Abstract
Hospital to Home (H2H) is a national quality improvement initiative of the American College of Cardiology (ACC) and the Institute for Healthcare Improvement (IHI). The goal of the initiative is to reduce 30-day all-cause readmission rates for patients discharged with cardiac conditions by 20% nationwide by December 2012. Like the national quality initiatives that have come before it, the foundation of H2H is a growing community of like-minded individuals committed to addressing a significant health problem through best practice sharing. Unlike its predecessors, however, H2H is starting with an evidence base that is less clear about proven best practices shown to reduce hospital readmission rates. The wide variation in problems and practices presents challenges, as well as opportunities for innovation, for the H2H initiative and its implementation.

Keywords
Readmissions, transitions of care, national quality initiative, learning community, best practices, lessons learned

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Developing the Idea for a New National Quality Initiative
National statistics tell us that the heart failure 30-day readmission rate varies considerably, but recent studies indicate that the mean is somewhere around 27%.1 There is also a wide variation regionally across the US. In one region, more than half of patients readmitted within 30 days did not have evidence of an outpatient bill, suggesting they did not go to, or have, a follow-up appointment.2 It has been shown that many patients discharged after a surgical procedure benefit from earlier medical follow-up, since a substantial majority of post-surgical hospitalizations stem from medical conditions. Likewise, a substantial majority of rehospitalizations following heart failure hospitalizations are for medical conditions other than heart failure. It also does not appear that a majority of rehospitalizations within 30 days after heart failure discharges are planned for any other staged surgical procedures, such as device implantation.

Controlled studies have shown that certain interventions at the time of discharge sharply reduce the rates of rehospitalization in patients with heart failure.3,4 The variation among states, regions, and hospitals suggests that improvement on a national scale may be possible, but the data do not suggest which practices cause the differences or whether the differences are transferable. The best practices of hospitals with the lowest readmission rates have not yet been clearly identified and disseminated for other facilities to test and learn.

Readmissions are not just a problem for the patient, hospital, primary care physician, or specialist. There are many stakeholders in this problem, not only on a national, state, and regional level, but in terms of payers, providers, and the public.

Hospital to Home (H2H) is a national quality improvement initiative of the American College of Cardiology (ACC) and the Institute for Healthcare Improvement (IHI). It builds on the success of the ACC Door-to-Balloon Alliance for Quality and the IHI 100K Lives and 5 Million Lives campaigns. The goal of the H2H initiative is to reduce 30-day all-cause readmission rates for patients discharged with cardiac conditions by 20% nationwide by December 2012. To achieve this goal, H2H recommends improvement in three core areas:

- ensuring appropriate medication management post-discharge;
- arranging for early follow-up; and
- ensuring that the patient understands symptom management as a means of self-care.

H2H is an online learning community and an environment for sharing ideas using features such as a robust website, a very active Listserv®, webinars, and online toolkits. The foundation of H2H is a growing community of like-minded individuals committed to addressing a significant health problem through best practice sharing. In this article, we explore the rationale for targeting the reduction of hospital readmissions and transitions of care right now, as well as the lessons learned and potential challenges.
To address transitions of care, the federal government has included this in its current healthcare referendum. Beginning on October 1, 2012, hospitals with a higher than expected readmission rate will experience a decrease in Medicare payments. The decrease in payments will accelerate through the ensuing years. While there is a complicated formula that determines this, it is easiest to think about the maximum penalty to understand the impact. For the fiscal year 2013, the largest reduction could be 1% in overall hospital payments from Medicare; in 2014, 2%; and in 2015, 3%. There are essentially two numbers that will be calculated—an expected 30-day readmission rate for all hospitals and an actual 30-day readmission rate for a particular hospital. If you exceed this expected rate of readmissions by a certain percentage (that percentage has not been released by Centers for Medicare and Medicaid Services [CMS]), then Medicare payments will be reduced.1

Beginning in 2012, there will be three medical diagnoses addressed for readmissions: myocardial infarction (MI), heart failure, and pneumonia. These diagnoses have been part of publicly reported hospital quality data used for annual payment updates. It is expected that these data will be risk-adjusted, so that facilities treating more difficult and less adherent patients are not unfairly penalized. Yet risk-adjusted readmission rates are not reported on the CMS Hospital Compare website.6 In the fiscal year 2015, it is expected that CMS will expand the number of conditions that will be tracked in terms of readmission and the Congressional Budget Office estimates that this strategy could save as much as $7.1 billion over 10 years.

