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Case Study

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Intermountain Healthcare's McKay-Dee Hospital Center: Driving Down Readmissions by Caring for Patients the "Right Way"

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Vital Signs

Hospital: McKay-Dee Hospital Center

System: Intermountain Healthcare

Location: Ogden, Utah

Type: Private, nonprofit hospital

Beds: 352

Distinction: Top 3 percent in low readmission rates for heart attack, heart failure, and pneumonia patients, among more than 2,800 hospitals eligible for the analysis.

Timeframe: October 2007 through September 2008. See Appendix A for full methodology.

This case study describes the strategies and factors that appear to contribute to a low readmission rate among patients at McKay-Dee Hospital. It is based on information obtained from interviews with key hospital and system personnel, publicly available information, and materials provided by the hospital during March through August 2010.

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SUMMARY

McKay-Dee Hospital Center in Ogden, Utah, part of the Intermountain Healthcare System, had readmission rates in the lowest 3 percent of hospitals across the nation for all three clinical areas reported to the Centers for Medicare and Medicaid Services (CMS) for the selection period, and its heart failure and pneumonia readmission rates were within the best 1 percent of hospitals reporting (Exhibit 1).

McKay-Dee's success may be attributed to the following:

- comprehensive quality improvement strategies, supported by extensive, systemwide clinical research and training in evidence-based care;
- standardization of care through "care process models," or clinical protocols, and heavy use of hospitalists;
- information systems designed to monitor quality;
- interdisciplinary care coordination and discharge planning with individualized patient education and scheduling of follow-up appointments before discharge;
- comprehensive identification of heart disease patients for education, post-discharge phone calls, and referral to the outpatient heart failure clinic;
- integration with community providers, both within and outside of Intermountain's network, which provides a continuum of care and helps ensure patients are connected with a medical home; and
- Intermountain's role as a leader in health care delivery and payment innovations, exemplified in its involvement with pilots of bundled payment/accountable care arrangements.

The Intermountain Healthcare System is a highly integrated system with multiple hospitals, primary care practices and clinics, an outpatient heart clinic, home health service, and a renowned clinical research institute. Membership in this system provides clear advantages in terms of shared resources and expertise, and enhanced communication across care settings. Nevertheless, McKay-Dee's experiences provide lessons for other hospitals and systems—even less-integrated entities—that are striving to reduce readmission rates as well as improve outcomes and maximize systemwide efficiencies.

First, McKay-Dee Hospital Center and Intermountain Healthcare operate on the premise that lower readmission rates, better quality measure scores, and financial savings are not the primary focus of their efforts, but rather byproducts of caring for patients correctly. Second, alignment of hospital care with outpatient care improves transitions and health outcomes. Third, it is critical to select and nurture physician leaders who embrace a hospital's quality measurement and reporting philosophy. If other physicians do not respond through medical leadership and incentives, it may be necessary to hold them to a higher level of accountability to encourage their adherence to clinical protocols. Current payment policy that rewards volume rather than clinical outcomes conflicts with some of these desired practices. Over the long term, changes to the incentives in the health care system are needed to align goals across hospitals and other stakeholders.

WhyNotTheBest.org
Readmissions Case Study Series

Nearly one of five elderly patients who are discharged from the hospital in the United States is rehospitalized within 30 days. Evidence suggests that many of these readmissions are avoidable, caused by complications or infections from the initial hospital stay, poorly managed transitions to post-acute care, or recurrence or exacerbation of symptoms of their chronic diseases. In addition to taking a physical and emotional toll on patients and their families, avoidable readmissions are extremely costly.

Reducing readmissions has become a priority among health care providers, health plans, government, and other stakeholders. Readmission rates for three clinical areas—heart failure, heart attack, and pneumonia—are collected and publicly reported by the Centers for Medicare and Medicaid Services and other organizations. The risk-adjusted readmission rates show significant variation across hospitals, indicating that some hospitals are more successful than others at addressing the causes of readmissions. This case study is part of a series that highlights best practices among hospitals.

Exhibit 1. 30-Day Readmission Rates for McKay-Dee Hospital

Condition	National Average	Top 10%	McKay-Dee Hospital Center
Heart Attack	19.97%	18.40%	17.70%
Heart Failure	24.74%	22.40%	19.30%
Pneumonia	18.34%	16.50%	13.70%

Note: All-cause 30-day readmission rates for patients discharged alive to a nonacute care setting with principal diagnosis. Reporting period: Q3 2005 to Q2 2009.
Source: www.WhyNotTheBest.org, accessed Sept. 28, 2010.

INTERNAL AND EXTERNAL ENVIRONMENT

The Hospital

McKay-Dee Hospital opened its doors in Ogden, Utah, 100 years ago. Located 40 miles north of Salt Lake City, McKay-Dee serves northern Utah and portions of southeast Idaho and western Wyoming. It is the third-largest hospital in the Intermountain Health System and the fourth largest in the state, with 352 licensed beds and approximately 3,000 employees.

A nonprofit secondary and tertiary care facility as well as a trauma and referral center, McKay-Dee has about 63,000 emergency department visits per year. The hospital has a small family practice residency program, and relies heavily on hospitalists to care for inpatients. The facility was built at its current site in 2002, and was running at about 70 percent occupancy in early 2010.

About one-quarter of the 415 doctors who actively admit patients to McKay-Dee are employed by Intermountain Healthcare, and their admissions generate about half of the hospital's revenue. Many physicians—from the health system as well as non-Intermountain community clinicians—have their offices and clinics in the hospital's physician office wing, which is organized so that outpatient clinics are adjacent to the related inpatient floors. For example, the heart failure clinic is on the same floor as the unit where most of the heart failure patients are admitted.

