WHITE PAPER
Coordinated Care
Highlighting Healthcare Success

Reducing Readmissions at Presbyterian Healthcare Services

To promote adoption of best practices, Intel's Healthcare IT team is spotlighting leaders in coordinated care. See how award-winning Presbyterian Healthcare Services is reducing readmissions and using technology to support its strategic initiatives.

PRESBYTERIAN

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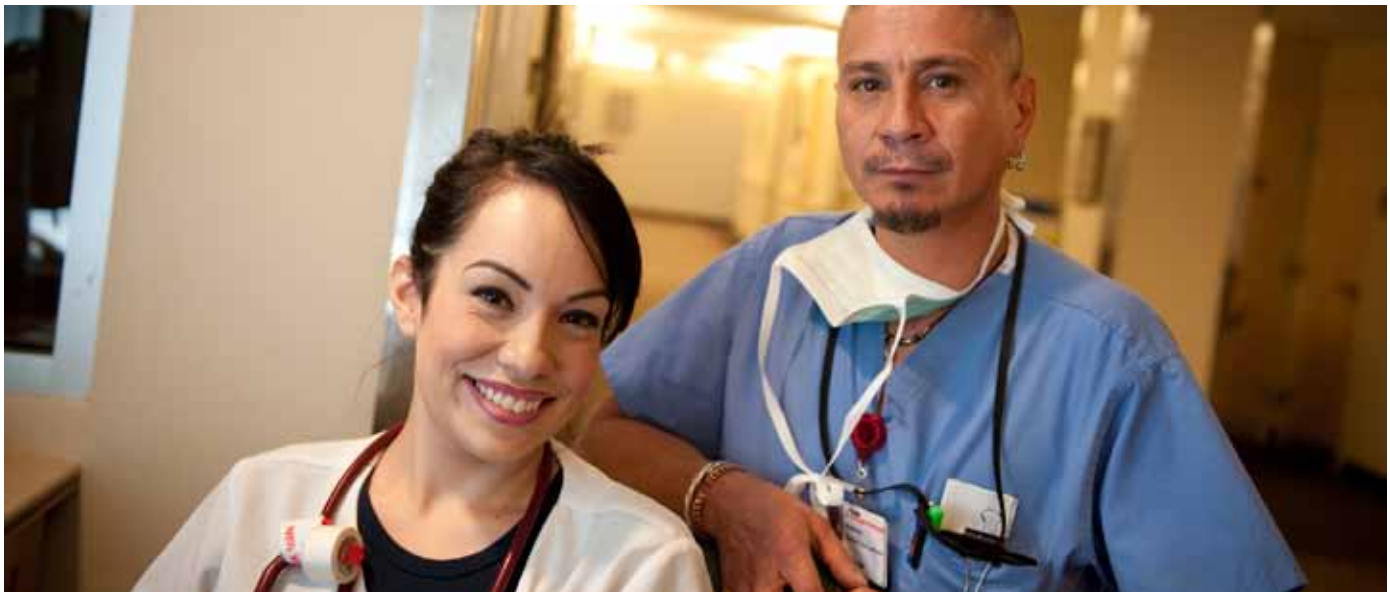
INTRODUCTION: TAKING ON A COMPLEX CHALLENGE

Despite national attention and the threat of Medicare penalties, many hospitals and health systems continue struggling to reduce hospital readmission rates. A recent Dartmouth Atlas study found that average 30-day readmissions not only did not decline between 2004 and 2009 but in some areas of the United States actually rose.[1]

Readmissions are a complex problem caused by factors ranging from psycho-social issues to fragmented care and lack of follow-up. Given an aging population, sicker patients, and a rising use of outpatient procedures, it's not surprising that readmissions are difficult to reduce. But they're not impossible. Presbyterian Healthcare Services (PHS) shows that comprehensive efforts to coordinate care as patients move through the healthcare system, supported by healthcare information technologies and a commitment to the whole patient, can produce striking improvements. PHS's readmission rates are well below the national average, and the organization is driving them lower.

