MANAGEMENT INNOVATIONS XXVII

Poster Session

54th

Congress on Healthcare Leadership

March 21 – 24, 2011

Chicago, Illinois

MANAGEMENT INNOVATIONS XXVII
Poster Session

Cost Savings

Marketing

Revenue Raising

Operations

Patient Satisfaction

Reducing *Clostridium Difficile Associated Disease (CDAD)*

Healthcare-associated infections (HAIs) are a major patient safety concern, particularly among the seriously ill and vulnerable elderly. The Centers for Disease Control and Prevention estimates there are 1.7 million HAIs acquired annually resulting in 99,000 deaths each year, making them the fourth leading cause of death in the United States.

As part of the commitment to eliminating HAIs, North Shore-LIJ Health System senior leadership endorsed a number of innovative programs that focus directly on reducing the risk for an HAI. This poster session will focus on a program that was adopted to reduce the incidence of *Clostridium difficile* associated disease *(CDAD).*

*CDAD r*eduction was prioritized by Health System leadership and senior hospital executives in 2008, as reports of increasing *CDAD* incidence, severity and mortality emerged. Plans for *CDAD* reduction were developed through a Health System level Infection Control Task Force that involved nurse epidemiologists and senior clinical/quality management leaders from the Health System's 15 hospitals and two long term care facilities. North Shore-LIJ also participated in a statewide collaborative led by the Greater New York Hospital Association and United Hospital Fund to share best practices. Plans were developed to heighten staff awareness of *CDAD,* promote early identification of the disease, elicit prompt treatment for suspected infection, introduce improved testing procedures, enhance communication among staff, promote antibiotic stewardship and improve cleaning procedures to reduce *CDAD* spores in the environment.

As part of the plan, nurse driven protocols were put into place to facilitate early identification of cases and placement of patients on precautions when *CDAD* is the suspected cause. Patients who are admitted with a past history of *CDAD* are flagged and placed on contact precautions until it is confirmed that continued precautions are necessary. When indicated stool specimens are obtained and submitted immediately to the laboratory. Contact precautions are maintained until patients are asymptomatic for at least 48 hours regardless of laboratory results. To ensure optimal processing of the specimens the laboratory introduced polymerase chain reaction (PCR) testing in 2010, a more sensitive test that will be fully implemented in all facilities by the end of the first quarter of 2011. Positive *CDAD* results are also communicated as a critical value and are immediately called to the patient care unit.

To improve cleaning procedures, processes for terminal cleaning of common areas and patient rooms were enhanced and supplemental *CDAD* education was provided to environmental services personnel. Proper cleaning procedures with disinfectants and strict adherence proper hand hygiene procedures using soap and water is enforced. Competency evaluations for hand hygiene, terminal cleaning and cleaning procedures related to *CDAD* have also been developed.

To improve communication, electronic alerts are provided to environmental services cleaning staff through bed-tracking systems to prompt terminal cleaning whenever contact precautions are discontinued, or a *CDAD* patient is discharge from their room. A list of patients on contact precautions is distributed electronically every day to further enhance communication and ensure proper patient follow-up and evaluation.

To measure ongoing performance, an infection control metric with consistent data definitions and calculations is in place across all health system facilities. Reports are provided to senior hospital leadership and staff on a quarterly basis. North Shore-LIJ was one of the first health systems in New York State to adopt transparency by reporting its infection control statistics on its public website with quarterly updates posted.

Actions to minimize the spread of *CDAD* were implemented in 2009 and have continued throughout 2010. As a result a 30% reduction in the incidence of *CDAD* per 1,000 patient care days has been achieved with rates of *CDAD* decreased from 1.14% (2008) to 0.80% (2009). This improvement has been sustained at a rate of 0.79% (Q1-3 2010).

Title: Driving to Zero: Reducing Hospital Acquired Infections

Objective of program: Lankenau Medical Center undertook an extensive performance improvement initiative to drastically reduce infection rates

Planning/research methods: Comparison to local and national benchmarks showed an opportunity for reduction in device associated infections. Research revealed that many areas within the hospital had not identified or standardized best practices that could prevent infections.

Implementation methods: A multi-component charter was undertaken that included:

- Clinician-led targeted programs for all types of device associated infections
- Hospital-wide advertising & hand-washing campaign
- Efficient data collection
- Real-time monitoring and feedback
- Clinical Informatics support
- Enhanced environmental cleaning
- Communication of measures & activities
- Biomedical engineering partnership with local university
- Focused Critical Care initiatives

Robust, data driven committees chaired by the hospital's executive team and physician champions implemented best practices supported by vigorous, immediate individualized feedback. Both clinical best practices and data management methodologies were implemented in parallel.

Results:

- 71% reduction in catheter-associated urinary tract infections
- 54% reduction in central line-associated blood stream infections
- 84% reduction in ventilator associated pneumonia

Title: Hospital Certification Programs Use Data to Improve Quality and Decrease LOS- A Look at Stroke in Wisconsin

Authors: Michelle Gardner, MBA, Kathleen O'Neill, MHA

Objective: Hospital certification programs are increasingly available for several different disease states by many organizations. Stroke continues to be a leading killer in the state of Wisconsin. Since 2004, 25 of the larger hospitals in the state have started collecting data on stroke patients and have completed a certification process to be considered a stroke center. Over time, the implementation of quality improvement efforts based on the data and the requirements of certification have made an impact on care and length of stay. This abstract will look at aggregate trends of the 25 stroke certified Wisconsin hospitals which includes a total of 19,320 patients though 2006-2010.

Planning/Research methods- Since 2004, hospitals across the country have made the decision to become certified as a stroke center, either through a state based certification process, The Joint Commission or other certifying bodies using the American Heart Association/ American Stroke Association (AHA/ASA) guidelines and recommendations. There are 25 certified stroke center hospitals in Wisconsin. These 25 hospitals enter each stroke patient's data through Get With The Guidelines (GWTG) Stroke's Patient Management Tool. A Wisconsin Stroke Center benchmark was created by the ASA to analyze statewide trends and plan quality initiatives.

Implementation methods- Hospitals have added or improved protocols according to American Stroke Association (ASA) guidelines and completed requirements needed for the certifying body. As part of the requirements to be certified, certain data points and elements must be collected and evaluated to make improvements. Data is entered on each stroke patient either concurrently or retrospectively. Each hospital has varying techniques to analyze data, report progress and implement change. However, all hospitals must have a quality improvement process and a stroke team in place. Hospitals must report their GWTG-Stroke data, typically quarterly, to the certifying body.

Results: The collecting and analyzing of data within the Wisconsin certified stroke hospitals has made an impact over time. Eligible patients receiving the clot busting drug, tPA has increased from 63.7% in 2006 to 86.3% in 2009. The drug, tPA can prevent or lesson the paralyzing effects of a stroke and can dramatically improve patient outcomes. Defect-free stroke care in Wisconsin certified stroke hospitals was given to 60.6% of patients in 2006. In 2009, Defect-free care had increased to 91.4% of patients. Length of Stay (LOS) in these same hospitals had a mean of 5.15 days for ischemic stroke patients in 2006 and had a 2009 mean of 4.47 days. Currently, 2010 data is showing a mean of 4.27 days among Wisconsin certified stroke hospitals. These trends show evidence based care for stroke patients has been improving along with a financial impact as LOS has been decreasing.

Title-Redesigning Patient Focus Groups to Answer Critical Questions About Patients' Recovery and the Role of the Hospital

Objective- to develop a new methodology of engaging patients in assisting to design and develop programs that meet the special needs of patients with a particular disease or medical condition

Methodology - Developed a set of criteria including demographics and MSDRG as well as a timeframe from their acute medical episode to ensure continuity within the groups from an age, medical diagnosis and post hospitalization standpoint. Participation was voluntary although there was a monetary gift upon completion of the interview session. A set of predetermined questions was created to ensure a standardized approach to the interview process. No interviews were conducted outside of the group setting and no patients were allowed to participate who did not meet the set criteria. Criteria included two groups with a diagnosis of cardiac intervention (acute myocardial infarction requiring stenting or bypass surgery) between 3-6months post acute hospitalization. The first group were patients who were patients who were between the ages of 30-55. The second group was over the age of 65. Key questions asked focused on how the patient was feeling that day at that moment and the events that had occurred since their hospitalization to get them to that point as well as the role of the hospital in assisting them since their discharge.

Results - all patients in the older age group did not attend the focus group session alone-there was a spouse or caregiver that accompanied the whereas all patients in the younger group attended without a caregiver or life partner. Similarly, patients who were over the age of 65 appeared to speak less frequently about their current state of health in a positive light and frequently allowed a caregiver to speak for them. As for the patient-reported health state of the younger group, this appeared to be split between those who were in a much improved state to those who were now paralyzed by their condition. For those who reported an improved lifestyle, this seemed to be an intentional effort that focused on their nutrition and level of physical activity with the support of a friend or family member. In contrary for all who reported a less than desired state of health since the acute event, there seemed to resonate a feeling of hopelessness and being overwhelmed with no clear direction as to first steps toward necessary changes. There was no correlation as to what the hospital provided one group over the other in terms of education or resources with their reported health state.

Discussion - in accessing the role of healthcare on long-term health status reported by cardiac patients, it would appear that hospitals are mere agents of intervention for life-saving measures. Although hospitals often create educational sessions and programs for recovery these do not appear to truly meet the needs of interventional cardiac patients for their long-term recovery. It would appear from these sessions that rather than inpatient education and mere descriptions of rehab programs, patients are more drawn to a personal advocate to assist them to connect to the appropriate program once they have more fully healed. Similarly, inpatient instructions regarding nutrition and physical activity are not comprehensive enough to shepherd patients toward appropriate lifestyle changes. Rather patients requested videos and post-discharge follow-up education sessions to assist. Finally, these sessions indicated that post discharge follow-up conversations were a critical element to alleviate depression and hopelessness and should be added to any comprehensive patient education program.

Implementation Benefits - this new methodology has provided us with a new resource for programmatic design and patient care. This focus on learning from our patients' recent experiences in healing (the what worked for them and what role the hospital did or didn't have in this) has allowed us to rethink not only what we do while the patient is an inpatient but what services are best suited to assist that patient post discharge. If hospitals are to prevent unnecessary readmissions, this new approach suggests a potential methodology that explores using our patients as the creators of the programs and initiatives best suited to address these patients' needs versus the traditional use of patient focus groups in hospitals as "customer satisfaction" gauges.

Beth Boyer Kollas, PhD – Vice President, Orlando Health

An Innovative Approach to Improving Care at the Bedside Through a Leadership Driven Focus on Accountability and Sustainability

Objective:

Following initial gains in clinical quality improvement, St. Francis Medical Center (SFMC) experienced the challenge of achieving and sustaining top level performance across its key result areas in quality, safety, patient satisfaction and finance. The medical center has an established history of collaborative work in quality and patient safety through its support of the Institute for Health Care Improvement's 100,000 Lives and 5 Million Lives Campaigns and as a member of the Southern California Patient Safety Collaborative. After its work with the Premier-CMS Hospital Quality Incentive Demonstration (HQID) Project, SFMC became a charter member of the Premier QUEST program in 2007, seeking to deliver better quality healthcare at a reduced cost. The first two years of QUEST focused on improvements in Evidence Based Care, Mortality and Efficiency, with Harm and Patient Experience metrics added in subsequent years.

Planning & Research Methods:

Top performing organizations were contacted to identify best practices and strategies leading to sustained performance levels. SFMC stepped up its efforts through:

Save Lives with an emphasis on reducing sepsis related mortality through the adoption of best practices in early sepsis identification and goal directed therapy

Deliver the most reliable and effective care through increased accountability at the bedside for adherence to evidence based care

Reduce the cost of care through improvements in case management, identifying and eliminating waste, contract compliance (purchasing), appropriate pharmaceutical use/drug formulary management

Improve the patient experience through the adoption of an evidence based practice model for patient-family centered care

Improve patient safety by preventing incidents of harm, including hospital acquired conditions and hospital acquired infections and birth injuries

Implementation Methods:

Hospital leadership implemented multiple approaches aimed at closing the gap between current performance and top performance, placing continual emphasis on accountability at all levels. The key changes implemented to achieve and sustain top performance levels included:

- Board of Directors and its Quality & Patient Safety Committee established expectations for perfect care and zero harm
- Key Result Area (KRA) focused leadership meetings: 30 minute meetings focused on Quality/Patient Safety, Patient Experience, and Finance
- KRAs cascaded to department and unit level operational plans
- Integration of KRA goals into individual leadership performance evaluations
- Aligned performance expectations of contracted clinical services
- Shared governance adoption and collaboration across patient care services (Our Magnet journey)
- Clarity of communications: roles and responsibilities for direct care givers and performance expectations
- Consistency in addressing lapses and breaches through Just Culture®

Results:

- Reduction in observed to expected mortality (risk adjusted) ratio (baseline 1.14 to 0.81 in 2010)
- Increased compliance with evidence based care (baseline 74% to 89% in 2009, and 92% in 2010)
- Reduced cost per adjusted discharge (baseline $6,217 to $5,370 in 2010)
- Improved patient satisfaction (Press Ganey baseline mean score 80.9 to 83.4 in 2010)
- Improved HCAHPS Top Box ratings: "Overall Rating" (baseline 69.1 to 78.7 in 2010) and "Willingness to Recommend" (baseline 72.2 to 79 in 2010)
- Achieved QUEST Top Performer status for year two

Gerald T. Kozai, Pharm. D. President & CEO St. Francis Medical Center, Lynwood, CA geraldkozai@dochs.org **Louis G. Rubino**, Ph.D., FACHE Professor, California State University, Northridge Board Member & Chairman, SFMC Quality & Patient Safety Committee, St. Francis Medical Center, Lynwood, CA lrubino@earthlink.net
Marsha Chan, Pharm.D., MBA, FACHE SVP, Chief Quality Officer & Corporate Responsibility Officer St. Francis Medical Center, Lynwood, CA marshachan@dochs.org
Beverly Quaye, Ed.D., RN, NEA-BC, FACHE VP Patient Care Services & CNE St. Francis Medical Center, Lynwood, CA beverlyquaye@dochs.org

Title

Designing a new transport chair

Objective of Program

UAB Medicine partnered with a local product design company to create an improved tool for patient transportation. Our motivation stems from the design shortcomings of the traditional wheelchair which is less optimal for transport of patients, puts patients and employees at higher risk injury and is frequently stolen for use as a personal transportation device. We also identified that the standard wheelchair design leads to decreased productivity because it is not optimized for use by employees to transport patients. UAB Medicine's design objectives were focused on the following:

- *Enhance the transport of the patient and their belongings while increasing comfort and safety*
- *Optimize ability for employees to push, control, turn and navigate ramps – both up and down*
- *Increase storage capability*
- *Reduce loss of chair by theft*
- *Introduce a sit-to-stand feature to enhance patient safety and reduce employee injury*

Planning/Research Methods

A multi-disciplinary team, including nursing, guest services, patient escort staff, physical therapists, and management worked closely with the product design firm to conceptualize an optimal patient transport chair. The team took cues from office furniture, car seating, strollers, and shopping carts, in addition to existing wheelchair design. Every aspect of the escort's tasks and the patient's experience was examined. We compiled internal data reflecting our incidence of injury due to patient transfer and transport as well as our attrition rate of wheelchairs.

Implementation Methods

As we moved towards implementing our design concept, we used the interdisciplinary team for continuous feedback and input. In addition to frequent meetings, the team used a secure project management website called Basecamp to communicate. Its format for collaboration allows users to post new ideas, ask questions, and provide timely feedback. This team was consulted on every design element including but not limited to:

Rear push handle: Design elements include multiple grasp points and easy adjustments to accommodate for differences in the height of people using the chair. The handle also extends from the back to allow for comfortable stride distance.

Seat profile: The seat profile is based on the Grandjean curve – specially designed to provide maximum comfort for all user sizes.

Range of travel (*from reclined to full standing*)**:** Individuals who are physically weak often have difficulty sitting and standing and adjusting their posture. The integrated pivot allows the seat to adjust through 40 degrees of travel.

Brake placement: The new brakes are easily controlled from the back of the chair, preventing staff from having to lean over the patients as they do with a conventional wheelchair.

Storage placement: A support frame behind the patient holds IV bags, binders, and other equipment. A bottom rack provides additional storage for patient belongings during admission and discharge.

Results (e.g. cost savings, increased productivity, improved quality of care)

The prototype and subsequent iterations are currently being tested in our hospital and clinic. Based on patient and end user feedback, we continue to improve the design and operational capabilities. Initial testing and feedback is extremely positive. Our escort staff is able to transport patient belongings more efficiently due to additional storage. This reduces the amount of trips and increases productivity. Use of the sit-to-stand feature minimizes risk of injury during transfer in and out of the chair. Patients and employees are also more satisfied. Patients report the chairs are more comfortable than wheelchairs and are happy they can fit their belongings in the storage space and avoid carrying items in their lap. The employees enjoy the operational ease and increased efficiency due to ease of push, adjustability for height and storage capability.

Contact

Anthony W. Patterson, RN, MSHA, FACHE
Sr. Associate VP/COO UAB Highlands
UAB Hospital
awpatterson@uabmc.edu

Akofa A. Bonsi, MHSA
Operations Manager
UAB Hospital
abonsi@uabmc.edu

Assessment of the Difference (if any) in Mortality and Length of Stay when the on site, bedside Intensivist is move to a virtual setting, providing care remotely.

Objective

A comprehensive intensivist team, consisting of 24/7 specially trained Critical Care Nurses and Board Certified Intensivists has existed at Geisinger Medical Center's Adult Intensive Care Unit for over two decades. As an integrated health care system, Geisinger has implemented Tele-ICU technology, which provides access, via two-way audio and video, to a remote critical care nursing team 24/7 and an intensivist team from 7pm to 7am daily. The technology allows patients to receive specialty nursing/ physician care in multiple units and facilities, effectively leveraging technology to reduce severity adjusted mortality and length of stay in a unit which previously did not have 24/7 Intensivist coverage, while at the same time maintaining outcomes utilizing a remote intensivist versus a bedside intensivist. The purpose of this investigation is to determine if there is any detriment to patient outcomes in the unit which previously had a 24/7 bedside intensivist model of care.

Methods

Prior to implementing Tele-ICU technology at Geisinger Medical Center, 200 patient charts were randomly selected from the Adult Intensive Care Unit from calendar year 2009 (50 charts per quarter) to complete APACHE IV analysis. From those, an analysis of 196 patients with 209 unit stays were given APACHE scores, severity adjusted mortality and length of stay ratios. Pre-implementation data was compared to post implementation data from Quarters 2, 3 and 4 of 2010.

Evaluation

Geisinger Medical Center's Adult Intensive Care Unit (AICU) and Adult Intensive Care Unit 4th floor (AICU 4), a 16 bed and 18 bed unit respectively, are mixed medical/ surgical trauma intensive care units in a 422 bed facility has seen improvement in patient quality indicators with the implementation of a Tele-ICU Program while at the same time discontinuing night shift bedside intensivist coverage.

- Severity of illness using APACHE IV scores steadily increased in the AICU over four quarters from 64.8 to 77.7
- Severity adjusted mortality ratio improved over four quarters from .99 pre-implementation to 0.7.
- Improvements in severity adjusted ICU length of stay also decreased by 1.83 days from 6.79 pre-implementation to 4.96.
- Based on APACHE IV scores, the GHS program had an actual mortality of 198 versus an expected mortality of 280; the tele-ICU program has been able to save 82 lives in the first 10 months of operations.
- Based on Geisinger's variable cost per critical care day and the number of days saved per APACHE IV, Geisinger Health System has saved over $2 million dollars in the first 10 months of operations.

Conclusion

Leveraging experienced critical care physicians and nursing staff, tele-ICU provides vigilant monitoring on every patient in the intensive care unit; utilization of this technology has the potential to significantly impact patient outcomes. Implementation of a Tele-ICU system in place of a bedside intensivist is associated with preservation or improved mortality and length of stay outcomes. Additionally, tele-ICU technology is associated with reductions in cost of care in the ICU. This reduction in mortality and patient days in the ICU illustrate and improvement in patient outcomes and survivability in our Intensive Care Units.

Authors

Kenneth Wood, DO,
Chief Medical Officer,
Geisinger Medical Center
kewood@geisinger.edu

Susan Fetterman RN, MSN, MBA
Vice President Operations
Division of Medicine
Geisinger Health System
Danville, PA
sfetterman@geisinger.edu

Angelo Venditti RN, BSN
Operations Director
Geisinger eICU Program
Geisinger Health System
Danville, PA
acvenditti@geisinger.edu

The Perfect Marriage: Leveraging Resources; The Transfer Center and the Tele-ICU Story

Leslee Gross RN MHCA, Philipp Ludwig Assistant Vice President South Miami Hospital, Beth Willmitch RN, Director of eICU, Louis Gidel MD, PhD, eICU and Transfer Center Medical Director
Baptist Health South Florida

The Perfect Marriage: Leveraging Resources; The Transfer Center and the Tele-ICU Story

Objective:

Delivery of care in today's healthcare arena can be quite challenging because often times patients are at facilities that are unable to provide for their patients' care needs. Matching patients with a facility that can provide the appropriate level of care and service for their needs can be a very complex process, thus the Baptist Health South Florida (BHSF) Tele-ICU and the BHSF Transfer Center were created. BHSF aims at standardizing care across its five-hospital health system in order to greatly improve patient care outcomes by efficiently utilizing resources.

Planning and Implementation Methods:

In 2005, BHSF Tele-ICU was created. The BHSF Tele-ICU model was created to oversee 114 ICU beds across its five-hospital system, twenty-four hours a day and seven days a week The BHSF Tele-ICU model consists of one critical care physician and three experienced critical care nurses, who are in charge of monitoring 114 ICU beds in the health system, twenty-four hours a day and seven days a week. The Tele-ICU employs prophylactic treatment orders, it standardizes order sets and protocols, and it heightens monitoring and communication in order to prevent untoward events. The Tele-ICU software has a built in artificial intelligence, which contributes to identifying possible complications sooner than manual observation alone.

Successes realized with the Tele-ICU led the way to the creation of the BHSF Transfer Center in March 2009, an additional system-wide department that focused on addressing the challenges of system growth and patient movement. The mission of the BHSF Transfer Center is to efficiently move patients in need of higher levels of care or specialties not available at the current hospital to a hospital with the required clinical resources.

The BHSF Transfer Center was opened in March 2009 and it was housed with the Tele-ICU. The two departments share resources such as the 24-hour intensivist MD and real time awareness of ICU bed availability. The Transfer Center has all patient transfers routed through one central location, which handles all patient transfers in and out of the health system.

Results

The collaboration of the BHSF Transfer Center and the Tele-ICU is unique in the United States. The two departments have the ability to leverage each other's technological platforms, which has provided extraordinary results in terms of improved patient outcomes, physician satisfaction, and operational efficiencies.

The partnership has also accomplished the following results:

- Consistent operational processes (the Tele-ICU medical director also serves as the Transfer Center medical director)
- Constant physician availability to the Tele-ICU and the Transfer Center (the two departments are housed together)
- Ongoing knowledge of available ICU resources
- Real time situational awareness of all Tele-ICU beds
- More efficient transfer processes for bedside caregivers (since the cumbersome process was reduced to one call to the Transfer Center)
- Freed up human resources for direct patient care
- Efficient movement of patients to appropriate facilities shortened overall patient length of stay
- Rapid matching of patients with appropriate facilities
- Comprehensive continuity of care

- Coordination consultation of the Tele-ICU physician is a resource to the physicians at both the sending and receiving facility. The Tele-ICU physicians support clinical care management by offering input on:
- Stability of the patient
- Diagnosis necessitating transfers
- Capabilities of the receiving hospital
- Interpretation of clinical data
- The appropriate steps necessary to perform safe and rapid transfers, i.e., the need for intubation or transfusions

In 2010, there was a 15% reduction in the number of patients transferred out of the health system to other health systems as compared to 2009. The collaboration of the departments has also captured business that would previously have been transferred to outside facilities. Furthermore, each transfer on average takes approximately five hours and fifteen phone calls to complete, thus BHSF Transfer Center removes this time consuming burden from the bedside staff. This equates to an annual cost savings of 54,000 hours per year of bedside care and $1.6 million in cost savings due to the shift in work.

Contact: Leslee Gross RN
Lesleeg@baptisthealth.net

Using a Systems Redesign Approach Toward Improving VA Compensation and Pension (C&P) Examination Reports

Authors
Brian B. Yee MD, Joan White-Wagoner MHA, and Nomie G. Finn MD CPE

Contributors

Kirk Austin MD, Tammy Benz-Yanken LCSW, Jesse Burgard PhD, Linda Clark NP, James Cochran, Clyde Harris, Sherry Hills PsyD, Kenworth Holness MD, Lakisha McKinnon, John S. Goldman VAMC Director, Martin J. Traxler MBA, Cherron L. Blakely CPM, and Mark Anderson FACHE Acting VISN Director

Objective

The US Department of Veterans Affairs (VA) processes over 2.7 million service-connected disability and pension claims annually. Veterans Health Administration (VHA) facilities nationwide have experienced exponential growth in C&P examination workload over the past 5 fiscal years, with consequent difficulties in meeting the VA performance standard for completing examination reports within 30 days. Systems Redesign was utilized with aims to improve C&P examination report timeliness and preserve overall report quality.

Planning/Research

Carl Vinson VA Medical Center (CVVAMC) in Dublin, Georgia, part of Veterans Integrated Service Network 7 (VISN 7), performs a disproportionate share (35.6%) of all C&P examinations related to veteran claims in Georgia. In November 2009, CVVAMC faced a backlog of 546 pending examinations, amidst average monthly demand of 529 new requests and average monthly productivity of 278 reports. Report completion times averaged 57 days with negative trending. Both workload and timeliness factors were tied to exponential growth, and preliminary regression analysis projected timeliness exceeding 100 days by end of Fiscal Year (FY) 2010. Although a historically positive linear trend in productivity was identified, this alone was considered insufficient to match current program expectations. VHA's recent initiative toward Systems Redesign (i.e. an organizational framework combining quality improvement principles with strategies for sustainable transformational change – Figure 1) was considered ideal for addressing the problem of C&P operational throughput.[1,2]

Implementation

A multidisciplinary team was chartered to rectify adverse trends in C&P timeliness and backlog, using the VHA Systems Redesign improvement framework. During February-May 2010, this team convened on a weekly-biweekly basis to review baseline data and operations, analyze trends, evaluate recommendations, and implement change with consensus. Using observational time study and flow mapping, the team identified numerous process handoffs between examiner and clerical staff, and agreed to maximize throughput by minimizing such handoffs (Figure 2). Voluntary examiner participation for additional C&P clinics during weekends and after-hours was adopted. Examination scheduling was standardized in order to minimize variability, and a demonstration project using 10-hour examiner work shifts was tested. Data on examination report timeliness, productivity, and backlog were gathered on a weekly basis in order to gauge impact of aforementioned system modifications.

Results

Productivity and timeliness improvements were dramatic. For remainder of FY 2010, average monthly productivity increased 79% (i.e. 55% from standardized scheduling, 12% from weekend and after-hours clinics, and 12% from switching to 10-hour work shifts – Figure 3). Scheduling and report processing throughputs increased 54% overall. Backlogged pending examinations declined from a high of 724 in December 2009, to a low of 71 in September 2010 (Figure 4). Examination report timeliness peaked at 82.8 days in February 2010, then declined steadily toward eventual compliance with the 30-day standard for final 3 months of the FY (Figures 5 and 6). Percentage of insufficient examination reports as a quality measure remained well below the 2% standard set by VA during this period.

Conclusion

Systems Redesign seems well suited for improving C&P program operations in VHA facilities such as ours. Further study is recommended in order to determine applicability of this model in other similar settings.

References

[1]VHA Office of Systems Redesign. *Veterans Health Administration Systems Improvement Framework: Version 1.0*. Washington DC: US Department of Veterans Affairs, January 2010.

[2]Lukas CVD, Holmes SK, Cohen AB et al. Transformational change in health care systems: an organizational model. Health Care Management Review 2007; 32: 309-320.

Identifying Adverse Trends Before They Become Adverse Outcomes – Opportunities in the Med Surg Population

Objective of program

At Banner Health, a centralized team of dedicated Intensivists and ICU RNs (called the iCare team) use Philips Visicu's eICU® technology to significantly reduce Mortality and LOS in the ICU population.

Our objective: to evaluate this technology and change in the care delivery model to provide improvements in a Med/Surg population. Our hypothesis:

Clinical: Reduce transfers from Med Surg to ICU by 30 percent
Service: Increase patient satisfaction
Increase care-giver engagement
Financial: Budget neutral operational model
Reduce LOS by 0.25 days

Planning/research methods

A transformation team, consisting of leadership, project management, technical experts, and most important, a multidisciplinary bedside team, met monthly over a six month period to:

- Define the program's vision, guiding principles & key characteristics
- Procure & construct iCare center
- Identify/re-define bedside care-giver roles
- Define staffing plan for units and iCare center
- Define iCare staff accountabilities and responsibilities
- Develop new processes and workflows

Implementation methods

The Change Acceleration Process (CAP) structure and tools were utilized to advance acceptance of the iCare delivery model among key stakeholders/customers.

Results (e.g., cost savings, increased productivity, improved quality of care)

	Measure	Hypothesis	Outcome
Clinical	Transfers to ICU	reduction of 30%	In first 24 hrs of stay dropped from 0.9% to 0.8%
			After 1 day dropped from 1.1% to 0.6%
Service	Patient Satisfaction	increase	Stable
	Caregiver Engagement	increase	Returned to Stable with staffing model change
Financial	Operations budget	neutral	Savings of $783 Average Direct Cost per Case ($4.5 M annual)
	LOS	reduction by 0.25 days	Reduction from 4.1 to 3.6 days with an increase in CMI (MSDRG) from 1.29 to 1.33

Deborah Dahl BSE MBA FACHE Sr Director of Clinical Innovation Banner Health deb.dahl@bannerhealth.com
Sheri Dahlstrom. BSN, MSN, FACHE CNO, Banner Gateway Medical Center sheri.dahlstrom@bannerhealth.com

Title: Hardwiring Operations to Reduce Expenses

Objective of program: Lankenau Medical Center undertook an extensive initiative to reduce expenses in response to a changing healthcare environment

Planning/research methods: Fluctuations in both inpatient and outpatient volume led to operational challenges in controlling expenses. Review of volume and expense trends indicated the need to address both overall cost structure as well as implement a daily hospital-wide method to match resources to demand.

Implementation methods: A multi-faceted initiative was undertaken to reduce operating expenses. Development and reporting of productivity standards was implemented for all nursing and ancillary departments. In collaboration with physicians, supply costs were reduced through changes in utilization patterns as well as targeted vendor negotiations. Lean methodology was employed to minimize waste in the healthcare delivery processes. Daily, weekly and monthly operating mechanisms were employed to ensure that staffing resources matched the volume and acuity levels of the organization.

Results: The results of this work include significant reductions to the overall cost structure, $10 million annually, while maintaining high levels of quality and safety outcomes. Productivity levels were increased while overall salary expense decreased, including a 62% reduction in overtime hours, bringing overtime to 0.7% of paid hours.

Title: Delivering Measurable Improvements in Clinical and Financial Performance through a Focus on High-Impact Diagnoses

Objective of the Program: Develop a core process to focus clinical workflow for hospitalists and hospitalist RNs in the areas where cost, quality and volume intersect to reduce variance and drive performance.

Planning/Research Methods: The High-Impact Diagnoses Initiative was designed by drawing on our deep informatics database of > 2 million patient visits. Regional leadership teams also work closely with the leadership of each the hospital – typically the Chief Financial Officer and Vice President of Medical Affairs – to customize the patient diagnoses that are high-impact to the specific hospital.

Implementation Methods: High-impact patients are identified electronically in our workflow and informatics platform based on primary diagnosis. These patients are then followed closely to ensure care follows established clinical guidelines effectively and efficiently. Variance from best practices is documented at the patient's bedside and provided in real-time back to the physician with a hospitalist RN managing that process.

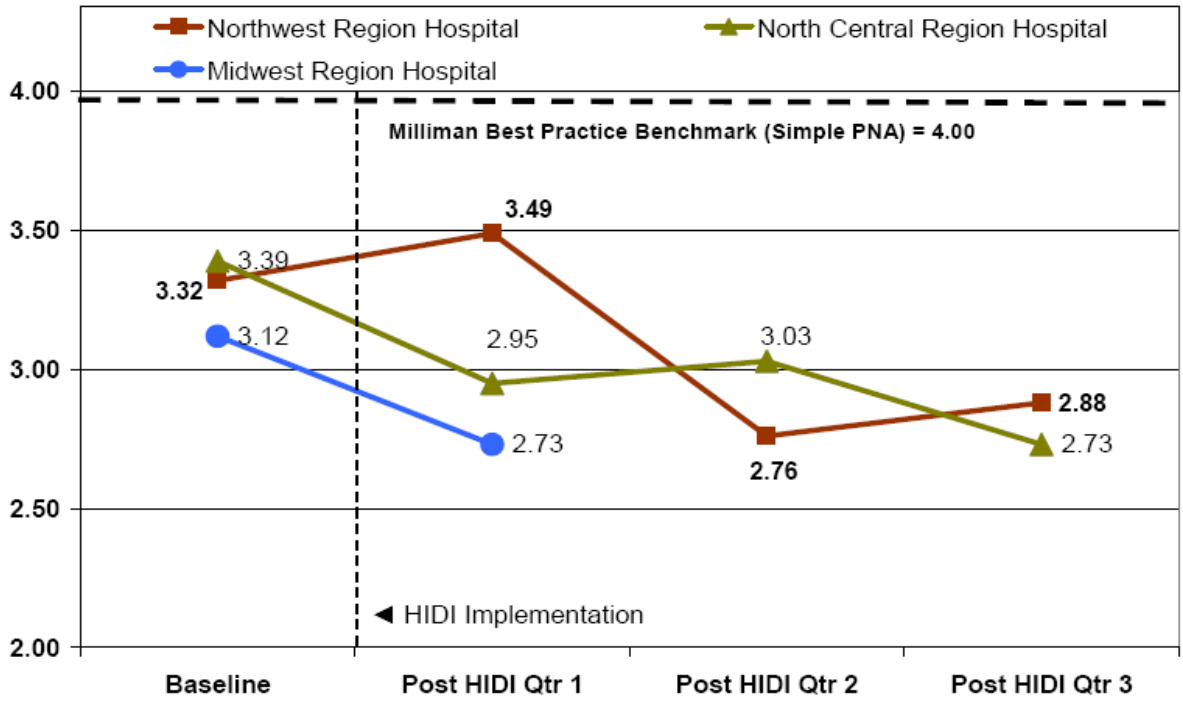
Pharmacy, clinical documentation and discharge planning interventions are applied at the patient's bedside daily. The average hospitalist spends more than $2 million annually with their pen writing orders for diagnostic testing, labs and pharmacy. Pharmacy typically accounts for 25% of the annual orders generated by hospitalists. Optimizing pharmacy orders represents a huge opportunity to drive down the cost of inpatient care. For each diagnosis we work on, we have developed a pharmacy tool using best practices that is included on the patient's chart. This process is managed by the physician and nursing team.

The patient's chart includes a clinical documentation tool to query physicians in a compliant way to optimally reflect the illness severity of their patients. This ensures that clinical documentation and reimbursement more accurately reflect the resources consumed in the hospital. Individual physician performance is tracked and reported back to the physicians. Specific areas for improvement are identified and addressed using targeted training through an on-line learning platform.

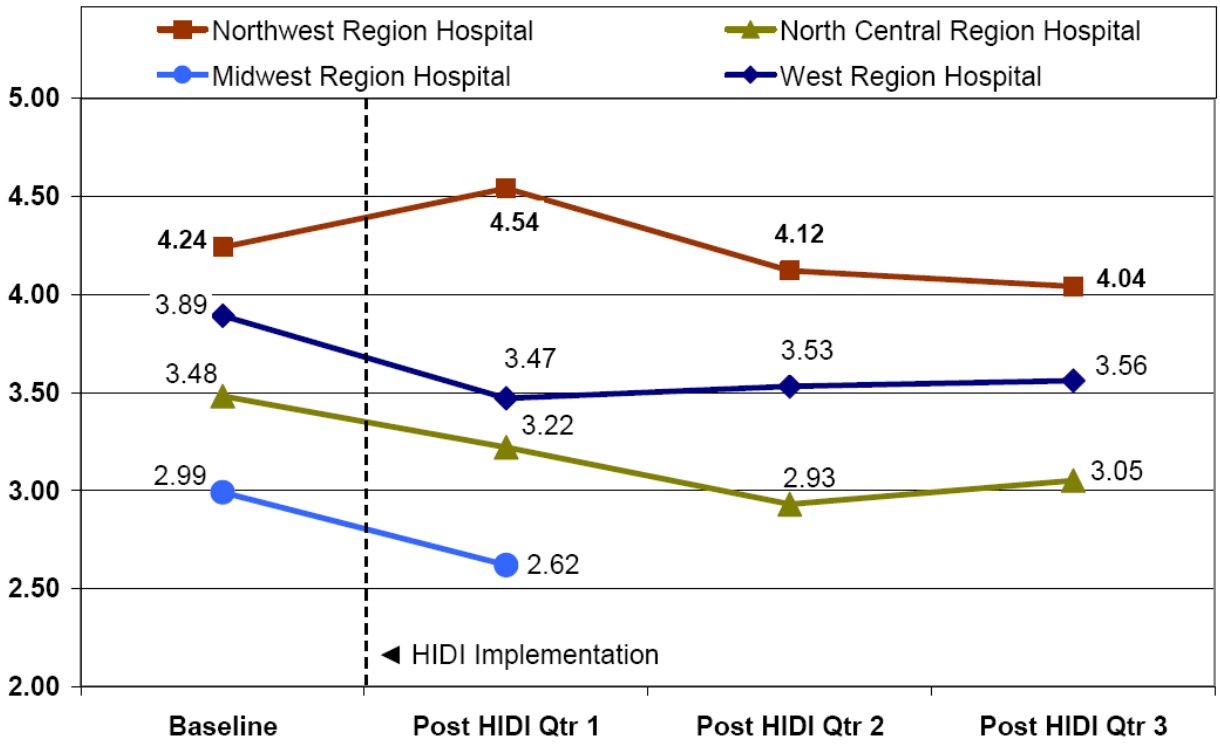
We conduct quarterly business reviews on key performance data with the hospital to demonstrate measurable value and ensure continued alignment with hospital goals. All physicians are measured in their quality performance with recognition tools in place to promote improvements in quality and outcomes.

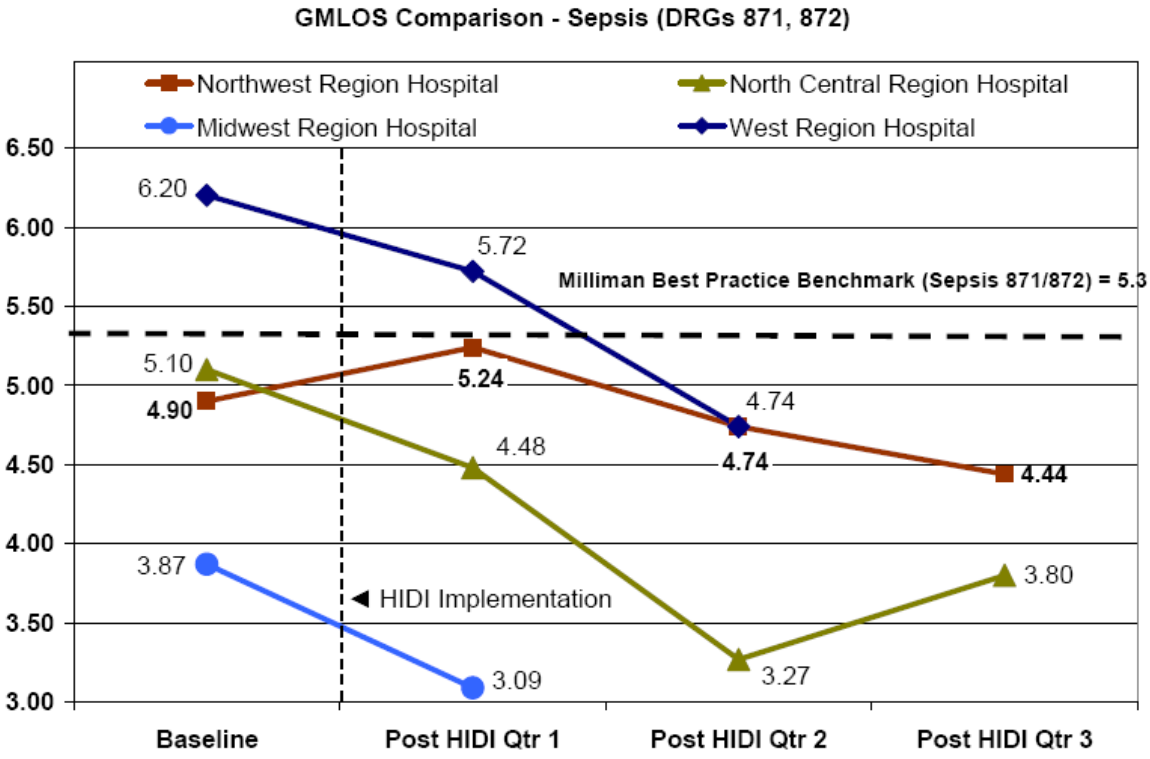
Results: This initiative has been implemented in 25 hospitals nationwide. Results for length of stay (5-12% reduction), direct cost per case (9-17% reduction), and Case Mix Index (.03-.05 improvement) have been shown consistently. Actual data from several of the hospitals is presented below:

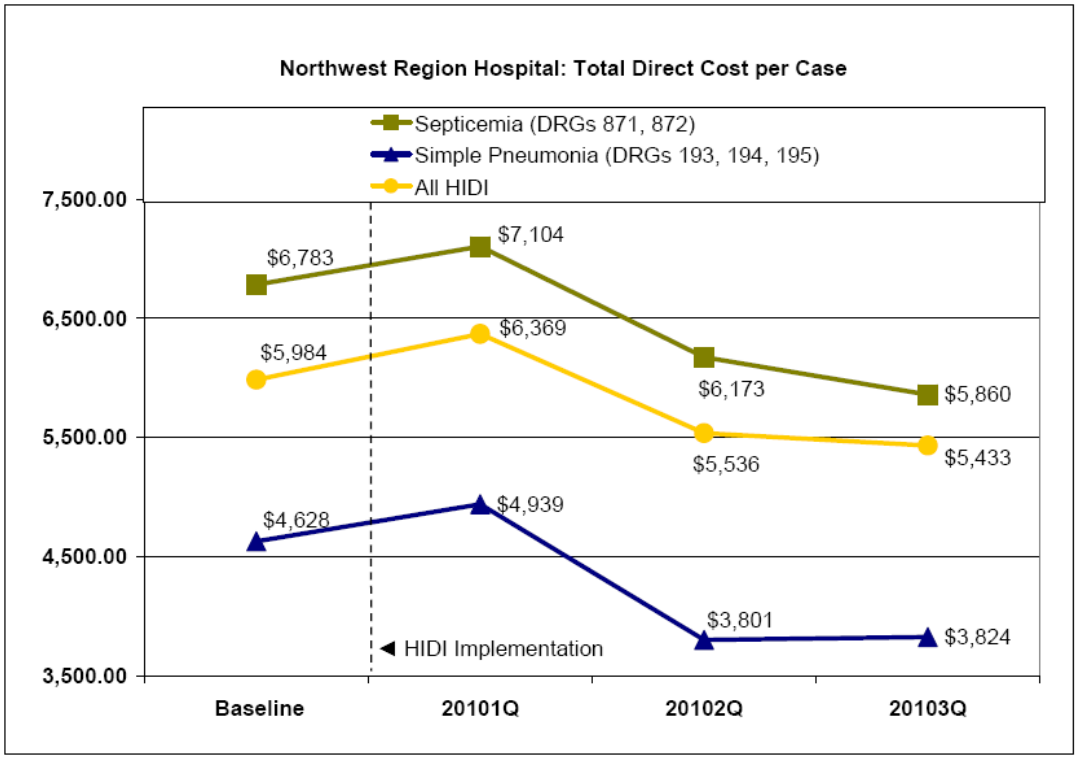
GMLOS Comparison - Simple Pneumonia (DRGs 193, 194, 195)



GMLOS Comparison - High Impact Diagnoses







Note: The increase in costs during Quarter 1 of 2010 was reported across sites due to H1N1infection.

Contact: Kripa Krishnan, MPH | Operations Manager | Mayo Clinic in Arizona | krishnan.kripa@mayo.edu
Adrienne Palmer, MHA, FACHE | Operations Administrator | Mayo Clinic in Arizona | palmer.adrienne@mayo.edu

"When Two is Not Better Than One": Creating Value Through Supply Standardization Across Multiple Practices
Authors: Kripa Krishnan, MPH; Adrienne L. Palmer, MHA, FACHE; Kimberly J. Hallum

Objective:
In high volume procedural practices like gastrointestinal (GI) endoscopic centers, supplies are often the largest expense item after salaries and benefits. