Implementation Guide to Reduce Avoidable Readmissions

HRET Contact
hen@aha.org
(312) 834-7056
www.hret-hen.org
# Table of Contents

## PREVENTING AVOIDABLE READMISSIONS OVERVIEW .................................................................4
- BACKGROUND ..................................................................................................................4
- SUGGESTED AIM ...........................................................................................................4
- POTENTIAL MEASURES .................................................................................................4
- MAKING CHANGES .......................................................................................................4
- KEY RESOURCES ..........................................................................................................4

## PREVENTING AVOIDABLE READMISSIONS DRIVER DIAGRAM ..........................................................5

## SUGGESTED AIMS ..........................................................................................................7

## IDENTIFY HIGH RISK PATIENTS .......................................................................................7
- SECONDARY DRIVER: RISK ASSESSMENT ......................................................................7
  - Change Ideas ............................................................................................................8
  - Suggested Process Measure .......................................................................................8
- SECONDARY DRIVER: RISK STRATIFICATION ...............................................................8
  - Change Ideas ............................................................................................................8
  - Suggested Process Measure .......................................................................................8
- SECONDARY DRIVER: ENHANCED ADMISSION ASSESSMENT .........................................8
  - Change Idea .............................................................................................................8
  - Suggested Process Measure .......................................................................................8
- SECONDARY DRIVER: PATIENT ACTIVATION ...................................................................8
  - Change Ideas ............................................................................................................9
  - Suggested Process Measures ...................................................................................9
  - Suggested Outcome Measure ...................................................................................9
- "HARDWIRING" THE IDENTIFICATION OF HIGH RISK PATIENTS ........................................9

## SELF-MANAGEMENT SKILLS ............................................................................................9
- SECONDARY DRIVER: MEDICATIONS ...........................................................................9
  - Change Ideas ............................................................................................................9
  - Suggested Process Measures .....................................................................................10
- SECONDARY DRIVER: KNOWLEDGE OF SYMPTOMS AND RED FLAGS ..............................10
  - Change Ideas ..........................................................................................................10
  - Suggested Process Measure .......................................................................................10
- SECONDARY DRIVER: HEALTH LITERACY LEVEL AND CULTURALLY APPROPRIATE TRAINING MATERIALS .............................................................................................................10
  - Change Ideas ..........................................................................................................10
  - Suggested Process Measure .......................................................................................10
- SECONDARY DRIVER: USE TEACH BACK TO VALIDATE UNDERSTANDING .......................11
  - Change Ideas ..........................................................................................................11
  - Suggested Process Measure .......................................................................................11
- "HARDWIRING" SELF-MANAGEMENT SKILLS ................................................................11

## COORDINATION OF INFORMATION ACROSS THE CONTINUUM .............................................11
- SECONDARY DRIVER: CREATE A PATIENT-CENTERED RECORD ......................................11
  - Change Ideas ..........................................................................................................11
  - Suggested Process Measure .......................................................................................12
- SECONDARY DRIVER: COMMUNICATION TO OTHER HEALTH PROVIDERS ......................12
  - Change Ideas ..........................................................................................................12
  - Suggested Process Measure .......................................................................................12
- "HARDWIRING" COORDINATION OF INFORMATION ACROSS THE CONTINUUM OF CARE .................................................................................................................................12

## ADEQUATE POST HOSPITALIZATION FOLLOW-UP AND COMMUNITY RESOURCES ............12
SECONDARY DRIVER: PHYSICIAN/OTHER CARE PROVIDER AND RESOURCE FOLLOW-UP NEEDS

Change ideas:

Suggested Process Measure:

SECONDARY DRIVER: POST DISCHARGE CALLS AND VISITS

Change ideas:

Suggested Process Measure:

SECONDARY DRIVER: COORDINATE WITH THE COMMUNITY - SKILLED NURSING

Change ideas:

SECONDARY DRIVER: DETERMINE THE COMMUNITY RESOURCES FOR THE SPECIAL NEEDS OF HIGHLY VULNERABLE POPULATIONS

Change ideas:

Suggested Process Measure:

SECONDARY DRIVER: FOR INTEGRATED ORGANIZATIONS, DEVELOP A MEDICAL HOME

Change ideas:

Suggested Process Measure:

"HARDWIRING" POST HOSPITALIZATION FOLLOW-UP AND LINKAGES WITH COMMUNITY RESOURCE

Change ideas:

Suggested Process Measure:

POTENTIAL BARRIERS

TIPS ON HOW TO USE THE MODEL FOR IMPROVEMENT

HOW WILL YOU KNOW IF YOU MADE AN IMPROVEMENT?

UNDERSTAND YOUR CURRENT PROCESSES AND DATA

What are your patients telling you?

What is the Primary Care Physician (PCP) or other providers of care telling you?

What are your medical records telling you?

What are your data telling you?

What are your processes telling you?

SELECT A PROCESS TO IMPROVE

TESTING CHANGE IDEAS

APPENDIX I: SAMPLE TOOLS

APPENDIX II: SAMPLE VALIDATED RISK-ASSESSMENT TOOL

APPENDIX III: SAMPLE RISK-ASSESSMENT METHODOLOGY

APPENDIX IV: SAMPLE PATIENT INTERVIEW TOOL

APPENDIX V: SAMPLE PROVIDER INTERVIEW TOOL

APPENDIX VI: SAMPLE MEDICAL RECORD REVIEW TOOL

APPENDIX VII: SAMPLE PROCESS REVIEW TOOL

KEY RESOURCES
Preventing Avoidable Readmissions Overview

Background:

- A 2009 study in the *New England Journal of Medicine* demonstrated that almost one-fifth (19.6%) of Medicare patients were readmitted to the hospital within 30 days of discharge and 34% were readmitted within 90 days.
- This research estimated that only 10% of these readmissions were planned and that the annual cost to Medicare alone of unplanned hospital readmissions exceeds $17 billion.
- Performance with readmissions varies. Medicare 30-day rehospitalization rate varies 13-24% across states and varies even more significantly within states.

Suggested Aim:
Reduce hospital readmissions by 20% compared to the 2010 baseline by decreasing preventable complications during a transition from one care setting to another by 12/31/13.

Potential Measures:

**Outcome:**
- 30-day all-cause readmission rate (or count) for selected patient populations
- 30-day all-cause hospital readmission rate (or count)

**Process:**
- Percent of nurses using effective teach back methodology (observation)
- Percent of patients who had follow-up visit scheduled before being discharged

<table>
<thead>
<tr>
<th>Primary Drivers</th>
<th>Secondary Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify patients at high-risk for readmission</td>
<td>✓ Use a risk of readmission assessment tool and validate it using your own data</td>
</tr>
<tr>
<td></td>
<td>✓ Develop a method to stratify patients at higher risk of readmission</td>
</tr>
<tr>
<td></td>
<td>✓ Adopt an enhanced admission assessment</td>
</tr>
<tr>
<td></td>
<td>✓ Assess the patient’s engagement and assertiveness in managing their own care</td>
</tr>
<tr>
<td>Self-management skills</td>
<td>✓ Assign clear accountability for medication reconciliation</td>
</tr>
<tr>
<td></td>
<td>✓ Educate patient regarding medication, need for medication, method of obtaining and taking medication once discharged</td>
</tr>
<tr>
<td></td>
<td>✓ Educate patient on their condition, symptoms and what to do if symptoms worsen</td>
</tr>
<tr>
<td></td>
<td>✓ Provide clearly written medication instructions using health literacy concepts</td>
</tr>
<tr>
<td>Coordination of care across the continuum</td>
<td>✓ Obtain accurate information about primary care physician at the time of admission and create a patient centered record</td>
</tr>
<tr>
<td></td>
<td>✓ Ensure effective communication to non-hospital based care team members</td>
</tr>
<tr>
<td></td>
<td>✓ Medication reconciliation at each transition of care</td>
</tr>
<tr>
<td></td>
<td>✓ Send discharge summary to primary care physician with 48 hours of discharge</td>
</tr>
<tr>
<td>Adequate follow-up and community resources</td>
<td>✓ Prior to leaving the hospital, determine what after-hospital resources and appointments are needed and ensure appropriate planning</td>
</tr>
<tr>
<td></td>
<td>✓ Work with patient and care provider to identify and address any barriers to making and attending follow-up appointment(s) and other follow-up needs such as medications, special diet, etc.</td>
</tr>
</tbody>
</table>

Making Changes:
This intervention is in the Collaborative with Reducing Adverse Drug Events (Reduce RED Collaborative). National meetings, webinars, monthly coaching calls, change packages and other tools will augment state hospital association activities.

Key Resources:
- Better Outcomes for Older Adults through Safe Transitions (BOOST): [http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/CT_Home.cfm](http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/CT_Home.cfm)
- STAAR How to Guide: [Improving transitions from the hospital to post-acute care](http://www.ahrq.gov/qual/mparticle.html)
### Preventing Avoidable Readmissions Driver Diagram

**2012-2013**

**Aim:** Reduce Hospital Readmissions by 20% Compared to the 2010 Baseline by Decreasing Preventable Complications During a Transition from One Care Setting to Another by 12/31/13.

<table>
<thead>
<tr>
<th>Primary Driver</th>
<th>Secondary Driver</th>
<th>Change Ideas</th>
</tr>
</thead>
</table>
| Identify patients at high-risk for readmission | • Effective risk assessment  
• Simplified risk stratification  
• Enhanced admission assessment for discharge needs  
• Conduct patient activation assessment | ✓ Use a risk of readmission assessment tool and validate it using your own data.  
✓ Adopt an enhanced admission assessment.  
✓ Make readmission risk assessments easy for all to see and address.  
✓ Find out who the primary caregiver is (if it is not the patient).  
✓ Communicate who the primary caregiver is to members of the healthcare team, use white board, chart special entry, etc. so that there is a standard place for this information.  
✓ Incorporate the Patient Activation Measure into the assessment function. |
| **Self-management skills** | • Enhance patient/caregiver knowledge of medications  
• Enhance patient/caregiver knowledge of symptoms and self-care strategies  
• Identify and address health literacy level and culturally appropriate training materials  
• Use teach back to validate understanding  
• Consider motivational interviewing and activation based coaching approaches | ✓ Perform accurate medication reconciliation at a minimum on admission and at discharge so that the medication list is as accurate as possible.  
✓ Educate patients regarding each medication, need for medication, and method of obtaining and taking medication once discharged.  
✓ Provide clearly written medication instructions using health literacy concepts.  
✓ Develop patient-centered diagnosis and symptom educational tools that use health literacy concepts.  
✓ Train clinical staff on teach back using role play and observe their technique once trained.  
  o Use “I” statements when speaking with patient and caregiver. “To make sure I did a good job explaining your medications, can you tell me ...?”  
  o Validate patient and caregiver understanding of discharge instructions. |
| Coordination of information across the continuum | • Create a patient centered record  
• Adequately communicate to members of the care team who are not hospital based | ✓ Evaluate best practices and resources and already developed tools such as the Project RED After Hospital Care Plan (AHCP) and Coleman Personal Health Record.  
✓ Determine which model will work in your organization. |
<table>
<thead>
<tr>
<th>Primary Driver</th>
<th>Secondary Driver</th>
<th>Change Ideas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate follow-up and community resources</td>
<td>• Ensure timely follow-up with Primary Care Physician and other providers</td>
<td>✓ Prior to leaving the hospital, determine what after-hospital resources and appointments are needed and ensure they are included in the after-care plan.</td>
</tr>
<tr>
<td></td>
<td>• Consider post discharge calls/visits for high-risk patients</td>
<td>✓ Work with patient and care providers to determine any barriers to making and attending follow-up appointment(s).</td>
</tr>
<tr>
<td></td>
<td>• Coordinate with available community services</td>
<td>✓ Work with patient and caregiver to determine any barriers to other follow-up needs such as medications, special diet, etc.</td>
</tr>
<tr>
<td></td>
<td>• Consider programs for special populations: behavioral health patients, homeless patients, ESRD, HIV or other complex, high-risk populations.</td>
<td>✓ In addition to these hospital driven elements, further benefits have been derived from post-discharge interventions including: post-discharge phone calls, home visits, home health referrals, etc. Those patients who are at highest risk of readmission may also benefit from more intensive community resources and support.</td>
</tr>
<tr>
<td></td>
<td>• For integrated organizations, develop medical home capabilities.</td>
<td>✓ For patients without a PCP, work with health plans, Medicaid agencies and other safety net programs to identify PCP. Consider hospital follow-up clinics run by hospitals, NPs if timely access to a PCP not available.</td>
</tr>
<tr>
<td></td>
<td>• Coordinate where possible with other stakeholders and organizations to address special needs for patients</td>
<td>✓ In addition to these hospital driven elements, further benefits have been derived from post-discharge interventions including: post-discharge phone calls, home visits, home health referrals, etc. Those patients who are at highest risk of readmission may also benefit from more intensive community resources and support.</td>
</tr>
</tbody>
</table>

2. [http://www.bu.edu/fammed/projectred/newtoolkit/3.%20How%20to%20deliver%20the%20RED%204.15.11.pdf](http://www.bu.edu/fammed/projectred/newtoolkit/3.%20How%20to%20deliver%20the%20RED%204.15.11.pdf)  see 32-42
Preventing Avoidable Readmissions:

A now famous 2009 study published in the *New England Journal of Medicine* demonstrated that almost one-fifth (19.6%) of Medicare patients were readmitted to the hospital within 30 days of discharge and 34% were readmitted within 90 days. This research estimated that only 10% of these readmissions were planned and that the annual cost to Medicare alone of unplanned hospital readmissions exceeds $17 billion. Performance with readmissions varies. Medicare 30-day rehospitalization rate varies 13-24% across states and varies even more significantly within states. Hospitals are making progress reducing avoidable readmissions by employing several effective strategies. While readmissions are the result of a variety of factors, the lack of care coordination and effective transitions of care are important contributors. Addressing complex issues across care settings is difficult and requires new tools, communication channels and care processes.

