>
<tr>
<td>COPD</td>
<td>Maximum activity level, ECHO done or ordered</td>
<td>0: Sat, 0: Requirement</td>
<td></td>
</tr>
<tr>
<td>GI BLEED</td>
<td>BMs: number and description, Transfusions, Diet, Planned or performed procedure</td>
<td>Orthostatics, if positive</td>
<td>H/H: level and change in last 24 hrs</td>
</tr>
<tr>
<td>MI</td>
<td>CP, SOB, Maximum activity level, Cardiac meds</td>
<td>HR trend and HR with ambulation, BP range</td>
<td>Troponins, ECGs,</td>
</tr>
<tr>
<td>PANCREATITIS</td>
<td>Abd pain, Diet, Narcotics given</td>
<td></td>
<td>Amylase: levels and trend</td>
</tr>
<tr>
<td>PARTIAL SBO</td>
<td>Abd pain, BMs, Symptomatic meds given</td>
<td>NGT output: last day and last shift</td>
<td>BUN CR CBC</td>
</tr>
<tr>
<td>PNEUMONIA</td>
<td>Fever curve, Maximum activity level</td>
<td>0: Sat, 0: Requirement</td>
<td></td>
</tr>
<tr>
<td>PE</td>
<td>Day # of Heparin, Maximum activity level</td>
<td>0: Sat, 0: Requirement, HR trend and HR with ambulation</td>
<td>INR, Antifactor Xa: high, therapeutic, low? CBC only if HGB or platelet count is diminished</td>
</tr>
<tr>
<td>SEPSIS</td>
<td>Day # of which antibiotics, Mental status, New symptoms</td>
<td>Fever curve</td>
<td>Blood and other pertinent CX results, CBC</td>
</tr>
<tr>
<td>STROKE</td>
<td>Deficit progression, Therapies: PT, ST, OT rec’d, Studies done, ordered</td>
<td>Neuro deficit progression</td>
<td>INR-only if on Coumadin</td>
</tr>
</tbody>
</table>
# DISCHARGE CHECKLIST

**SCHEDULED DISCHARGE APPOINTMENT WITH RN TIME:**

**PATIENT NAME:** ___________________________  **MR#** _____________  **Room #** _____________  

### Evening Before Discharge – Evening Shift Duties and Responsibilities

- [ ] Complete all discharge teaching
- [ ] Advance diet as appropriate, obtain MD orders if necessary
- [ ] Discontinued Foley catheter, as ordered. Call MD if order needed.
- [ ] Complete bowel care program
- [ ] Complete any needed vaccines

**PM Nurse** ___________________________  **PM NA** ___________________________  **PM UA** ___________________________

### Night Before Discharge – NOCS Shift Duties and Responsibilities

- [ ] Complete any EARLY Labs ordered as early as possible during night shift so results are ready early in AM. Call MD if order needed.
- [ ] Evaluate wound for discharge summary
- [ ] Complete all dressing changes

**NOC Nurse** ___________________________  **NOC NA** ___________________________  **NOC UA** ___________________________

### Day Of Discharge – Day Shift Duties and Responsibilities

- [ ] Confirm with patient/family that teaching has been complete and all questions answered
- [ ] Review & reinforce discharge instructions
- [ ] Complete morning hygiene and assist patient with getting dressed
- [ ] Escort to admitting on the way out if a copay is still due

**Day Nurse** ___________________________  **Day NA** ___________________________  **Day UA** ___________________________

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**Please circle Discharge Information Below:**

**DISCHARGE TIME:**

1. **Disposition Code:**  
   - [ ] A = Home with RX & F/U Appointment  
   - [ ] B = Home Health / DME (not O2)  
   - [ ] C = SNF / B&C / Home IV’s / Home O2

2. **Final order to discharge written by 8:30 AM:**  
   - [ ] Y / N

3. **Name of Discharging Physician:** ___________________________

4. **REASON PATIENT DISCHARGED AFTER 11AM:**

   Return form to Managers office after Discharge  

Kaiser Permanente Roseville

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October 2007  

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