As an integrated delivery system (IDS) with 20 years' experience in digital information technologies, PHS is in a good position to streamline the flow of information and deliver coordinated care as patients move across the care continuum. However, not all patients at PHS hospitals are part of the IDS. Many of PHS's practices are relevant to accountable care organizations (ACOs) and others that want to reduce readmissions and coordinate care more effectively. The PHS experience also shows that a committed health plan can exert leadership to help reduce readmissions for its members. Equally significant, PHS leaders say that efforts to reduce readmissions can help improve healthcare outcomes, increase patient and member satisfaction, enhance resource utilization, and reduce costs.



"The benefit we have by virtue of being such an integrated system is that we have access to the medical records at every touch point. We can have a more efficient treatment of the patient and a shorter length of stay because we're not guess-working as we move that patient through the continuum of care... We have a lot of opportunity for improvement, but I think where our success lies is in being able to share the information electronically back and forth and communicate well—with the support of leadership."

– Paula Casey, MSN, RN, ONC, CCM
Director of Integrated Care Solutions
Presbyterian Health Plan

Comprehensive Care: About PHS

Presbyterian Healthcare Services is a private, not-for-profit organization and New Mexico's largest locally owned healthcare system. Its statewide healthcare delivery network serves more than 665,000 individuals—one in three New Mexicans.

PHS operates eight hospitals across New Mexico, including its flagship, Presbyterian Hospital in Albuquerque; and Presbyterian Rust Medical Center in Rio Rancho, which opened in October 2011. Presbyterian Medical Group (PMG) comprises 36 primary and specialty clinics and more than 500 physicians and providers and handles more than 1.2 million patient visits each year. PHS owns and operates a skilled nursing facility (SNF) and contracts with other organizations to deliver ancillary services for its plan members. Presbyterian Health Plan and Presbyterian Insurance Company (PHP/PIC), which are part of the PHS family, offer a broad range of health insurance options for individuals and employers and cover over 400,000 New Mexicans.

PHS was recognized as one of the nation's most integrated health systems for 2010 and 2011 by the healthcare analytics firm SDI Health. PHS has used the Baldridge Criteria for Performance Excellence since 2002 and earned the Zia Award, the highest honor from Quality New Mexico, in 2004. It is the market preference leader by a wide margin[2] and is involved with a range of care innovations, such as the Patient Centered Medical Home model that PMG and PHP are piloting[3] and a Hospital at Home program that PHS implemented in 2008.[4]

Leadership: One Presbyterian, Whole Patient

Presbyterian's readmissions efforts have grown out of a holistic, people-first philosophy, an organizational commitment to high performance, and a willingness to take proactive steps to achieve its goals. Organization-wide goals focus on:

- **Best clinical quality.** PHS is committed to delivering a level of clinical and service excellence that exceeds that of regional competitors and other healthcare organizations with a reputation for excellence. This includes both the safety and effectiveness of care.
- **One Presbyterian.** By fully utilizing the opportunities of integrated care models, PHS seeks to provide a seamless experience that helps improve its customers' health. An enterprise-wide quality institute provides leadership and coordination of comprehensive quality improvement initiatives.
- **Affordability and sustainability**. New Mexico is the third-poorest state[5] and has a racially, linguistically, and culturally diverse population. Presbyterian delivers millions of dollars annually in free care or care where the payment received is less than the cost of care. However, Presbyterian has continued to receive a "AA" credit rating from financial ratings agencies in 2007, 2008, 2009, and 2010. PHS works to lower costs by redesigning care models, increasing process efficiencies, and reducing waste.

Reducing readmissions aligns with all three goals. Patients who remain out of the hospital avoid the attendant risks of an acquired infection or complication (higher quality). They enjoy higher satisfaction and a more integrated experience of PHS (One Presbyterian), and their care is more affordable.

Technology Across the Continuum of Care

Care coordination is critical to reducing readmissions, and digital information is critical to care coordination. PHS has undertaken several key steps to improve coordination across the "seams" between different parts of the healthcare system, with a particular focus on hospital discharge planning and post-discharge follow-up with the patient, primary care provider, home health team, SNF, and Rehab. PHS also tracks patients who are readmitted following discharge from SNF or Rehab.

Healthcare IT facilitates this coordination. PHS includes technology in the planning process for new care initiatives or process improvements, and works to identify applications, software modifications, and devices to support its initiatives. Hospitals are transitioning to Epic EpicCare* electronic medical records (EMRs) from a previous EMR solution that PHS determined was not keeping up with PHS' growing requirements. Presbyterian Medical Group clinics and offices are also deploying EpicCare.

Other parts of the system may use other applications, with point-to-point integration enabling unified access through McKesson Horizon Physician Portal.*

Regardless of the integration methods, health professionals at each transition point within the IDS have secure digital access to the patient's medical record. Not all patients at PHS hospitals and clinics are part of the integrated delivery network. This complicates the flow of information, but PHS coordinates with non-PHS facilities to improve information flow within HIPAA guidelines.

PHS gains further value from its digital health information by mining it to identify root causes, evaluate the success of its initiatives, and formulate best practices. For example, PHS has analyzed its data to pinpoint the 15 most common readmission diagnoses among its own population rather than relying only on national data. Data analysis also showed that the highest rate of readmission comes from patients who are discharged to an SNF, so PHS is taking steps to ensure that patients are appropriately discharged to SNF and Rehab and to strengthen its coordination with these centers. Analysis also showed that two common readmission drivers are the lack of a follow-up appointment and problems with obtaining or reconciling medications, so PHS's readmission initiatives focus on those issues in particular.

"There's a real opportunity to extend the EMR to better reflect the case management workflow and help case managers be true advocates for the whole patient. We need to tell the patient's personal story—not just to put a label on them and write them off, but to explain, for example, why they're a noncompliant diabetic. Do they have resource problems? Motivation problems? What services have worked for them in the past? Case managers can have a huge impact on the cost and quality of the patient's care—and if you do the right thing for the patient, it ultimately works for the system."

—Paula Green, RN, CCN/CSM
Director, Care Coordination Department
Presbyterian Healthcare Services

"At first we thought: Do you really want to make the discharge calls through a centralized call center? It's not as intimate as when you have a nurse calling from the unit. But the reality is that because you can pull up the medical record, you have all the information you need to make that call, so it's just as if you had the access as you sat on the nursing floor...The technology helps you utilize evidence-based medicine and protocols in a much more efficient and consistent way. You couple these very experienced nurses with lots of years as a clinician with some technology that aligns you with evidence-based best practices, and the patient gets a better outcome."

– J.J. Parsons
Vice President of Performance Excellence
Presbyterian Healthcare Services

Holistic Case Management and Discharge Planning in the Hospital

Avoiding readmission starts with delivering coordinated care at the hospital. PHS works to avoid silos by providing unit-based care, pairing each physician with a case manager who advocates for complex, high-needs patients while supporting both the physician and the staff nursing team. Teams hold a daily review meeting to identify medical issues or resource constraints that might prevent a timely discharge.

Discharge planning starts early, to ensure that needed resources are in place when the patient is discharged. Psycho-social issues contribute to readmissions, so case managers target the whole patient and focus on solving practical problems that would otherwise keep the patient from carrying out the discharge treatment plan.

Case managers access the patient's EMR and document their work using MIDAS* integrated medical management software to which they've added case management functions. Facilitating the flow of information, organizations that will be involved in the patient's post-discharge care receive extensive medical and case management documentation on the patient's hospital stay. This material is provided electronically to PHS facilities and via secure e-mail PDF files or fax to non-PHS facilities.

Post-Discharge Follow-up: Call Center

Research shows that discharge phone calls decrease post-discharge medication errors and help prevent infections.[6] In addition, patients who receive detailed after-hospital care instructions are 30 percent less likely to be readmitted or visit the the Emergency Department (ED).[7] Previously, PHS had staff nurses call discharged patients for follow-up, but found that success in reaching patients varied depending on the day's workloads. In 2007 PHS piloted a discharge call center. Following the pilot's success, PHS used Lean Six Sigma processes to design a workflow for a centralized, RN-staffed call center.