Several care models and care systems have been created to address the needs of patients in a complex system. Many of these approaches also have research support and/or significant experience with multiple hospitals to warrant consideration. This change package does not endorse any particular model or care system. Rather, common approaches and practices are highlighted. Hospitals should review the models listed in the key resources section and determine which approach is more effective for their structure, patient population, and most importantly, the leading causes of readmissions for their patients.

In sum, avoidable readmissions are common, costly variable across and within states and can be reduced with effective care coordination and transitions of care.

Suggested Aims:

Before the implementation work starts, the team must have a goal at which to aim. An aim statement for rehospitalization reduction efforts could include one of the following:

- Reduce hospital readmissions by 20% compared to the 2010 baseline by decreasing preventable complications during a transition from one care setting to another by 12/31/13.
- By the end of 2013, preventable complications during a transition from one care setting to another will be decreased so that (a selected group by hospital location, for example, specific unit or units or diagnosis, for example CHF, AMI, pneumonia, etc.) readmissions would be reduced by 20% compared to 2010.

Identify High-Risk Patients:

Understanding the patients who are more likely to be rehospitalized will enable you to target your limited resources. While there are many risk assessment tools available, for the most part, all share some key factors: prior admissions within certain time period, certain diagnoses, age and disposition. By using a risk assessment, you will be able to segment your patient population. Patients who are at a higher risk for readmission receive specific interventions based on your plan. Additionally, an assessment of patient activation will allow you to more closely target your interventions to be most readily understood and accepted by your patient.

Secondary Driver: Risk Assessment

Use a validated readmission risk assessment tool or use your own data to determine odds ratios for various factors within your patient data set. Risk for readmission is usually more than clinical risk factors such as number and type of comorbid factors or severity of illness. Many non-clinical factors play a role such as availability of the primary care physician, ability to get to ambulatory appointments (transportation), ability to fill all medications (insurance and financial constraints) and support structure for monitoring and assisting. Not every high-risk patient who is found with risk assessment tools and prepared throughout the hospital stay for clues about hidden factors that might contribute to an increased risk for readmission is a necessary redundancy. At a minimum, determine which patients were previously admitted and those who fail teach back.
Change Ideas:

- Select a risk assessment that is easy to implement, will require minimal training and can fit into current workflows. See sample risk assessment tools links in Appendix I.
- Periodically, validate the findings from the tool with your readmissions data to answer the question: “Is this risk assessment tool identifying our readmitted patients?” If you find patterns with other factors, include them in your risk assessment tool.
- Use a qualitative interview approach to understand non-clinical factors and where the ambulatory care system did not meet the individual needs of patients. For example, ask five patients to walk through the steps they used or did not use to address symptoms or issues prior to being readmitted.

Suggested Process Measure:
- Sample a small number of patients each month to determine if the risk of readmission assessment is performed reliably. Suggested sample size = 10 cases

Secondary Driver: Risk Stratification

Use the findings from your risk assessment to stratify your patients into segments or groupings and determine which interventions will be associated with the different segments. An example might be:
- Low risk of rehospitalization – normal process
- Moderate risk of rehospitalization – enhanced hospital process
- Highest risk of rehospitalization – enhanced hospital process plus community intervention

Change Ideas:

- Determine a method to identify patients’ intervention group. Locate this information in a place where it is accessible to the care team.

Suggested Process Measure:
- Sample a small number of patients each month to determine if the risk stratification is accessible to the care team reliably. Suggested sample size = 10 cases

Secondary Driver: Enhanced Admission Assessment

For patients who at a higher risk of rehospitalization, perform an enhanced admission assessment to determine who their primary provider/caregiver is and what their discharge needs are. Take into special consideration prior discharge plan failures if the patient had a prior admission. Identify potential barriers that might prevent the patient from being able to manage their care once they are discharged.

Change Idea:

- Communicate who the primary caregiver is to members of the healthcare team.
  - Use a standardized method for communication, i.e. white board, special chart entry, etc.

Suggested Process Measure:
Sample a small number of patients each month to determine if information about the primary caregiver is reliably accessible to the health care team. Suggested sample size = 10 cases

Secondary Driver: Patient activation

Not all patients, regardless of their level or readmission risk, will have the same ability to learn self-management techniques. Evaluating the patient’s level of activation – that is, how engaged and self-assertive they are in managing their own care – will allow you to further tailor your interventions. Raising patient activation is associated with improved health outcomes.
Change Ideas:

- The Patient Activation Measure (PAM) is a proprietary measure and coaching program. Not all facilities will choose to use this measure. For more information: http://www.insigniahealth.com/solutions/patient-activation-measure
- Consider tailoring education and coaching approaches based on PAM scores
- Determine if PAM scores change over time with different interventions

Suggested Process Measures:
- Distribution of Patient Activation level scores across categories (PAM scores fall into three categories).

Suggested Outcome Measure:
- The difference between PAM scores before and after intervention for high-risk patients.

“Hardwiring” the Identification of High-Risk Patients:

Determining the best risk-assessment methodology is much like looking for the “holy grail” – you never quite get it perfect. A main reason is that so many hard to quantify non-clinical factors are involved. More reliable approaches clearly define the processes for readmission risk assessment, risk stratification, enhanced admission assessment and patient activation. In addition, they also ask the questions: who is responsible, which risk assessment tool is used, where the results are recorded and communicated and which actions are taken as a result of different scores. If the risk assessment process is identifying fewer high-risk patients over time, the process is likely not hardwired. Test processes to ensure that they are compatible with patient and organizational needs. Revise processes as necessary and as a result of testing. In the end, hardwiring is the result of continual learning and improvement of systems.

Self-Management Skills:

All interventions should have patient self-management as their goal. Patients need to leave the hospital with the knowledge of how to manage their medical conditions. Keys to success are: knowledge of medications and early warning signals; knowing what to do if these signals occur and knowing what to do if they have any questions. In some cases, the patient is neither the primary caregiver nor the primary learner. Identify who provides the care for the patient, including multiple caregivers, and target self-management skill development to them.

Secondary Driver: Medications

Upon discharge, each person needs to know which medications they should take, the purpose for the medications and their clinical condition, and an easy-to-use system for obtaining and taking their medications. Medication management issues are a significant driver of avoidable readmissions.

Change Ideas:

- Medication reconciliation:
  - Perform accurate medication reconciliation at a minimum on admission and at discharge so that the medication list is as accurate as possible.
  - Give a list of medications to the patient that clearly identifies which medications should be taken use health literacy concepts.
  - For high-risk patients, work with home health or other ambulatory providers to ensure medication reconciliation is performed at home. In some settings, pharmacy technicians can reconcile medications by phone with low or moderate-risk patients.
- Medication education:
  - Educate patient regarding: each medication, need for medication, and method of obtaining and taking medication once discharged. Simplify instructions to the extent possible.
o Provide clearly written medication instructions using health literacy concepts. Pictures of medications that accompany easy to understand text can help some patients.

**Suggested Process Measures:**
- Sample a small number of patients each month to determine the patient’s level of understanding regarding their medications. Suggested sample size = 10 cases

**Secondary Driver: Knowledge of Symptoms and Red Flags**
Patients should understand when their condition begins to worsen from whom and how they should obtain assistance. When patients have this level of understanding, they can obtain assistance early and thereby prevent urgent and emergency medical needs. Some patients understand when red flags occur but lack the assertiveness or problem solving skills necessary to navigate the ambulatory process, especially if their doctor is not available.

**Change Ideas:**
- ✓ Develop patient-centered diagnosis and symptom educational tools that use health literacy concepts.
- ✓ Consider tools that are easily accessible such as wallet cards, refrigerator magnets, etc.
- ✓ Keep red flag messages simple to understand.
- ✓ Determine the patient and caregiver’s familiarity with managing red flags and steps to find help to resolve the problems. Script system navigation steps when appropriate.

**Suggested Process Measure:**
- Sample a small number of patients each month to determine patient’s level of understanding regarding their “red flags.” Suggested sample size = 10 cases

**Secondary Driver: Health literacy level and culturally appropriate training materials**
In order to be effective, training materials must be understandable and useful, geared to address your patient population and their specific needs. Thus, materials should be customized and patient/family coaching provided using literacy and cultural competency principles. Visual or graphic displays can aid narrative text, even with high literacy patients.

**Change Ideas:**
- ✓ Develop patient-centered training materials.
- ✓ Make materials readily available.
- ✓ Have a patient focus group or patient counsel assist you in developing patient education materials.

**Suggested Process Measure:**
- This is a task. Determining the effectiveness of educational materials requires qualitative and perhaps quantitative assessments for comprehension. Materials should be refined until maximal effectiveness is achieved. Once achieved, it does not need to be continuously measured.

**Secondary Driver: Use Teach Back to Validate Understanding**
Use “teach back” as a communication tool to validate the patient’s understanding of instructions. Teach back is a method where clinicians ask patients, in a non-threatening manner, to recite the instructions just given. It requires shifting the responsibility for effective communication to the clinician who provides the information. It also requires prioritizing teaching points since everyone has a limit on the quantity of information understood and processed. If a patient or caregiver cannot effectively “teach back,” that is a red flag that additional support is necessary. Failure of teach back may have two components: 1) the clinician’s skills at using teach back, and 2) the patient or caregiver’s understanding. Regular failure, determined by observational methods, requires an analysis of both components.
Change Ideas:

- Train clinical staff on teach back using role play and observe their technique once trained. Consider creating videos with your staff giving examples of good and not so good teach back.
  - Use “I” statements when speaking with patient and caregiver. “To make sure I did a good job explaining your medications, can you tell me ...?”
  - Script specific teach back questions for staff to use such as: “Can you tell me who you would call if you gained five pounds?”
- Determine where and how the status of patient understanding is documented in the medical record. For example, is there an education record? Does it need to be modified to address these issues?
- Determine how this information is passed from caregiver to caregiver throughout the patient’s stay. For example, how is patient understanding transferred from shift to shift?
- Monitor the use and effectiveness of teach back through observation and validation of patient understanding. For example, have a nurse manager interview a patient to determine their level of understanding and compare that to what is documented. Provide real time feedback if observation and documentation are not in concordance.
- Consider using motivational interviewing techniques for patients who are at high-risk and who have lower activation. Motivational interviewing is a technique to increase the participation and desire of the patient to carry out self-management tasks. For more information about motivational interviewing, go to http://www.motivationalinterview.org/

Suggested Process Measure:

- Rate of effective teach back (use medication and “red flag” education) – observational, semi-qualitative.
- Number of times teach back fails in a month, by unit.

“Hardwiring” Self-Management Skills:

Producing high-quality self-management skills requires ongoing assessment and refinement. Since a variety of techniques are used, each will need to be refined and adapted to specific populations and individual patients. It is also unlikely that all patients will have adequate self-management skills acquired during their hospital stay and ongoing skill development at home and with the ambulatory system is needed to hardwire completely.

One way to create a system of learning is to create a patient/family council or other formal structure that is tasked with responsibilities such as reviewing patient education materials. Also, consider teach back as a key competency for all clinical staff. Include training on teach back in new employee orientation. Formally evaluate competency with teach back as a component of performance evaluation.

Coordination of Information Across the Continuum:

Coordinate patient information so that it is accessible where and when it is needed to care for the patient. Care coordination is largely information management with appropriate and timely intervention.

Secondary Driver: Create a Patient-Centered Record

Make the patient a key source of his/her clinical information. Develop a patient-centered record that is used by the patient to manage their care and used by the patient to communicate with their clinical providers.

Change Ideas:

- Evaluate patient-centered record best practices and resources and already developed tools such as the Project RED’s After Hospital Care Plan (AHCP) and the Coleman Personal Health Record (PHR).
- Determine which model will work in your organization.
✓ Evaluate IT support for completing the plan of care.
✓ Determine where key information is stored and how it will be compiled to complete the plan of care.

**Suggested Process Measure:**
✓ Percent of patients with a complete, customized after-care plan.

**Secondary Driver: Communication to Other Health Providers**
Communicate key information to other care providers who are not based in the hospital. Do this on a timely basis. Also see the section below on post-hospitalization follow-up.

**Change Ideas:**
✓ Obtain accurate information about primary care physician (PCP) at the time of admission.
  o Sometimes the patient may not know who his/her primary care provider is so using other questions such as: “Which doctor prescribed your medication?” or “Where do you go when you need to see a doctor?” as other ways that may help you obtain accurate information.
  o At admission if this information is not obtainable due to patient condition, have a process in place to obtain the information post admit.
✓ Ask non-hospital providers what information they need and what is the best method for them to obtain it.
✓ Send discharge summaries to primary care providers within 48 hours of discharge.
✓ Use a concise, standardized discharge or transfer form. Some states have created standardized transfer forms for all hospitals and skilled nursing facilities. This process streamlines communication and has led to more effective use of transfer forms and improved communication.

**Suggested Process Measure:**
✓ Percent of PCPs (or other physician follow-up) who received the after-care plan within 48 hours.

**“Hardwiring” Coordination of Information Across the Continuum of Care:**
Develop a patient/family council or other formal structure that is tasked with responsibilities such as reviewing the patient centered discharge plan of care. Seek information from practitioners regarding how and what information they wish to receive. In general, the receiver wants more information in an easy to read format. This needs to be balanced across the resources required to produce “enough” information across different settings. IT may help balance the “needs” of the receivers and the resource limits of the “senders” but invariably, tradeoffs are required to develop efficient and sustainable systems of information coordination.

Develop regular communication sessions with post-acute providers (long-term care, ambulatory care, home health) to help identify and fix care coordination and transition problems and improve the reliability and sustainability of new systems, tools and practices.

**Adequate Post Hospitalization Follow-up and Community Resources:**
Develop a plan of care for the patient to follow once discharged that is designed to meet the required level of care. After-care plans are crucial for care coordination and require the insights of the entire clinical team.

**Secondary Driver: Physician/Other Care Provider and Resource Follow-Up Needs**
Determine when and who the patient needs to be seen by once they leave the hospital. Determine other after-hospital needs such as: medications, durable medical equipment, oxygen, etc.
Change Ideas:

✓ Upon admission, begin to determine and plan for what after-hospital resources and appointments are needed.

✓ Facilities and their physicians should determine the acceptable length of time between discharge and the first follow-up visit with a clinician. Ideally that appointment should occur within 7-14 days. Track your readmission data to determine when patients are returning. That analysis will inform you about the timeframe needed for follow-up appointments for your patients.

  o Work with patient and care provider to determine any barriers to making and attending follow-up appointment(s).

  o If barriers are identified, determine how they can be resolved. For example, coach the patient to call his/her physician and say: “I need to make an appointment to see the doctor because I just got out of the hospital and I need to be sure that I am taking my medications correctly.”

✓ Consider hospital run follow-up clinics run by hospitalists, or Nurse Practitioners if timely access to a PCP not available.

✓ For patients without a PCP, work with health plans, Medicaid agencies and other safety net programs to identify PCP.

✓ Work with patient and caregiver to determine any barriers to other follow-up needs such as medications, special diet, etc.

  o If barriers are identified, determine how they can be resolved. For example, can a longer supply of medications be obtained prior to discharge? Can medications be mailed rather than picked up?

Suggested Process Measure:

✓ Percent of patients who had follow-up visit scheduled before being discharged (initially, use sampling techniques, start with a specific population).

Secondary Driver: Post Discharge Calls and Visits

Develop a process to call and/or visit those high-risk patients to ensure that they are able to carry out their plan of care. Determine if the plan is understood and whether it requires any changes.

Change Ideas:

✓ Determine which patients will be called, who will do the calls and when the calls will occur.

  o Gather information from these calls to find trends that can inform your readmission team. For example, repeated questions about medications may guide your team to develop different education materials or processes.

✓ Anticipate high no answer rates for calls. Patients and caregivers tend to answer calls from a clinician they met in the hospital. Determine if patterns occur with unanswered calls, e.g., time of day, location of patient, level of activation.

✓ Maximize the continuity of post-discharge calls when possible.

✓ Consider medication reconciliation for low or moderate-risk patients by phone. Pharmacy technicians can also support home medication reconciliation.

✓ Determine which patients require a home visit, who will do the visits and when they will occur.

  o Review home health referrals.

  o Review home health readmission patterns to determine opportunities for focused interventions.

Suggested Process Measure:

✓ Percent of calls answered by patients and/or caregivers.

✓ Number of times care plan is altered during the month.
Secondary Driver: Coordinate with the Community-Skilled Nursing

Evaluate the percentage of rehospitalized patients coming from skilled nursing facilities. Collaborate with your SNF partners on readmission reduction strategies.

Change Ideas:

- Review admission source data to determine which SNFs drive your readmission rate.
- Meet with SNFs and start a dialogue about strategies to avoid preventable readmissions.
  - Consider INTERACT II [http://www.interact2.net/](http://www.interact2.net/)
  - Periodically review readmissions with the SNF to look for improvement opportunities
- Consider providing after-hours physician phone triage/consultation services for SNFs who are considering sending a patient to the Emergency Department.
- Standardize transfer information form hospital to SNF. Several states have done this at the state level and work to balance the needs of the “receivers” and the resource limits of the “senders.”
- Patients at the highest risk of rehospitalization may benefit from the support of other clinical and non-clinical community resources.
  - Map out the resources in your community.
  - Consider partnering or developing a referral relationship with community based resources such as local area agencies on aging, home health, etc.
  - For patients without a PCP, work with health plans, Medicaid agencies and other safety net programs to identify PCP.

Secondary Driver: Determine the Community Resources for the Special Needs of Highly Vulnerable Populations

Certain more vulnerable patient populations may benefit from additional resources such as: behavioral health patients, homeless patients, ESRD, HIV or other complex, high-risk populations.

Change Ideas:

- Consider telehealth or other remote monitoring.
- Connect with already developed community resources (e.g., nutrition programs, transportation programs, case management programs) or identify the need for new services.

Suggested Process Measure:

- Percent of patients with community support services identified and activated.
- Mean number of community support services activated per high-risk patient.

Secondary Driver: For Integrated Organizations, Develop a Medical Home

Proactively identify high-risk patients. Inclusion in a comprehensive medical home program may prevent avoidable admissions. This involves regular outreach for high-risk patients to monitor their health and wellness and is built around designed information services and a multidisciplinary ambulatory infrastructure. For more information about medical homes, go to [http://www.ncqa.org/LinkClick.aspx?fileticket=ycS4coFOGnw%3d&tabid=631](http://www.ncqa.org/LinkClick.aspx?fileticket=ycS4coFOGnw%3d&tabid=631)

Change Ideas:

- Consider ongoing case management based in the medical home.
- Consider complex care clinics or other approaches.
- Consider population registries.
- Consider accreditation of medical homes.
Suggested Process Measure:

- See linkages

“Hardwiring” Post Hospitalization Follow-Up and Linkages with Community Resource:

Clearly define the processes for addressing follow-up needs including: post discharge calls, visits and referral to community resources. Determine if the correct patients are being supported based on an analysis of data. Test processes to ensure that they are compatible with patient, organizational, and community needs. Revise process as necessary as a result of testing. Determine accountability, tools and documentation requirements. Train involved staff in these new processes. Monitor results and provide feedback to involved staff members.

Establish a forum for community providers to link with the hospital to exchange needs and resources. On a periodic basis, share data about readmissions with outside agencies so that all involved parties can review the case and determine opportunities for improvement. Develop a community forum to prioritize and address the issues that emerge from various settings such as palliative care and end of life planning.

Potential Barriers:

Reducing readmissions is the right thing to do but it is not necessarily aligned with reimbursement at the current time. Understanding the financial ramifications from readmissions helps identify where early gains may be beneficial to all.

Reducing preventable readmissions is challenging work because it requires the involvement of many individuals and systems both within and outside of the hospital. Time and resources must be given to understand the organization’s current level of performance and its gaps as well as selecting appropriate interventions that match the needs identified in the gap analysis. Once interventions are selected, they need to be tested, adapted and implemented. Common barriers include: drift to other priorities, lack of accountability to complete the initiative and inadequate resources.

Using administrative leadership sponsorship to help remove or mitigate barriers:

- Align readmission reduction efforts with strategic business priorities.
- Provide adequate resources to support the improvement work.
- At least monthly review process and outcome measures with team leader and identify barriers.
- Develop a strategy to overcome barriers and evaluate the effectiveness of the strategy.

This is not just a change in practice but may also be a change in culture:

Culture and practice changes can be very challenging. They mean giving up what is comfortable for what is unknown.

- Keep the aim front and center. Unite and motivate around the goal.

The need for interdisciplinary communication and collaboration is significant when striving to reduce readmissions. Just getting everyone in a room and talking together is a great first step. Since disciplines may be more familiar with working independently, collaboration across disciplines may present a change in culture.

- Create a structured forum where different disciplines can share their understanding and roles.
- Routinely share patient stories.

Another change in culture that may be associated with readmission reduction efforts is the movement from a more paternal approach, where we tell the patient what to do, to a patient-centered approach, wherein the patient plays a pivotal role in his/her care. Some clinicians are not used to validating the patient’s understanding.
or asking the patient why he or she feels that he or she needed to be readmitted.

- Use teach back.
- Involve patients to actively participate in care design.
- Seek information from patients about the reason for readmission.

Readmission reduction work often includes the need to partner with both clinical and non-clinical members of the community. Once again, just getting your community partners together is a great first step.

- Create a forum for community involvement. Uncovering local agencies and other organizations interested in effective care outside of the hospital is often a rewarding and supportive ally.
- Use community organizing principles to engage partners outside of the usual care community.

Tips on How to Use the Model for Improvement:

How Will You Know If You Made an Improvement?

Throughout the course of your readmission reduction initiative, you will measure outcomes (readmission rates) and various processes that contribute to reduced rates. Potential Measurement(s):

Outcome:

30 day all-cause readmission rate
30 day all-cause readmission rate for selected patient populations
30 day all-cause readmission count
30 day all-cause readmission count for selected patient populations

Process:

Compliance with individual processes, e.g., percent of patients who receive a written discharge plan
Aggregate compliance with ALL processes

Consider collecting both qualitative and quantitative data. Many teams overlook the importance of quantitative data especially when they are testing new processes. During testing, it is very important to collect data from your users on their satisfaction or lack thereof with the change being tested.

Understand Your Current Processes and Data

Before selecting the evidence-based approaches to implement in your organization, perform an intensive assessment of your current situation. Interview returning patients and their caregivers with a goal of finding out from them why they believe they were readmitted. Interview the primary care providers of these readmitted patients to determine if they were aware of the original hospitalization and their patient’s discharge needs. Ask them what they believe occasioned the rehospitalization? Review the medical records for all past readmissions of these five patients within the past 90 days to discover the patient’s condition and dispositions over time. Pull data for all of your readmitted patients for the past year and sort these data so that you can learn your rates, most common diagnoses, etc. Review key processes within your organization to understand the gap between your current processes and the processes that need to be implemented to reduce readmissions. Find out which processes are present and reliable, which are present but not always reliable, and processes which are not currently present.

What Are Your Patients Telling You?

Talk to the five patients and their caregivers who had previously been discharged from your organization and are now readmitted. Try to have the patient/caregiver articulate in their words why the readmission occurred. You may need to ask a series of open ended why questions to get at the specific failures. See sample tool in Appendix I.
You can ask questions used in the STAAR initiative or others such as:

- How do you think you became sick enough to come back to the hospital?
- Did you go to your doctor’s office before you came back to the hospital? If yes, who is your doctor? If not, why not?
- Did you have any problems getting to see your doctor?
- Has anything gotten in the way of you taking your medicines?
- How do you take your medicines and set up your pills each day?
- Tell me about the kinds of meals you typically eat each day.
- Why do you think you were readmitted to the hospital?
- What do you think needs to happen for you to be able to stay healthy enough to stay at home?

What gaps did you identify?

What processes do you need to change to fill these gaps?

**What is the Primary Care Physician (PCP) or Other Providers of Care Telling You?**

Contact the PCP or other providers who cared for the patient after discharge. Ask them what they believe occasioned the patient’s readmission? The goal here is not to collect a clinical diagnosis, rather it is to uncover the reason why the patient’s clinical condition deteriorated. Determine if they were aware of the patient’s hospitalization and if they received a discharge summary. See sample tool in Appendix I.

- What gaps did you identify?
- What processes do you need to change to fill these gaps?

**What Are Your Medical Records Telling You?**

Review the medical records of the patients you just interviewed. Start with the initial admission and review all subsequent readmissions. Review all admissions in the prior 90 days. See sample tool in Appendix I.

Find out items such as:

- Admission and discharge dates, days in between admissions.
- Reason for each admission/readmission.
- Condition at discharge from each stay.
- Where patient was discharged to after each stay.
- Medications at discharge after each stay.
- At the time of each discharge, did the patient/caregiver have: a clear medication list, a follow-up visit scheduled and confirmation that the patient/caregiver had the means to obtain the medications and attend the visit?
- Was there documented evidence of patient/caregiver’s understanding of discharge instructions, e.g., “teach back”?
- Documented social needs that may have contributed to readmission.

What did you learn from this chart review?

What was missing in these medical records that you wished you knew?

What processes do you need to change to fill these gaps?
**What Is Your Data Telling You?**

Pull the data for all readmissions for the prior year. You will want to run reports to answer the following types of questions:

- What is your readmission rate by month for the past twelve months?
- What types of patients are being readmitted?
- What are your highest risk groups?
- Consider factors such as: age, where patients are being readmitted from, where they were discharged to prior to the readmission, their primary and secondary diagnoses.

What have you learned from this review of your data?

Based on your findings, do any priorities stand out to you?

**What Are Your Processes Telling You?**

Understand your current processes and the degree to which they are reliable. This is far more than a review of your policies and procedures. Actually trace through your processes to determine their level of reliability. Start by reviewing your policies and procedures, forms and other printed materials. Ask, “Do we need to make any changes?” Find out how the staff members are trained to perform the process. Ask, “Do we need to make any changes?” Then trace these procedures to determine if they are widely known and followed. Did you find evidence of these processes in your chart reviews, observations and interviews? Also, interview at least three staff members who routinely admit and discharge patients to ascertain their understanding of these key processes. Do you routinely monitor these processes? If so, what is measured, by whom, how often and where does the data go? See sample tool in Appendix I.

**Understand your current admissions process**

Do you reliably collect data on admission about the primary caregiver or key learner by asking such questions on admission as: “Who takes care of you at home? Who helps you with your medications? Who goes to the doctor’s appointment with you?” Who collects this information? Where does it go? Is it displayed in such a way that it is easily accessible by other healthcare providers, i.e. on a white board in the patient’s room or in a common place in your medical record?

**Understand your current patient/family teaching processes**

Across the dozens of completed studies and initiatives underway, organizations with the best results have the following traits in common:

- Teaching efforts are consistently targeted to the appropriate key learner.
- Educators consistently evaluate patients’ understanding of the information provided.
- Organizational culture supports efforts to prioritize patient education.
- Strategies and technologies are adopted to make patient education activities fit easily, if not automatically, into hospital employees’ workflow.
- Education materials are designed thoughtfully with the patient in mind.

Who receives teaching? When and how often is this performed? How is understanding demonstrated? Can your patients/families reliably teach back to you an adequate understanding of their conditions, medications, discharge follow-up needs, etc.? Do you use teach back? How do you evaluate staff competency to perform teach back? Do you include all of the following types of teach back questions throughout the patient’s stay: knowledge of
medications; diet, etc.; attitude – why these are important; behavior questions – how will you remember, organize, etc.?

Are your written training materials appropriate for the languages and reading level of your patients?

**Understand your coaching processes**

- Does your coaching model work to transfer self-management skills to the patient/caregiver? How do you know it is effective?
- Understand your hand-over processes.
- Does your patient reliably leave your organization with a clear patient health/transitions record which includes a clear list of medications to take upon discharge? Is there a plan to obtain the medications if they are not provided by the organization?
- Does your organization reliably communicate key information to the next providers of care? Are discharge summaries completed and sent to the PCP within 24 hours of discharge? Is there a standardized method of communicating to other organizations such as SNFs? Does the method meet the patient’s needs?

**Understand your post-acute care follow-up process**

- Does your patient have adequate and reliable follow-up? Is a follow-up appointment scheduled prior to discharge? Is there a process in place to check to see if the patient made it to the appointment and an intervention if he/she did not?
- Do you have a process in place for post discharge follow-up calls or telehealth monitoring?
- Do you know who the highest risk patients are?
- Do you have specific strategies in place for these patients?
- What did you learn from this review of processes?
- Has your thinking about readmissions changed as a result of this review? If so, how?
- What was missing in your current processes?
- Do not be surprised to find gaps in these processes. Most of your improvement work will be done here. You will also find bright spots, things that are working well. Find out why so you can replicate these conditions elsewhere.

**Select a Process to Improve:**

Depending on the findings of your diagnostic activities, you will select improvement priorities. Your priorities might be based on criteria such as: potential impact, level of readiness, availability of resources, etc. If, for example, you selected determining which readmission risk assessment should be used by your facility, you might do the following:

- Review a variety of risk assessment tools.
- Select a tool that appears to be compatible with the needs and abilities of your organization.
- Ask: “Is there anything we need to modify before we test this here?”
- If yes, make the modification (note that if you are using a validated tool, modifications may interfere with the fidelity of the tool).

**Testing Change Ideas:**

**Plan:** Tomorrow a nurse test this readmission risk assessment tool on his/her first admission

**Do:** Nurse tests the readmission risk assessment

**Study:** At the end of the shift, the team huddles with the nurse to ask questions such as:

- “Were there any challenges in completing the assessment?”
- “Are there any suggestions for modifications of the tool or the process?”
Act: Make any recommended change and retest to determine if the changes are an improvement. If no changes are suggested, plan additional testing with more patients the following day.

Once the assessment has been tested successfully on several more patients, you can expand the test to other nurses.

Document each PDSA cycle so you will have a record of the changes you implemented. You can run several PDSA cycles in parallel. For example, while one group is working on the readmission risk assessment, another might be testing change for obtaining accurate information about the PCP. Coordinate the findings from all of your PDSA cycles so that you can keep track of the entire project.
Appendix I: Sample Tools

Link to Personal Health record - [http://www.caretransitions.org/documents/phr.pdf](http://www.caretransitions.org/documents/phr.pdf)
Link to After Hospital Care Plan - [http://www.bu.edu/fammed/projectred/newtoolkit/3.%20How%20to%20deliver%20the%20RED%204.15.11.pdf](http://www.bu.edu/fammed/projectred/newtoolkit/3.%20How%20to%20deliver%20the%20RED%204.15.11.pdf)
see pp. 32-42
Appendix II: Sample Validated Risk Assessment Tool

**Modified LACE Tool**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
<th>Points</th>
<th>Prior</th>
<th>Present</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of Stay</strong></td>
<td>Less 1 day</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 day</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 days</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 days</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4-6 days</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7-13 days</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14 or more days</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute admission</strong></td>
<td>Inpatient</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Observation</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Concordity:</strong></td>
<td>No prior history</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Concordity points are cumulative to maximum of 6 points)</td>
<td>Mild liver disease, DM with end organ damage, CHF, COPD, Cancer, Leukemia, lymphoma, any tumor, cancer, moderate to severe renal dz</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dementia or connective tissue disease</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Moderate or severe liver disease or HIV infection</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metastatic cancer</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Emergency Room visits during previous 6 months</strong></td>
<td>0 visits</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 visits</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 visits</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 visits</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 or more visits</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Take the sum of the points and enter the total** →
Appendix III: Sample Risk Assessment Methodology

(Use organization’s own data)

Risk Assessment Formula Evaluation

The factors considered are displayed below.

Characteristic:
- Length of stay
- Admission in the past 3 months
- Month of admission
- Attending physician
- Discharge destination
- Age by decade
- Diagnosis
- Comorbidity (1st 12 ICD-9 codes)
- Days between discharge and readmission
- Insurance
- Fields to be added after the proof of concept
- Fall risk
- Caregiver
- Depression
- Dementia
- Polypharmacy (>5 medications on discharge)
- Receiving high risk medication (Beer’s listing)
- Health literacy

Six months’ worth of data was collected. The data was entered into a relational database (FileMaker Pro, FileMaker, Inc., version 11). Information was collected for all patients discharged. The fields listed above were used to create an odds ratio describing the characteristics power in predicting readmission (formula 1). The odds ratios with their corresponding characteristics were rank ordered. The top 10 characteristics were used to perform a linear regression analysis. This can be done in most statistical programs, including the functions in Excel, Microsoft Word. The factors showing the greatest power to predict readmission (R squared and t-score, p-value) were selected for the formula. The R-squared value was 0.7 with highly significant p-values. The four factors having the greatest power for our patient population are: age, prior admission within the previous 90 days, discharge to skilled nursing facility, home health care and residential care facility, and specified ICD-9 codes. The odds ratio was used to weight the individual elements of the predictive formula. The formula was calculated and converted to a percentage risk for readmission over the baseline risk for the entire population of patients discharged.

Formula 1: Determine the rate of readmission for a characteristic

# Patients readmitted with specific characteristic divided by # patients with this specific characteristic.

100 patients with CHF were readmitted; there were 1000 patients discharged with the diagnosis of CHF. Readmission rate 10%.

Formula 2: Determine the overall readmission rate for the entire population

# Patients readmitted divided by # patients admitted.

1000 patients were readmitted; there were 10000 patients discharged. Readmission rate 10%.

In this fictitious example, there is no additional risk predicted for patients with CHF.
Odds ratio = \text{Readmission rate patient with characteristic (rate with CHF 10\%)} / \text{Readmission rate for entire population (hospital readmission rate 10\%)}

Odds ratio is 1.0.
Conclusion: patients with CHF are no more likely to be readmitted than any patient admitted to the hospital.

Increased Risk for Readmission
# Patients readmitted who are discharged to a SNF divided by # patients discharged to a SNF.

Example: 300 patients d/c’ed to a SNF were readmitted; there were 1000 patients discharged to a SNF. Readmission rate 30\%.

Use the overall readmission rate for the entire population (10\% in this example)
# Patients readmitted divided by # patients admitted.

1000 patients were readmitted; there were 10000 patients discharged. Readmission rate 10\%.

In this fictitious example, there is additional risk predicted for patients discharged to a SNF.