Focusing on rehospitalizations right now is a priority because healthcare reform represents not only an economic, but a political and societal issue. Unnecessary and preventable readmissions are harmful to patients, costly, and represent a flaw in our healthcare system where we could clearly perform better. It is an ideal time for the ACC and IHI H2H initiative to help hospitals and clinicians address this issue by sharing best practices nationwide and advocating for quality innovation.

Lessons Learned from Previous Quality Improvement Initiatives

The ACC has a history of developing and implementing quality improvement initiatives. One of the most well known is the Guidelines Applied in Practice (GAP) quality improvement initiative which started in ten hospitals in Michigan.7 The GAP project sought to improve care for acute myocardial infarction (AMI) patients by increasing the use of evidence-based therapies using a toolkit. The toolkit could be customized, and consisted of an AMI standard order set, clinical pathway, pocket guideline and pocket card, patient information form, AMI-specific patient discharge forms, GAP chart stickers to identify patients included in the project, and hospital performance charts showing performance over time on key AMI metrics. GAP developed a variety of quality care indicators and measurement tools and eventually, after embedding these guidelines into practice, showed an improvement in 30-day and one-year mortality in patients with MI.8 This benefit was most marked when patients were cared for using standardized evidence-based clinical care tools.9

To expand on the idea of providing evidence-based clinical care tools, the ACC developed an online quality improvement product called CathKIT® (KIT stands for Knowledge and Improvement Tools).10 Developed in response to the evolution of the cardiac catheterization laboratory from a diagnostic facility to a treatment facility, the goal of CathKIT was to provide cardiac catheterization laboratory administrators and physician champions with the tools necessary to identify opportunities for improvement in their cath lab using a series of self-evaluation checklists and a quality scorecard. Ultimately, the CathKIT became a part of the National Cardiovascular Data Registry (NCDR) to help participants use their data for quality improvement.

Lessons learned from the GAP project and the CathKIT were applied to the ACC Door-to-Balloon (D2B) Alliance, which launched in 2006. From the GAP Project, the ACC learned the benefit of having guideline implementation tools. CathKIT demonstrated that knowledge of quality improvement could be increased through an online tool. D2B took these lessons a step further by building a quality improvement learning community committed to applying guideline-based best practices. As a national campaign to improve the timeliness of reperfusion therapy in patients with heart attacks, D2B facilitated the adoption of six evidence and guideline-based best practices shown to reduce door-to-balloon time.11,12 D2B is a national initiative to enlist clinicians, administrators, other healthcare professionals, hospitals, and other partners to work together and provide coordinated diagnosis and treatment in patients with ST-segment elevation myocardial infarction (STEMI).

Like the ACC quality initiatives before it, H2H is a learning community, committed to quality improvement and the identification and sharing of best practice strategies to address a timely environmental issue. Unlike its predecessors, however, H2H is starting with an evidence base that is less clear about proven best practices shown to reduce hospital readmission rates, which presents opportunities for innovation and challenges as well.

Developing the Hospital to Home Goals

H2H was born as a collaborative effort between the ACC and the IHI in 2009. By the end of 2010, the community consisted of over 1,000 organizations, more than 1,600 individual participants, 34 partners with two strategic partners, 25 quality improvement organizations, and a small amount of grant money for support. There have been more than 25 presentations nationwide, including two national webinars: one in February 2010 addressing the readmission problem and the second one in May 2010 which addressed a legislation briefing around the Obama administration’s health plan and how readmissions would be affected in the future. There have been a total of eight best-practice webinars, with approximately 900 attendees per webinar. A best-practice study with Yale supported by the Commonwealth Fund is currently in progress.

In 2011, H2H proceeded to engage the community by introducing the H2H Challenge as a community call to action around the three H2H core improvement areas: early follow-up, post-discharge medication management, and patient recognition of signs and symptoms. Over a period of six months, H2H community members are challenged to address one of these core improvement areas and are supported with four webinars, two surveys, and a collection of tools and strategies.
Importantly, establishing communications between sending and essential. Other elements of early follow-up that are considered other comorbid conditions that require early intervention. Timely follow-up by either primary care physicians, specialists, or any member of the healthcare team is important. Elucidating a list of instructions for how to respond to these circumstances is, furthermore, essential. Other elements of early follow-up that are considered important are establishing communications between sending and receiving clinicians, as well as the follow-up visit as a natural opportunity for reconciliation of medications. It is also an opportunity to review outstanding tests and follow-up plans and to discuss monitoring signs and symptoms that would be indicative of worsening conditions that require attention.

The goal of the SY7 Challenge is for all patients discharged with a diagnosis of heart failure or MI to have a follow-up appointment scheduled within seven days of discharge. The heart failure patients should have an appointment to see any healthcare professional within seven days and the MI patients should have a referral for cardiac rehabilitation within seven days. Not only does this appointment need to be scheduled, but the follow-up visit must also be a successful or ‘good’ one.

Because of the abundance of information on improving the early follow-up process, the SY7 goals are broken down into eight measures of success that are simple, actionable, and improvable (see Table 1). A continuously growing collection of tools and strategies is offered to H2H participants via the H2H website, www.h2hquality.org, to support their efforts for each success measure.

The SY7 webinar series walks an H2H participant through a quality improvement process from understanding the evidence to implementing and evaluating an intervention. The first webinar introduced the H2H Challenges and the evidence to support improving the early follow-up process. The second webinar, in June 2011, reviewed the success measures in more depth and the toolkit to help hospitals be successful. The toolkit consists of a summary of ‘informational triggers’ a hospital could use to identify a heart failure patient using their electronic health record system, various readmission risk calculators, and a checklist of common barriers and solutions to help patients make it to their follow-up appointment. A third webinar, in September 2011, is an open forum for H2H community members to present their experiences and ask questions of leaders in the field. Two surveys are also part of the Challenge—one to enable self-assessment for a participant, and another to assess progress on the success measures. The second H2H Challenge in the series will launch in 2011 and address post-discharge medication management.

### Lessons Learned from Hospital to Home

As H2H has rolled out, specific issues have come to light. For heart failure and MI patients, care is led by different members of a patient’s care team. While the patient is the center of all care, it is unclear who takes the lead in the care team to improve the care process and how leadership gets determined. Additionally, there is not enough evidence to support the clear, simple, and singular best practices for hospitals and other stakeholders to manage the wide variation in practice to prevent unnecessary readmissions.

Patients with cardiovascular disease have many practitioners involved with their care in the hospital and in the outpatient setting—from the primary care physician to the cardiologist, from the nurse to the case manager. Many patients with cardiovascular disease have other conditions as well, adding more specialist physicians and nurses to a complex care team. In the hospital, physician representation includes primary care physicians, specialists, emergency room physicians, and hospitalists. Nurses of all levels are involved in the care of the hospitalized patient as caregivers, discharge planners, educators, and, after discharge, home health nurses. There may also be administrative representation. This makes it a challenge to identify the target audience for the H2H initiative, and it requires consideration of every role and responsibility to develop targeted messages and recommended actions.

With such a complex care team, it is also difficult to determine the targeted settings for improvement efforts to focus on. What should occur in the hospital during the patient stay and at discharge? What should occur in the outpatient setting? What should take place in the patient’s home? H2H has emphasized the need for improvements in every setting wherever the patient goes. Hospitals continue to be the ideal area for improvement because they initiate the discharge process.

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**Table 1: The ‘See You in 7’ Goals**

| #  | Success Measure                                                                 |
|----|---------------------------------------------------------------------------------|
| 1. | The hospital discharge process is successful if                                 |
|    | Heart failure and myocardial infarction patients are identified prior to discharge and risk of readmission is determined |
| 2. | Follow-up visit is scheduled or cardiac rehab referral is provided within seven days and documented in the medical record |
| 3. | Patient is provided with documentation of the scheduled appointment (e.g. appointment card) |
| 4. | Possible barriers to keeping the appointment are identified in advance, addressed, and documented in the medical record |
| 5. | The follow-up clinic or cardiac rehab appointment is successful if              |
|    | Patient arrives at appointment within seven days of discharge from hospital     |
| 6. | Discharge summary (including summary of hospitalization, updated medication list) is available to follow-up clinician |
| 7. | Patient brings his/her medications or a medication list to clinic visit         |
| 8. | Reason for referral is available to cardiac rehab center and patient brings referral letter or clinician prescription |

Distilled from the H2H community, published literature, and other sources. Through the Challenge, the H2H community is asked to try a recommended strategy or tool and share experience by participating in webinars, the listserv, and surveys.

The first H2H Challenge launched in March 2011 on the topic of improving early follow-up after hospitalization under the title ‘see you in 7’ (SY7). The rationale for early follow-up is to bring together the aspects of both inpatient and outpatient care in the days immediately following the patient’s discharge, which is considered a critical time that can impact on rehospitalization rates. Care is often complicated and coordination is important to prevent readmissions; often there are additions or changes to therapies used within the hospital that have an unknown effect or may even worsen the patient’s clinical status, or other comorbid conditions that require early intervention.

Timely follow-up by either primary care physicians, specialists, or any member of the healthcare team is important. Elucidating a list of symptoms that may indicate the condition is worsening and providing instructions for how to respond to these circumstances is, furthermore, essential. Other elements of early follow-up that are considered important are establishing communications between sending and receiving clinicians, as well as the follow-up visit as a natural opportunity for reconciliation of medications. It is also an opportunity to review outstanding tests and follow-up plans and to discuss monitoring signs and symptoms that would be indicative of worsening conditions that require attention.

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and the transition period, but attention also needs to be given to other settings. Even though there are incentives for the hospital to make improvements, ownership and responsibility are shared among all clinicians, non-clinical providers, patients, and payers.

Perhaps the most important lesson learned from H2H is the difficulty in rolling out a national quality initiative regarding which there is such a wide variety of problems in reducing readmissions and improvement strategies. There are many related parallel programs to H2H, such as the Best Practices for Better Care program from the Association of American Medical Colleges. This program is designed to reduce readmissions through contacting high-risk patients, counseling them on medications, and providing follow-up care, in addition to documenting follow-up and reporting compliance. Another program, Project BOOST from the Society of Hospital Medicine, is designed to identify high-risk patients, reduce patient readmission and length of stay, and improve satisfaction, as well as improving communication between hospitals and outpatient providers. The State Action on Avoidable rehospitalizations (sTAAr) initiative from the IHI is designed to reduce rehospitalizations in Massachusetts, Michigan, Ohio, and Washington by engaging payers, state and national stakeholders, patients, families, and caregivers at multiple care sites and clinical facilities. As a learning community and a rich resource, H2H tries to share information about all these programs with H2H participants, but the possibilities can be overwhelming and knowing what to do and how to get started can be unclear.

Despite these challenges to reducing readmissions and implementing a national quality initiative, H2H is thriving as a very active and engaged learning community of over 1,000 facilities and over 2,000 individuals. Contributions to the Listserv, participation in webinars, and activity on the H2H website all reflect the increased interest in this issue and a commitment to improvement.

Hospitla to Home’s Future

The primary focus of the first two years of H2H (2009–2010) was to build awareness and to build a community of individuals, facilities, and organizations committed to reducing hospital readmissions and improving transitions of care. We continue to do this as we roll out the Challenge projects in 2011 and 2012. Through the ACC chapters in every state, aligned with the IHI sTAAr initiative, we also hope to enable and equip leaders and communities at different levels of readiness to address unnecessary hospital readmissions in patients with heart failure and MI. Implementing best practices may start with establishing the H2H learning community, but the future of H2H and one of its contributions to future national quality initiatives will be from outreach efforts within communities to take action at the local level.

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