The System

Intermountain Healthcare is a Utah-based, integrated system of 23 nonprofit hospitals, 155 clinics, a medical group with nearly 800 employed physicians, home care, hospice, and other health services. Intermountain also owns or supports 17 community and school-based clinics serving uninsured and low-income patients.

Intermountain's hospitals account for 38 percent of hospital beds and 54 percent of discharges in Utah. Since 1983, Intermountain has owned a health insurance plan, SelectHealth, which serves about 23 percent of the market (about the same size as Utah's Blue Cross Blue Shield plan).

Intermountain is widely known as a pioneer in providing evidence-based care and improving the quality of care. It began to conduct formal studies on quality, utilization, and efficiency in 1986. In 1990, the system established the Institute for Health Care Delivery Research, directed by Brent James, M.D. The Institute, with an annual budget of approximately $5 million, provides technical support and education for clinical research and process management (see sidebar).

Intermountain's horizontally and vertically integrated structure promotes a "systemness" that may help reduce readmissions in a number of ways. For example, Intermountain has invested approximately $2 billion in infrastructure in the last 10 years, with heavy investment in health information technology (HIT). Its electronic medical record (EMR) system improves communication within and across Intermountain hospitals, physicians, and specialists, which helps patient transitions from one setting to another. If given permission, non-Intermountain physicians are able to log in to the Web-based EMR to view their patients'

Conversation with Brent James, M.D., Executive Director of Intermountain's Institute for Health Care Delivery Research

Intermountain Healthcare system established the Institute for Health Care Delivery Research in 1990, though the Institute's leaders had been conducting studies in clinical quality, cost, and efficiency at Intermountain since the mid-1980s. The Institute integrates and analyzes administrative and clinical data from Intermountain facilities and supports quality improvements throughout the system. It also conducts quality training and leadership programs for Intermountain medical directors and other clinical staff.

"We learned early on that narrowing variation improves clinical outcomes," said Brent James, M.D., executive director of the Institute. "And we demonstrated that quality drives savings."

Intermountain's researchers and clinicians developed an outcomes tracking and reporting system to identify and collect data in each of its nine clinical programs. The data system measures medical outcomes, cost, satisfaction, and other performance indicators. Based on these data, the researchers identify priority areas for improvement. Fourteen Development Teams, each focusing on a different condition and comprising frontline professionals and a physician leader, develop "care process models" and test protocols with clinical staff to promote buy-in and ownership. If the protocols are successful, the teams help deploy them throughout the Intermountain system. The teams track variances in processes and outcomes, and check regularly to see whether further changes to the protocols are needed. "Care process models change every month," said James.

Looking ahead, James and his colleagues will be testing the concept of accountable care organizations. Through pilot programs in which Intermountain is partnering with health plans and labor unions, they will implement and evaluate "bundled payments" for certain episodes of care (e.g., the entire pregnancy/labor/delivery/postpartum period). James said these pilots will "test the ability of the system to manage quality and cost."

Source: Interview with Brent James, March 4, 2010.

records. Also, having its own home health network improves coordination between Intermountain hospitals and home health providers.

All Intermountain hospitals share the philosophy that clinical excellence drives decision-making—an understanding that it's best to "do the right thing" to improve quality, even if it adds costs or reduces revenues. For example, McKay-Dee built an outpatient heart clinic (discussed below), despite the likely reduction in downstream revenue for the hospital, and Intermountain started its own home health network, requiring significant investment. Similarly, after reviewing data showing increased mortality rates among babies born before 39 weeks of gestation, Intermountain ceased performing elective preterm births, even though this resulted in reduced NICU utilization and its associated revenue.[1]

According to McKay-Dee's leaders, strategic financial management is handled primarily at the Intermountain system level, enabling individual hospital boards to focus on quality, safety, and medical staff issues.

[1] See *Reducing Inappropriate Induction of Labor: Case Study of Intermountain Health Care* (New York: The Commonwealth Fund, Oct. 2004).

Intermountain also has regional quality committees, with members drawn from all system hospitals. The committees discuss quality issues and share best practices, with support from 14 systemwide Development Teams as well as research/data expertise from the Institute for Health Care Delivery Research.

The Region

Utah is the lowest-cost state in the nation in terms of health spending per capita and also has the lowest percent of avoidable hospital costs.[2] James suggests that this is in part because of Intermountain's long record of quality and cost measurement and initiatives, which has influenced its competitors to reduce costs as well. Another factor may be the very low rate of tobacco and alcohol consumption among Utahns. Health care providers in Utah undoubtedly benefit from a higher than average median income, lower than average cost of living, and a rate of employer-sponsored insurance well above the national average.

McKay-Dee has about 46 percent market share in its region. Its biggest competitor is Ogden Regional Hospital, which is owned by the Hospital Corporation of America.

PRIMARY FOCUS ON CLINICAL EXCELLENCE

While many hospitals focus their quality improvement efforts on raising their scores on the CMS core measures, McKay-Dee leaders think these are the wrong target. "Here, we target the problem itself. We focus on treating the whole patient. If we do things correctly, then the scores will take care of themselves," said Garry MacKenzie, M.D., medical director of cardiology services at McKay-Dee. The hospital did not set out to reduce readmissions; instead, leaders view its low readmission rates as an outgrowth of its commitment to improving quality and taking care of the patient. "We do the right thing while people are here," said McKay-Dee CEO Timothy Pehrson.

[2] www.statehealthfacts.org and The Commonwealth Fund 2009 State Scorecard.