Odds ratio = \text{Readmission rate patient with characteristic (rate with CHF 30\%)} / \text{Readmission rate for entire population (hospital readmission rate 10\%)}

Odds ratio is 3.0.
Conclusion: patients discharged to a SNF have 3 times the risk of being readmitted in comparison to all patients discharged from the hospital.

This seems obvious when you say it, but it was a surprising realization to many seasoned clinicians, especially those who do not discharge frequently to skilled nursing facilities.

A sample formula, which is currently in beta test, is:
Age factor is 1.4 if patient >90
1.5 if patient 80 to 89
1.4 if patient 70 to 79
1.2 if patient is 60 to 70
0.9 if patient is <60

Prior admission factor – 2.8

Diagnosis factor – 1.9 if CHF
1.8 if pneumonia or COPD
1.4 if chest pain
1.5 if CVA

Disposition destination factor =
1.4 if SNF
1.3 if Residential Care Facility
1.3 if Home Health Care
1.0 if Home
Weighting factor predicting readmission = Age factor + prior admission factor + diagnosis factor + disposition destination factor

Baseline readmission rate = 11.4%

A readmission rate of 11.4% equals an odds ratio of .12

Odds ratio for readmission is odds ratio for readmission baseline * weighting factor predicting readmission

Example: The odds of a 90 year old patient with CHF, readmitted within 90 days and discharged to a SNF being readmitted are:

\[(1.4 + 1.9 + 2.8 + 1.4) \times 0.12\]

Age odd
### Appendix IV: Sample Patient Interview Tool

<table>
<thead>
<tr>
<th>Questions</th>
<th>Pt./Caregiver Name</th>
<th>Pt./Caregiver Name</th>
<th>Pt./Caregiver Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of days since the last discharge?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How do you think you became sick enough to come back to the hospital?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician Questions - Did you go to your doctor’s office before you came back to the hospital? If yes, who is your doctor? If not, why not? Did you have any problems getting to see your doctor?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medication Questions - Has anything gotten in the way of you taking your medicines? How do you take your medicines and set up your pills each day? Can you tell me which medications you are supposed to take each day?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dietary Questions - Tell me about the kinds of meals you typically eat each day.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why do you think you were readmitted to the hospital?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What do you think needs to happen for you to be able to stay healthy enough to stay at home?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What did you learn from the patient?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix V: Sample Provider Interview Tool

<table>
<thead>
<tr>
<th>Questions</th>
<th>Pt. Name</th>
<th>Pt. Name</th>
<th>Pt. Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of days since the last discharge?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were you aware of the patient’s last discharge from the hospital?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you receive timely follow-up information from the hospital about your patient’s condition and any changes to his/her medications?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did you provide any follow-up visits with the patient since his/her discharge and this readmission?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why do you think the patient needed to be readmitted? (The goal here is not to collect a clinical diagnosis rather it is to uncover the reason why the patient’s clinical condition deteriorated).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What do you think needs to happen for your patient to be able to stay healthy enough to stay out of the hospital?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What did you learn from the providers?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix VI: Sample Medical Record Review Tool

<table>
<thead>
<tr>
<th>Questions</th>
<th>Pt. Name &amp; MR #</th>
<th>Pt. Name &amp; MR #</th>
<th>Pt. Name &amp; MR #</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the past 90 days, how many acute care admissions has this pt. had?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>List the dates of all admissions.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the past 90 days how many ED visits has this pt. had? List the dates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of all visits.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What was the reason for each admission?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What was the condition at each discharge?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Where was the patient admitted from and discharged to for each admission?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For each discharge, did the pt/caregiver have: a clear med list, a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>follow-up visit scheduled and confirmation that the pt./caregiver had</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the means to obtain the meds and attend the visit?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was there documented evidence of pt./caregiver’s understanding of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>discharge instructions, e.g. “teach back”?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were any social needs documented?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What did you learn from the medical record review?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix VII: Sample Process Review Tool

<table>
<thead>
<tr>
<th>Process Questions</th>
<th>List and review any policies and procedures or forms related to this process? Are any changes needed?</th>
<th>Review training materials for involved individuals? Any changes needed?</th>
<th>Observation of actual practice through: chart review, staff interview, pt. interview or unit observation. Were desired practices evident on at least three separate occasions?</th>
<th>Describe any monitoring that is performed regarding the process. What measures are collected? How frequently? Who collects and aggregates these data? Where do the findings go?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhanced Admission Assessment</td>
<td>Enhanced Admission - Do you routinely ask the pt./caregiver upon admission: “Who takes care of you at home? Who helps you with your medications? Who goes to the doctor’s appointment with you?”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a white board or some other method to communicate this information to other providers? Is it complete and up to date?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Teaching and Coaching Processes</strong></td>
<td>**Who receives teaching? When and how often is this performed? How is understanding demonstrated? Can your patients/families reliably teach back to you an adequate understanding of their conditions, medications,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>discharge follow up needs, etc.?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you use teach back?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How do you evaluate staff competency to perform teach back?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you include all of the following types of teach back questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>throughout the patient’s stay:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>knowledge of medications, diet, etc.,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attitude – why these are important,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>behavior questions – how will you remember, organize, etc.?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are written training materials appropriate for the languages and reading level of your patients?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does your coaching model work to transfer self-management skills to the patient/caregiver? How do you know it is effective?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand Over Processes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does your patient reliably leave your organization with a clear patient health/transitions record which includes a clear list of medications to take upon discharge?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a plan to obtain the medications if they are not provided by the organization?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does your organization reliably communicate key information to the next providers of care? Are discharge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
<td>Answer</td>
<td>Answer</td>
<td>Answer</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>summaries completed and sent to the PCP within 24 hours of discharge?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a standardized method of communicating to other organizations such as SNFs? Does the method meet the patient’s needs?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Post-Acute-Care Follow Up Processes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does your patient have adequate and reliable follow-up? Is a follow-up appointment scheduled prior to discharge? Is there a process in place to check to see if the patient made it to the appointment and an intervention if he/she did not?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you have a process in place for post discharge follow-up calls or telehealth monitoring?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you have specific strategies in place for high-risk patients? How do you determine which patients are high-risk?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Key Resources

- State Action on Avoidable Rehospitalizations (STAAR) Initiative, http://www.ihi.org/IHI/Programs/StrategicInitiatives/STateActiononAvoidableRehospitalizationsSTAAR.htm
- Care Transitions Program http://www.caretransitions.org Eric A. Coleman, MD, MPH
- Project RED (Re-Engineered DC) http://www.bu.edu/fammed/projectred/ Brian Jack, MD
- Project BOOST (Better Outcomes for Older adults through Safe Transitions) http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/CT_Home.cfm Mark Williams, MD, FHM
- Transitional Care Model http://www-transitionalcare.info Mary D. Naylor, PhD, RN, FAAN
- INTERACT II http://www.interact2.net/
- Hospital 2 Home sponsored by the American College of Cardiology and the Institute for Healthcare Improvement http://www.h2hquality.org/