Call center nurses retrieve an electronic list of all patients discharged from the eight PHS hospitals, and attempt up to three calls within 72 hours of discharge to answer the patient's or family's questions and clarify discharge instructions. Call center nurses access Horizon Patient Folder* to research clinical protocols and review patient medical records. The nurses also utilize MIDAS running on full-function PCs to document advice and clinical interventions they provide to patients, and it becomes part of the patient's EMR. Call center nurses connect patients with clinic schedulers if a patient needs help scheduling a follow-up appointment or if the patient develops complications requiring an immediate appointment. Nurses also direct patients to appropriate resources as identified during the call on a case-by-case basis.

PHS finds the centralized approach provides a number of benefits and opportunities:

- **Greater reach.** Staff nurses trying to make discharge phone calls between routine patient care duties reach only a fraction of patients. PHS' call center nurses are able to connect with more patients, contacting an average of 70 percent.
- **More evidence-based care.** Centralized nursing staff can provide greater consistency in following evidence-based care protocols, identifying trends, and providing feedback to hospital staff that can be used to improve quality of care and patient safety.
- **Improved ability to meet special needs.** A centralized nursing call center staff ensures that a highly qualified and experienced clinician is available to answer post-discharge questions and assist in resolving post-discharge issues or concerns as well as communicate using the necessary language skills.

In addition to ensuring appropriate follow-up, PHS reviews these calls to identify systemic issues and recognize outstanding staff performance, particularly when a patient identifies a staff member by name. Call center staff and hospital staff meet regularly to discuss trends and issues and identify process improvements.

"It's so much easier to do a medication reconciliation when you've seen what the patient has been on in the clinic, you see what has been added or deleted from the hospital, and you're not depending on the patient's memory... The clinic case managers put a note in the clinic record. The case managers are getting a daily report of who's been in the hospitals, but the doctors are so busy they may not know that Mrs. Jones, who's coming in tomorrow, had been in the hospital. The note in the record means that next time the doctor sees that patient, he or she can say, 'I see you were in the hospital."

– Jane Bergquist
Manager, PMG Case Managers
and Disease Management Health Coaches
Presbyterian Medical Group

Primary Care Transition

Providers in PMG clinics have access to the inpatient medical record of patients within the IDS and receive a discharge summary from patients who are discharged from other hospitals. Each clinic has case managers who receive a daily electronic listing of patients who have been seen in the ED or discharged from an inpatient unit. The case manager reaches out to patients whose diagnosis puts them at high risk of readmission, to ensure they have a follow-up appointment scheduled, clarify discharge instructions, and make sure patients have the appropriate level of resources.

The clinic case manager also puts a note in the EMR to remind the provider that the patient has been hospitalized. PMG clinics are in the process of completing full deployment of EpicCare.

Home Health

Presbyterian Home Healthcare (PHH) provides a range of home healthcare services, including Hospital at Home, an innovative substitute for inpatient care for qualified, interested patients. CMS comparative data places PHH at 17-19 percent for readmissions—above the 90th percentile nationally in preventing acute care admissions from home care.

Patients who are discharged to home health may be remotely monitored via telehealth devices, including American TeleCare (ATI) mLife* and McKesson Health Buddy* appliance. Home care professionals use high-performance laptops and tools such as McKesson Horizon HomeCare* to chart their notes and access patient records and protocols.

"One of our enormous advantages ties to our being part of an integrated delivery system. We can look at bigger trends. We developed our Hospital at Home program as an alternative to traditional hospital admission for patients who met clinical criteria. Performance results confirm that all clinical indicators are equal or better than with traditional hospitalization, patient satisfaction is very high, and the variable costs per stay were $1,000 to $2,000 lower. The other advantage is the enormous gift in the technology we have—to be able to look at our data and segment it in a way that we can keep moving forward and be intentional about moving toward best practices."

– Lesley Cryer, RN
Executive Director
Presbyterian Home Healthcare

Health Plan Innovation

Health plans can be a powerful force for innovation in care delivery. In parallel with the actions of the PHS Delivery and home care teams, Presbyterian Health Plan has developed interventions that seek to reduce readmissions for all PHP members, regardless of where they are admitted or receive post-discharge care. In addition to its normal concurrent utilization reviews, PHP piloted a program in which plan case managers conducted in-room visits with plan members admitted to any Albuquerque-area hospital, SNF, or Rehab facility and having one of the 15 most likely to be readmitted diagnoses.

"We ask, 'Do you have an appointment with your provider? Did Home Care call you? Did all the equipment get delivered? Did you get your prescriptions filled?' If not, we intervene, and we document that intervention so everyone in the continuum is aware. We had one member whose car was impounded while she was an inpatient so she couldn't get her medication. We were able to intervene to have the medication delivered to her. It helped keep her from readmitting, and it definitely made her a more satisfied plan member."

– Paula Casey, MSN, RN, ONC, CCM
Director of Integrated Care Solutions
Presbyterian Health Plan

These visits served to validate whether discharge plans were realistic and understood by the patient, and involved coordinating with attending physicians and hospital staff to modify discharge plans as needed. The visits also helped ensure that the system had an accurate phone number for the patient's home or other post-discharge location, and helped smooth the way for the follow-up care provider (whether SNF, Rehab, or primary care clinic) to receive discharge data in a timely manner.

In addition, PHP made discharge calls to patients, SNF, and Rehab centers to review discharge instructions, reconcile medications, and confirm that the patient had a follow-up appointment scheduled and had received needed equipment, home health visits, and medications. For patients who are not part of the IDS and don't have a primary care "home," the caller works to connect them with a provider in their region. This in itself can be of significant value since many areas have a shortage of primary care providers.

PHS/PIC use TriZetto Facets* for payment authorization, CaseTrakker* care management software for outpatient case management, and Milliman CareWebQI* for inpatient case management.

Results: Readmissions, Patient Satisfaction, Staff Satisfaction

In August 2010, US News & World Report's Best Hospitals issue ranked Presbyterian Hospital as seventh in the nation for 30-day readmission of Medicare patients with heart failure (HF)—19.1 percent compared to the national average of 24.7 percent.[8] Since that time, PHS has driven the HF readmission rate even lower, and as of September 2011 was on track to achieve an 18 percent reduction by January 2012.[9]

PHS has also reduced readmissions for other diagnostic categories. For example, Presbyterian Hospital's 30-day readmission rate for Medicare patients with pneumonia is 14.7 percent—significantly lower than the national average and lower than that of non-PHS hospitals such as the University of New Mexico Hospital's 17.9 percent and Lovelace Medical Center's 16.6 percent.[10] PHS's comparative analysis using MIDAS DataVision shows Presbyterian Central Delivery System Hospitals (Presbyterian Hospital and Kaseman) in Albuquerque performing at the 97th percentile, 8.07 percent in August 2011 for all-cause 30-day acute care readmissions, well below the national mean of 11.42 percent for hospitals of more than 400 beds. PHS has produced these results while achieving lower than average results for average length of stay (ALOS).

PHS opened the discharge call center in September 2009, and while other interventions no doubt play a role, PHS' readmission rates have trended downward since that time. In addition, patients who receive a follow-up call are more satisfied with their overall experience. This is confirmed by higher measured patient satisfaction, with more patients who received a follow-up call ranking the hospital as a 9 or 10 where 10 is the best hospital possible. Staff have been pleased to receive patient recognition of their individual contributions.

The PHP programs reduced readmission rates for plan patients in the pilot from an average of 8.75 percent in 2008 to 8.3 percent in 2010. PHP programs also generated cost savings related to shorter ALOS of USD 860,040 from January-August 2010. Plan members expressed appreciation for the personal touch provided by the plan's pre-discharge visit and post-discharge phone call.

"PHS is very proud of our accomplishments in this area. Our dedicated and talented providers and clinical staff use the tools and technology every day to create a system of care that is personalized, yet focused on overarching goals such as cost reduction and consistent use of best practices. It is this level of collaboration and patient-centered care that will ultimately improve the health system in this country."

– Kathleen Davis RN, MBA
Senior Vice President and Chief Nursing Officer
Presbyterian Healthcare Services

Next Steps Toward More Efficient, Integrated Care

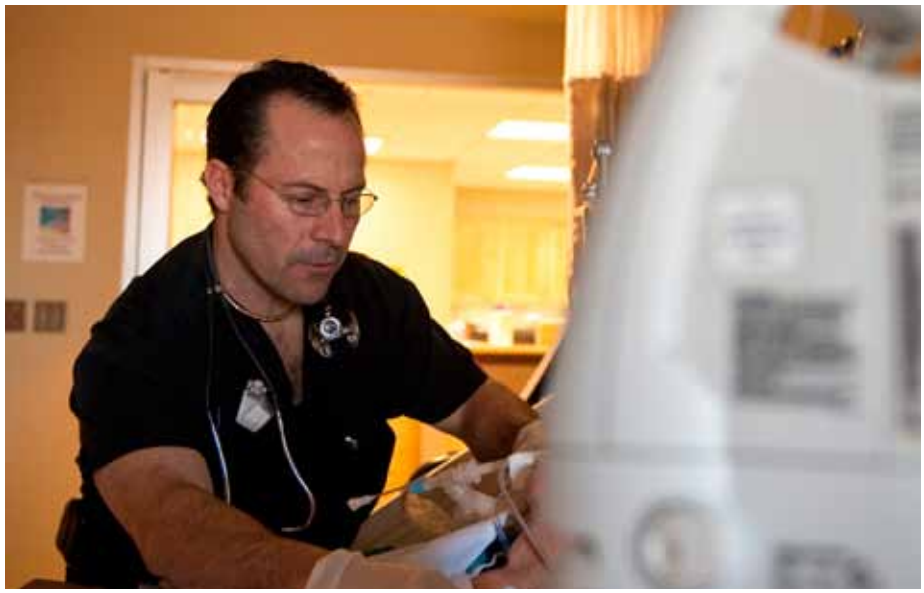
PHS is building on the success of its initiatives in ways that its leaders expect will further reduce readmissions along with avoiding duplication, increasing efficiency, and deepening the integration of care. The call center now contacts high-risk patients who visit the ED—patients younger than seven years or older than 65. The center is also beginning to call patients discharged from SNFs and Rehab facilities within the PHS system. PHS is unifying its case management teams under one management structure and combining the best practices from the interview scripts.

PHS has piloted the practice of having transitions case managers conduct a home visit the day following discharge for patients who are at the highest risk of readmissions. This approach has been successful, and PHS is looking to expand its use for non-Medicare patients. PHS is also expanding the many efforts it has underway to reduce hospital admissions and ensure optimal care for patients in the most appropriate setting.

PHS is excited about having both inpatient and clinics on a single EMR and looks forward to a time when a single EMR will be suitable for all workflows. The organization is also deploying two major new software solutions to assist in data analysis and process improvement:

- Health Care DataWorks, a clinical data repository and warehouse that PHS expects to improve its ability to execute and monitor care plans.
- IBM Lombardi* business process management systems, which can be used to enhance clinical planning as well as to improve processes relating to patient throughput and revenue cycles.

In addition, PHS has identified broader technology changes that can facilitate further improvement. Ranking high on the list:



- **Information standards.** Incompatible systems create issues when collaborating with non-PHS institutions and facilities. Even within PHS, the lack of standards forces a choice between having everyone on the same software or creating custom interfaces between systems (which ties up people whose programming skills could be used for more strategic activities). Lab data, generated by an external service, is difficult to integrate and limits the EMR's ability to provide a complete picture of the patient's condition.
- **Added functionality in EMRs and other software.** Case managers would like to see comprehensive, people-centered case management functionality incorporated into electronic medical record software. Staff would like to incorporate ancillary workflows, such as physical therapy notes, into the system without scanning paper documents, and to eventually have a single, comprehensive EMR that can cover workflows from the ICU to home and hospice.
- **Expanded teleconferencing.** New Mexico has many areas where mountains or remoteness make cellular communications difficult or non-existent and robust broadband very expensive. Broader deployment of affordable broadband would allow Home Health to implement video-based teleconferencing for more patients and families with complex chronic conditions and frequent readmissions.

KEY TECHNOLOGIES

- Epic EpicCare* EMRs
- McKesson Horizon* Physician Portal
- MIDAS* Care Management Software, DataVision
- McKesson Horizon* Home Care*
- McKesson Insight*
- OCS HomeCare*
- McKesson Health Buddy*
- American TeleCare mLife*
- TriZetto Facets*
- CaseTrakker* care management software
- Milliman CareWebQI*
- Thomson Reuters Advantage Suite*
- Intel® Core™ i5 processor-based PCs and laptops
- Intel® Xeon® processor-based servers and others depending on application requirements

PHS BEST PRACTICES TO REDUCE READMISSION

- Develop systematic processes for innovation and build innovation skills across the enterprise.
- Use data mining and predictive modeling to identify high-risk populations, determine root causes, and plan targeted strategies.
- Use holistically-oriented case managers to improve transition management, patient care, and resource utilization. Start discharge planning early.
- Create a centralized follow-up call center staffed with RNs to proactively contact patients, answer questions, and promote appropriate follow-up. These calls can also increase patient satisfaction and provide opportunities to identify both systemic issues and outstanding staff performance.
- Use healthcare IT to share information across the care continuum. Include technology as you plan new care initiatives or process improvements, and identify applications, software modifications, and devices to support them.

Culture of Success

PHS shows what determined healthcare professionals can accomplish through a patient-focused organizational culture and evidence-based initiatives. In addressing the complex challenges of readmission, PHS has applied enterprise-wide innovation processes that include data-driven investigation, collaborative process design by multidisciplinary teams of clinical leaders and administrative staff, robust pilots, and investments in the ability to use Lean Six Sigma tools.

PHS' success rests on a foundation of healthcare IT. This includes the data that PHS uses to analyze its performance, discover root causes, and develop targeted responses that meet patient needs and institutional requirements. It also includes IT tools, solutions, and devices, running on a platform of scalable, energy-efficient servers, that give clinicians and case managers information at every touch point to help them provide an optimal solution for the patient and the healthcare system. These initiatives are using technology to help reduce readmissions, improve patient and staff satisfaction, and deliver more affordable, sustainable healthcare.[11]

For More Information

How can healthcare information technologies support your strategic initiatives? Talk to your Intel representative, or visit Intel's Healthcare IT web sites:

www.intel.com/about/companyinfo/healthcare/index.htm

http://premierit.intel.com/community/ipip/healthcare

Intel appreciates the input from PHS leaders in the preparation of this case study: Jane Bergquist, Elizabeth Brophy, Paula Casey, Lesley Cryer, Kathleen Davis, Paula Green, and J.J. Parsons.

[1] David Goodman, MD, et al, After Hospitalization: A Dartmouth Atlas Report on Post-acute Care for Medicare Beneficiaries, Dartmouth Institute for Health Policy and Clinical Practices, Sept. 28, 2011.
[2] Data provided by PHS.
[3] For a long list of honors and awards to PHS, including PHP/PIC, see http://www.phs.org/PHS/about/awards/index.htm.
[4] http://www.hospitalathome.org/assets/DGMG/pdf/081022_Case_Example_Presbyterian_NEW_TEMPLATE_rev3.pdf
[5] Statistical Abstract of the United States, Persons Below Poverty Level, 2007, http://www.census.gov/statab/ranks/rank34.html.
[6] Mark Willard, Post-Discharge Call Programs: Improving Satisfaction and Safety, Patient Safety & Quality Healthcare, May/June 2010.
[7] B.W. Jack et al, A Reengineered Hospital Discharge Program to Decrease Rehospitalization: A Randomized Trial, Annals of Internal Medicine, 2009.
[8] Based on CMMS data.
[9] Ann Marie Stein, Heart Failure: Digging Deeper and R/E/L, a presentation to the New Mexico Hospital Association Annual Meeting, Sept. 2011.
[10] www.hospitalcompare.hhs.gov
[11] For a more comprehensive look at PHS innovations, see Vineeta Vijaraghavan and Ariana Klitzner: Presbyterian Healthcare Services: A Case Study Series on Disruptive Innovation within Integrated Health Systems, Innosight Institute, Dec. 2010. http://www.rwjf.org/files/research/72586.presbyterian.healthcare.pdf

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