Improvement Processes and Standardized Care

Much of McKay-Dee's quality improvement work is initiated by system-level Quality Councils. Four regional councils set priorities and standards, often based on research and practice findings spearheaded by the Institute. Quality Councils also translate their findings into clinical protocols, which are then tested, adapted, and spread by Development Teams made up of frontline staff from across the system. Further refinements occur as the protocols are implemented.

Standardization is a tenet of McKay-Dee's improvement work. The hospital standardizes processes, monitors practices and outcomes, and seeks to reduce variation in both. In particular, it has focused on processes that reduce complications and infections, thereby reducing readmissions. For example, new evidence on five classes of medications for heart disease patients led to nurse discharge protocols that include a medication checklist. Appropriate medication compliance increased from 57 percent to 98 percent, and both mortality and readmission rates declined among these patients, according to James.

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>
> Garry McKenzie, M.D., medical director of Cardiology Services

McKay-Dee's use of hospitalists also promotes standardization. Hospital leaders find it easier to train and influence the behavior of a small group of full-time physician employees than large numbers of community physicians. McKay-Dee employs 14 hospitalists, who together manage the care of about 33 percent of the medical/surgical population. Medical staff leaders would like to expand the use of hospitalists, but feel they need to do so in an incremental way; they acknowledge that not all patients want to give up their community doctor while in the hospital, and some

doctors like to retain control of their patients when they are admitted.

McKay-Dee makes its mission to deliver high-quality, patient-centered care operational by giving department chiefs and nurse managers responsibility for the quality of care within their clinical areas and promoting strong nurse–physician relations, whereby nurses know they are partners with physicians and have their support.

Since 2008, McKay-Dee has been working to integrate the principles of Lean manufacturing to health care.[3] It is using process improvement tools to eliminate waste as well as a management system that hardwires improvement activities into the daily work of administrators and staff. Each unit of the hospital is involved in focused improvement projects, facilitated by one of five management engineers. Each unit also has an Idea Board, to which employees can submit process improvement suggestions. To participate, an employee identifies a problem and recommends a solution; if given approval by their manager, the employee does the work necessary to implement the solution. Over 1,900 employee ideas have been implemented in the past two years.

Measurement and Accountability

At McKay-Dee, transparency is a cornerstone of improvement strategies. Administrative and clinical leaders describe the hospital's efforts to become more transparent as "a journey." Extensive internal data reporting started in the mid-1990s. Each hospital unit gets a monthly report summarizing its performance on many indicators over time, compared with benchmarks and goals. It shows where practices deviate from standards and expectations, in some cases providing startling news to clinicians who were unaware of the discrepancies. In addition, each quarter some physicians (including those who work in general medicine, the emergency department, hospitalists, and soon intensivists) receive report cards showing a range of indicators related to their patients, compared with goals and Intermountain system averages. Exhibit 2 shows part of a physician's report card related to readmission rates at 30/60/90/360 days after discharge.

At first, physicians questioned the accuracy of the performance data that Intermountain data analysts collected from the system and presented to them. Over two to three years, they came to accept and trust the numbers, and now some medical chiefs post the report cards in their departments. Leaders say that early successes helped promote this shift. For example, simple changes in infection reduction strategies led to reduced numbers of infections, and people began to believe in the data.

McKay-Dee also compiles a report card for hospitalists, which is shared with them each month. It compares hospitalists as a group to McKay-Dee physicians overall, and to Intermountain's goals for numerous measures related to service (e.g., doctor explained things well to patient), clinical targets (e.g., readmission rates, appropriate screenings and vaccinations), and operational effectiveness (e.g., average daily billed encounters).

Department chiefs have a "chat" with any physician who has failed to fulfill a certain care protocol or is an outlier in any particular measure. In addition, all readmissions within 30 days are reviewed by a hospital quality consultant and then in a peer review. Clinical and administrative leaders say that the report cards have been very successful at modifying physicians' behaviors over time. However, not all physicians have been responsive. McKay-Dee wants to expand the information provided to surgeons in order to address some lagging surgical care measures.

For some conditions, information is compiled and shared very quickly. For example, the "time to treatment" for acute myocardial infarction patients is reported to managers and passed on to the rest of the staff within 72 hours. This enables staff to make timely changes to the care process. Then, quarterly roll-ups of the data help them to see the patterns.

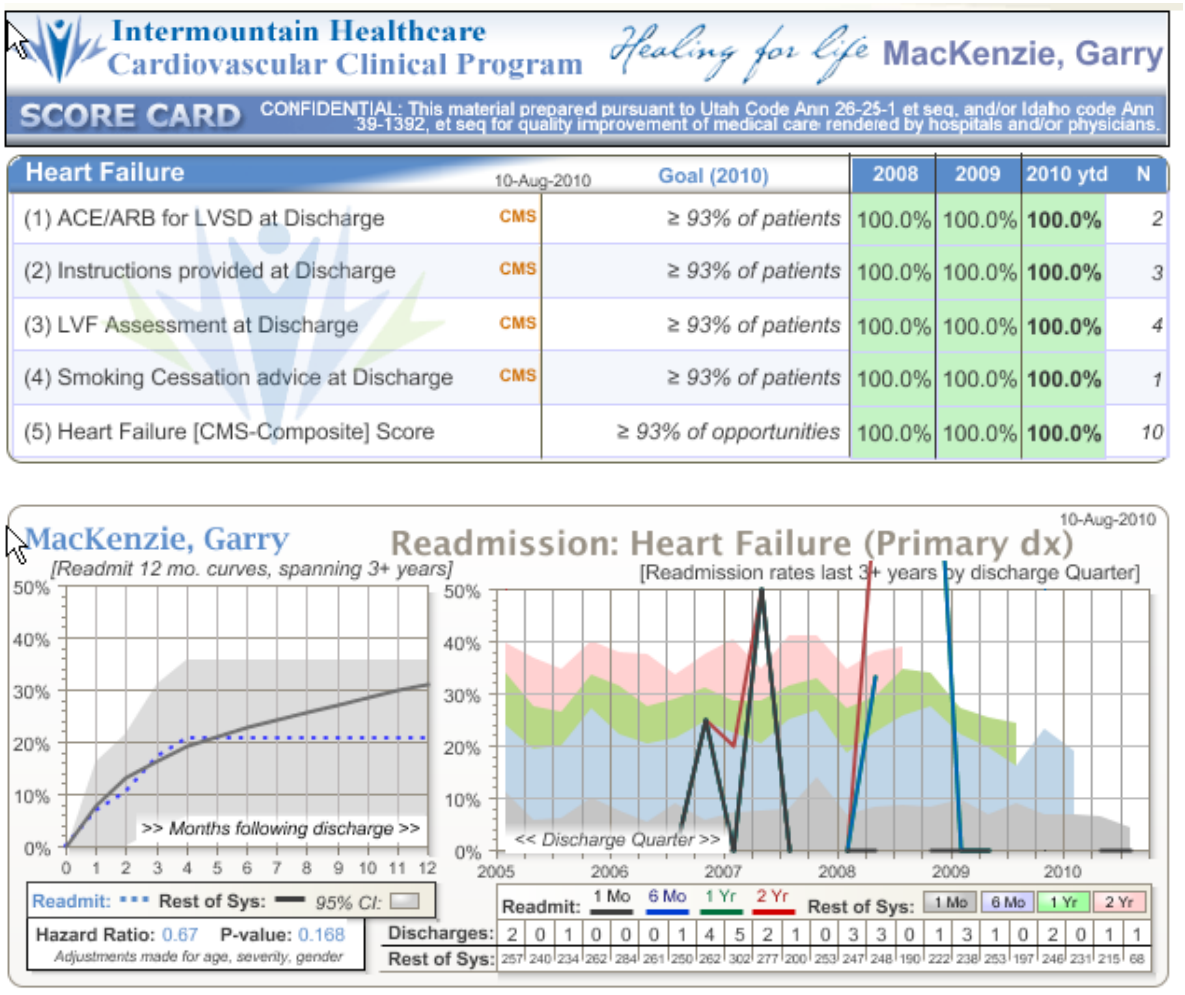
For certain measures, registered nurses acting as quality consultants abstract data from patients' charts

[3] Lean, first used in the Japanese automotive industry and now translated for use by the U.S. health care sector, focuses on increasing value and decreasing waste in administrative and clinical processes.

shortly after they are discharged, instead of waiting for monthly or quarterly performance reports. For example, they review charts for all heart failure patients to see whether all steps related to medications, activity, weight, diet, and symptoms were addressed during the hospital stay. When they discover failures in adherence to protocols, they drill down to determine causes. McKay-Dee is the only hospital in the system that uses highly trained registered nurses in this role; they believe doing so is worthwhile because registered nurses are better able than clerical staff (i.e., non-nurses) to interpret and analyze what went wrong.

Moving from accepting data to being accountable for improving their performance is the next phase for McKay-Dee's clinicians. Medical leaders say that this culture shift has just begun. As an important step, McKay-Dee recently introduced financial incentives—equivalent to 5 percent to 10 percent of salary—for employed physicians who meet two clinical goals. The hospital has found that, after physicians reach the goals, they tend to maintain that higher level of performance because behaviors and systems are changed in the process. Physicians report that the hospital supports their ability to earn their bonuses by providing data and guidance.

Exhibit 2. McKay-Dee Physician Report Card: Readmission Rates



Source: McKay-Dee Hospital, March 2010.

Exhibit 3. Sample Personalized Medication List

Date: February 19, 2010

Please keep this record of your current medications in your wallet or purse. Update it when medications are added or stopped. This will help others to better assist you in the future.

Medication	Reason	Dose	How to Take	AM	Lunch	PM
Diltiazem	Heart Rate	180 mg	Once daily		X	
Potassium	Electrolytes	10 meq	Twice daily	X	X	
Lasix (furosemide)	Water Pill	40 mg	Twice daily	80	80	22-Feb
Spironolactone	Water Pill	50 mg	Twice daily	X	X	
Synthroid (levothyroxine)	Thyroid	150 mcg	Once daily	X		
Colace	Stool Softener	100 mg	Twice daily	X		X
Pravachol	Cholesterol	20 mg	One pill once daily			X
Aspirin (ASA)	Clot Prevention	81 mg	Once daily	X		
Prevacid	Stomach Acid	15 mg	Once daily			
Dilantin	Seizures	100 mg	3 pills once daily			X
Coumadin	Clot Prevention	5 mg	**Once daily as prescribed per CAC**		X	
Allopurinol	Gout	300 mg	Once daily	X		
Ambien	Sleep	10 mg	Once daily			X
Metolazone	Water Pill	2.5 mg	See below	X		

Other instructions:

1. Metolazone 2.5mg Mon & Thurs only as of 2/25

Source: McKay-Dee Hospital, 2010.

CARE TRANSITION STRATEGIES

Interdisciplinary Care Coordination and Discharge Planning

McKay-Dee employs a number of strategies to promote smooth transitions from the hospital to post-acute care and thereby reduce avoidable readmissions. On the day of admission, every patient is assigned a nurse case manager and social worker to assess his or her needs and plan for discharge. They examine what triggered the admission, available family supports, finances, and medical history. If a patient cannot afford his or her medications, one of the outpatient pharmacists helps register him or her with a pharmaceutical manufacturer's free or low-cost medication program. The case manager coordinates with the patient's insurance company to create a plan for discharge, taking into account the support that will be required. If patients are members of Intermountain's insurance plan, the insurer has access to their electronic medical records.

The case manager closely coordinates follow-up care with home health agencies when necessary. Intermountain created its own home health network to improve coordination between the hospital and home health providers; inadequate support or attention to changes in condition can land someone back in the hospital. After starting their home health service in 1963, Intermountain experienced a significant decline in admissions and readmissions.

Seeking to better coordinate care and identify at-risk patients, McKay-Dee began daily, interdisciplinary care coordination meetings in late 2009. Case managers, floor nurses, social workers, hospitalists (who stay only during review of their own patients), and sometimes pharmacy staff meet to discuss each patient on their unit. Participants review when patients are going home, their needs, discharge issues needing attention such as home care, and whether patients have heart failure, which would trigger heart failure education and care protocols.

In addition, nurses write the estimated discharge date and goals for discharge on white boards in patients' rooms, to help prepare patients and their families for the transition.

Hospitalists schedule post-discharge follow-up appointments for their patients. For nonhospitalist patients, the case manager, social worker, or nursing staff facilitates follow-up appointments as needed. All Intermountain-employed, nonsurgical community physicians are required to see discharged patients within a

week of discharge. The discharge plan includes referral to the outpatient heart failure clinic (described below) when appropriate, although participation is voluntary.

For patients who do not have a regular source of care in the community, the hospitalist or case manager can leverage McKay-Dee's membership in a highly integrated system to link patients to community providers. Referring to its network of physician practices and clinics, one of the health system's leaders noted, "We can find a [medical] home for anyone. Without this system alignment, some patients could be difficult to place."

Finally, nurses call all heart failure, catheter, and hospitalist patients after discharge to identify and address problems before they are serious enough to require readmissions. If they are unable to contact a heart failure patient, they send him or her a letter reviewing follow-up and discharge instructions and providing telephone numbers to use to contact someone with concerns or questions.

Patient Education and Engagement

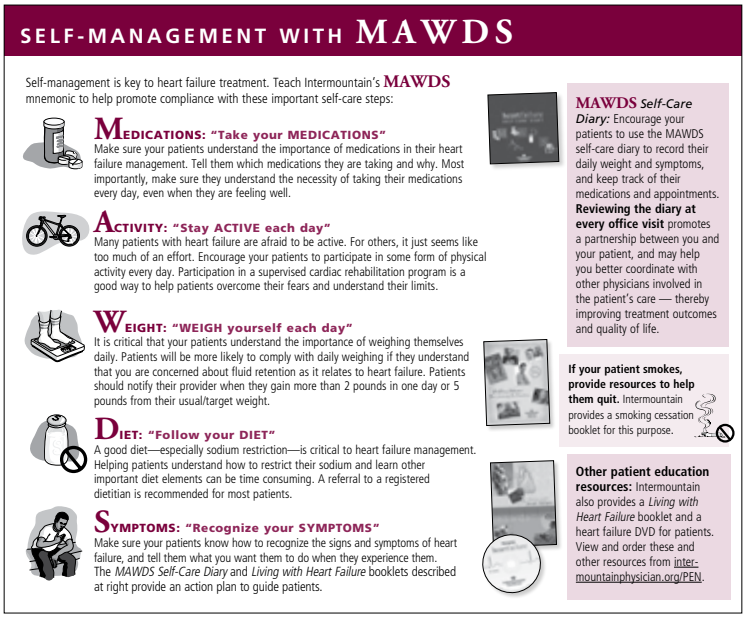
A patient education expert on the heart failure clinic staff trains McKay-Dee nurses on educational techniques, including how to take into account patients' unique learning styles and needs. For example, nurses learn how to assess patients' readiness to learn and use words they are likely to understand. They conduct medication education and give each patient a customized list describing the purpose and timing of each of his or her medications (Exhibit 3).

Identification and Management of Heart Disease Inpatients

While consistently providing the right care helps achieve low readmission rates, McKay-Dee has found that heart failure patients require more extensive interventions than either pneumonia or heart attack patients.

Over the past 20 years, McKay-Dee has worked to standardize its approach to heart failure care, adding one component after another until it has achieved strong results. First, staff seek to identify and educate every patient with heart disease—the underlying condition behind a large portion of avoidable readmissions nationwide. Its computer system flags patients who have a history of heart failure, even if is not their current primary diagnosis or the condition is inactive. Previously, coders had missed patients if heart failure

Exhibit 4. The MAWDS Heart Failure Patient Education Mnemonic



Source: Intermountain Healthcare, 2009.

> *We can find a [medical] home for almost anyone. Without this system alignment, some patients could be difficult to place.*
>
> Charlotte Foy, Quality and Case Management Director

was low on the list of their diagnoses. Pop-up alerts in the computer system remind staff of the need to educate heart failure patients on their medications and activity and to monitor their weight, diet, and symptoms to report to their physician. Intermountain developed and implemented this MAWDS mnemonic to remind staff and patients to pay attention to these factors (Exhibit 4).

Heart disease patients leave the hospital with targeted handouts about post-hospital care for their condition. A McKay-Dee nurse calls patients who have heart failure as their primary diagnosis seven to 10 days after discharge to ask about their understanding and adherence to the MAWDS guidelines, including whether they are tracking their weight in the diary they were given at discharge. Intermountain has a foundation that purchases scales for heart failure patients who cannot afford them so they can monitor their weight at home. Even a small reported change in weight triggers a follow-up visit, scheduled while the patient is on the phone.

Another of McKay-Dee's strategies to manage heart disease care is to concentrate cardiovascular disease (CVD) patients on a single floor. The nurses on this floor work exclusively with CVD patients, so they know the care protocols well and are less likely to overlook the guidelines than when CVD patients are mixed in with other patients.

Post-Discharge Follow-Up: Outpatient Heart Failure Clinic Manages Those at Risk for Readmissions

In addition to careful management and discharge of heart disease patients, McKay-Dee has an outpatient heart failure clinic, which hospital leaders consider key to preventing readmissions among this population. First proposed by the hospital's chief cardiologist in the early 2000s, the clinic opened in 2007 to provide follow-up care and manage heart failure patients, particularly the most complex cases, with the mission of keeping them out of the hospital. Patients can be referred to the clinic at discharge or from the community. Clinic staff maintain contact with each patient's primary care physician, aiming to be a resource rather than a substitute for community physicians. They view ongoing management of patients' care as a collaborative effort.

Clinic staff seek to keep heart failure under control through early interventions, patient education through the MAWDS approach, and family involvement in care. The clinic's on-site location at McKay-Dee has clear advantages. For example, clinicians can send an outpatient with high fluid levels, or "overload," directly to the McKay-Dee intravenous clinic. Successful fluid reduction avoids admission into the hospital.

The heart failure clinic is also very effective at working with community and Intermountain's palliative care and hospice programs. Building a good relationship with patients and their families through the clinic makes it possible for caregivers to have difficult discussions about end-of-life care.

Finally, a clinic nurse provides community-based education to seniors at least twice a month. She visits senior citizen residences, home care agencies, women's lunch groups, and other venues to talk about preventive care and heart disease management. By raising understanding of the disease, Intermountain hopes to promote prevention and self-care.

Administrators understand that controlling heart disease and keeping patients out of the hospital reduces revenue. Increasingly, however, financial incentives are aligning with better care: rising numbers of uninsured as well as declining Medicare payments and nonpayment from Medicare for readmissions within 30 days are beginning to make health maintenance more financially sound than hospitalization.

Pioneering Delivery and Payment Reforms

Instead of waiting for government-funded demonstrations, directives, or reimbursement policies, Intermountain is proceeding with its own tests of payment and delivery reforms intended to promote high-quality, efficient care. For example, the health system is piloting three elements of a "shared accountability organization." In one, a large payer will reimburse an Intermountain hospital a single bundled payment for pregnancy, labor, and delivery services. A second pilot involves bundled payments for hip, knee, and heart services.

In the third pilot, patient-centered medical homes will be rolled out in three clinics: South Ogden (primary care medicine; Intermountain owned, employed physicians); Holladay Pediatrics (Intermountain owned, employed physicians); and the Central Utah Medical Clinic (independent, large specialty practice). It initially involves a "coordination fee" for all patients insured through the Intermountain SelectHealth health plan, including approximately 5,000 patients per practice. The health system plans to expand the medical home pilot in three ways: 1) add eight large practices; 2) gradually expand the "coordination fee" (essentially a retainer) to include preventive services, followed by certain acute conditions, followed by chronic disease management; and 3) possibly institute a Medicare Part C capitated payment.

RESULTS

McKay-Dee Hospital Center is one of only eight hospitals nationwide with more than 50 beds that has readmission rates in the lowest 3 percent in all three clinical areas reported by CMS—heart attack, heart failure, and pneumonia.

Three other Intermountain hospitals are also in the lowest 3 percent in readmission rates in at least two of the three clinical areas. Given the systemwide emphasis on quality improvement, it is not surprising that several Intermountain hospitals achieve such low readmission rates. Yet, there is some variation across Intermountain hospitals on this measure, which may be due to differences in the amount of time a hospital has been part of the system as well as differences in the speed of adoption of practice guidelines among the hospitals. The uneven use among hospitals of highly trained nurses for quality improvement may also contribute to the variation. But with Intermountain's efforts to encourage hospitals to standardize care, the quality gaps may narrow over time.

Appendix B shows McKay-Dee's performance on the process-of-care "core" measures, patient experience measures, mortality rates, and readmission rates reported on WhyNotTheBest.org, compared with national averages and the top 10 percent of hospitals. Other than the exceptional readmission rates, McKay-Dee scores generally fall between the national average and the top 10 percent. Some scores, such as surgical care process-of-care measures, are below national averages.

This may be in part because of skepticism at Intermountain about the value of the specific core measures reported.[4] Brent James claims that a significant number of the core measures are unrelated to quality outcomes, so Intermountain chooses to work on only some of them. The health system has developed its own, broader set of process and outcome measures and goals, which it believes indicate a truer picture of a hospital's performance.

Nevertheless, administrative and clinical leaders admit that their performance on the surgical process-of-care measures, while it has been improving, is not as good as it should be. They report that surgeons are used to doing things their own way, and are often resistant to standardized processes or guidelines. "We're still fighting that battle," said chief medical officer Richard Arbogast, M.D. To encourage improvement, they are creating a balanced scorecard that presents both CMS and other surgical measures to surgeons and also will expand financial incentives to surgeons to meet certain quality targets.

Staff note that McKay-Dee's patient experience scores have been rising—nearing the top 10 percent of hospitals on several indicators. They say that hospital

[4] See http://www.jointcommission.org/assets/1/18/A_Comprehensive_Review_of_Development_for_Core_Measures.pdf.

staff have been working to ensure patients know they are committed to delivering the best-quality care.

LESSONS

McKay-Dee's membership in the highly integrated Intermountain health system provides clear advantages in terms of shared resources, expertise, and streamlined communication among care settings. However, the hospital's experience yields a number of valuable lessons for other hospitals and systems—even less-integrated entities with fewer resources and a shorter history of performance improvement—that are striving to reduce readmission rates as well as improve outcomes and enhance efficiencies.

Care for patients correctly and readmission rates fall, performance improves, and savings are realized as byproducts.

Intermountain does not "work on readmissions." The philosophy that has succeeded for them is: take care of the whole patient throughout the entire episode, provide the best care, and the numbers take care of themselves.

A hospital committed to providing the best care must be prepared to make investments and decisions that may result in higher costs over the short term. For example, McKay-Dee built an outpatient heart clinic, despite the likely reduction in downstream revenue for the hospital. Intermountain ceased performing elective preterm births after documenting that they result in increased mortality, even though this resulted in reduced NICU utilization and its associated revenue; created and funded a health care delivery research institute; and started its own home health network, which required significant investments.

Intermountain leaders report that most of these investments and decisions have resulted in savings to the health care system—not to mention better-quality care—over the long run. Also, the health system recoups some of the lost revenue from such decisions through contract negotiations with health plans; according to James, Intermountain negotiates higher reimbursements by demonstrating that they achieve systemwide savings.

Even if a hospital does not have Intermountain's long history of quality improvement, it can choose a few priority areas, build data systems to measure outcomes (generally using existing systems, rather than starting from scratch), test new care processes, and then build them into daily protocols. A key is to standardize and simplify processes, so they are easy to follow consistently.

Aligning hospital care with primary care networks or outpatient care settings can improve transitions and outcomes, and help reduce readmissions.

Transitions between care settings—from the hospital to home or an outpatient care facility—can be facilitated through an integrated system in which outpatient care is aligned with hospital care. Integration does not necessarily require hospitals to own outpatient care facilities. Intermountain has partnerships with community clinics in low-income neighborhoods, which enables it to connect patients to medical homes.

In addition, the integration of community practices with hospitals promotes follow-up care. Intermountain physicians must see patients within one week of discharge. Intermountain's network includes other services, such as a home health service and heart failure clinic, that also help to improve care transitions and reduce avoidable readmissions.

Select and nurture physician leaders who embrace the measurement and reporting philosophy.

McKay-Dee's experience suggests that both physician tenure and leadership make a difference. Physicians and administrators who have been with the hospital a long time have developed mutual trust, and are therefore more amenable to new policies and practices that achieve shared goals. The hospital has also found that strong physician leaders are necessary to bring other physicians along. As a result, Intermountain hires medical directors based largely on their leadership poten-

tial, and then requires them to go through Intermountain's quality leadership training.

Establish goals and hold physicians accountable.

Changing culture and behavior takes time. Despite their long history of data collection, analysis, and improvement efforts, the McKay-Dee leadership team admits they have not fully stepped up to changing physician behaviors. They have focused on educating physicians and other clinical staff, establishing standardized care processes, and comparing performance; the next steps would be to establish goals and then hold physicians accountable for meeting them.

Different financial incentives are needed to encourage hospitals to work to reduce readmissions.

Intermountain leaders point out the perverse nature of the predominant fee-for-service payment system: the better you treat people, the less they need to go the hospital—but hospitals need patients to survive. They are trying to change incentives within their system. At Intermountain's heart clinic, the physician and nurse directors are salaried, so they have no incentives to expand utilization of inpatient or outpatient services.

They also recognize that the federal government is trying to change incentives in the larger health care system. Medicare's nonpayment for readmissions within 30 days of discharge for the same diagnosis, as well as its support for pilots of medical homes, bundled payments, and accountable care organizations, are beginning to align incentives to reward quality and outcomes instead of volume.

Meanwhile, Intermountain is piloting elements of its shared accountability organization plan, hoping to illustrate it can balance high-quality care with cost. James believes that in the long term, the health care system must shift from fee-for-service capitation to bundled payments to promote health rather than utilization; only this will push providers to organize care and deliver patient-focused care across health care settings, he says.

FOR FURTHER INFORMATION

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Appendix A. Selection Methodology

The primary selection criterion for case studies of high-performing hospitals in readmissions was: the hospital was in the top 3 percent of hospitals with 50 or more beds in terms of lowest readmissions for at least two of three clinical areas (heart attack, heart failure, and pneumonia).

The calculations were based on data reported on the Center for Medicare and Medicaid Services (CMS) Hospital Compare Web site and The Commonwealth Fund's WhyNotTheBest.org Web site. Readmissions rates are based on Medicare patients readmitted to a hospital within 30 days of discharge from a previous hospital stay for heart attack, heart failure, or pneumonia. Readmissions rates used for selection were based on the October 2007 through September 2008 period.

According to the CMS Hospital Compare site:

- The three readmission models estimate hospital-specific, risk-standardized, all-cause 30-day readmission rates for patients discharged alive to a non–acute care setting with a principal diagnosis of heart attack, heart failure, and pneumonia. For each condition, the risk-standardized ("adjusted" or "risk-adjusted") hospital readmission rate can be used to compare performance across hospitals. The readmission measures for heart attack, heart failure, and pneumonia have been endorsed by the National Quality Forum (NQF).
- For each of the three principal discharge diagnoses (heart attack, heart failure, and pneumonia), the model includes admissions to all short-stay acute-care hospitals for people age 65 years or older who are enrolled in Original Medicare (traditional fee-for-service Medicare) and who have a complete claims history for 12 months prior to admission.

For more information see the CMS Hospital Compare Web site.

While low readmission rate was the primary criterion for selection in this series, the hospitals also had to meet the following criteria: ranked within the top half of hospitals in the United States on a composite of Hospital Quality Alliance process-of-care "core" measures and in the percentage of survey respondents giving a 9 or 10 rating of overall hospital care, as reported in the Hospital Consumer Assessment of Healthcare Providers and Systems to CMS; full accreditation by the Joint Commission; not an outlier in heart attack, heart failure, and/or pneumonia mortality as reported by CMS; no major recent violations or sanctions; and geographic diversity.

Appendix B. Performance Data from WhyNotTheBest.org for McKay-Dee Hospital Center

	Top 10% of U.S. Hospitals	National Average	McKay-Dee Hospital
Overall Recommended Care	98.10%	95.14%	95.06%
Overall Heart Attack Care	99.72%	97.11%	96.88%
Aspirin on arrival	100.00%	98.10%	98.69%
Patients given aspirin at discharge	100.00%	97.68%	99.04%
ACEI or ARB for LVSD	100.00%	95.56%	96.88
Adult smoking cessation advice/counseling	100.00%	99.39%	100.00%
Beta blocker prescribed at discharge	100.00%	97.76%	96.00%
Fibrinolytic therapy received within 30 minutes of hospital arrival	87.10%	74.47%	N/A
Primary PCI received within 90 minutes of hospital arrival	97.78%	88.54%	76.67%
Legacy: Beta blocker on arrival	N/A	89.00%	98.28%
Overall Pneumonia Care	98.03%	92.42%	94.61%
Pneumococcal vaccination	100.00%	90.84%	97.16%
Blood cultures performed in the emergency department prior to initial antibiotic received in hospital	99.28%	94.48%	91.18%
Adult smoking cessation advice/counseling	100.00%	97.35%	90.91%
Pneumonia patients given initial antibiotic(s) within 6 hours after arrival	99.26%	94.61%	95.81%
Initial antibiotic selection for community-acquired pneumonia (CAP) in immunocompetent patients	97.73%	90.69%	95.74%
Influenza vaccination	100.00%	89.94%	95.24%
Legacy: Pneumonia patients given initial antibiotic(s) within 4 hours after arrival	N/A	81.00%	93.11%
Legacy: Pneumonia patients given oxygenation assessment	N/A	99.00%	100.00%
Overall Heart Failure Care	98.96%	91.19%	97.37%
Discharge instructions	99.08%	85.45%	94.92%
Evaluation of LVS function	100.00%	95.38%	100.00%
ACEI or ARB for LVSD	100.00%	93.84%	96.15%
Adult smoking cessation advice/counseling	100.00%	98.78%	96.67%

	Top 10% of U.S. Hospitals	National Average	McKay-Dee Hospital
Overall Surgical Care	98.41%	94.67%	94.30%
Presurgical antibiotic given at the right time	99.11%	95.08%	94.00%
Surgical patients who were given the right kind of antibiotic	100.00%	96.92%	99.00%
Preventive antibiotics stopped at right time	98.13%	92.30%	92.01%
Cardiac surgery patients with controlled 6 a.m. postoperative blood glucose	98.39%	92.05%	87.01%
Surgery patients with appropriate hair removal	100.00%	98.79%	98.97%
Surgery patients with recommended venous thromboembolism prophylaxis ordered	99.14%	92.34%	87.31%
Surgery patients who received appropriate venous thromboembolism prophylaxis within 24 hours prior to surgery to 24 hours after surgery	98.57%	90.44%	81.34%
Surgery patients on a beta-blocker prior to arrival who received a beta-blocker during the perioperative period	100.00%	90.80%	91.25%
Patient Experience (HCAHPS) - Rating 9 or 10			
Percent of patients highly satisfied	78.00%	66.19%	77.00%
Doctors always communicated well	87.00%	79.99%	81.00%
Nurses always communicated well	83.00%	75.22%	77.00%
Patients always received help as soon as they wanted	75.00%	63.23%	64.00%
Staff always explained about medicines	68.00%	59.57%	61.00%
Pain was always well controlled	76.00%	68.82%	70.00%
Patient's room always kept quiet at night	71.00%	57.38%	54.00%
Patient's room and bathroom always kept clean	81.00%	70.35%	71.00%
Patients given information about recovery at home	87.00%	81.12%	88.00%
Patients would definitely recommend this hospital to friends and family	81.00%	68.67%	82.00%
Readmission			
Hospital 30-day readmission rates for heart attack	18.40%	19.97%	17.70%
Hospital 30-day readmission rates for heart failure	22.40%	24.73%	19.30%
Hospital 30-day readmission rates for pneumonia	16.50%	18.34%	13.70%
Mortality			
Heart attack 30-day mortality rate	14.10%	16.17%	15.20%
Heart failure 30-day mortality rate	9.40%	11.28%	11.20%
Pneumonia 30-day mortality rate	9.50%	11.68%	11.20%

Source: www.WhyNotTheBest.org, accessed January 6, 2011.

About the Author

Sharon Silow-Carroll, M.B.A., M.S.W., is a health policy analyst with nearly 20 years of experience in health care research. She has specialized in health system reforms at the local, state, and national levels; strategies by hospitals to improve quality and patient-centered care; public–private partnerships to improve the performance of the health care system; and efforts to meet the needs of underserved populations. Prior to joining Health Management Associates as a principal, she was senior vice president at the Economic and Social Research Institute, where she directed and conducted research studies and authored numerous reports and articles on a range of health care issues.

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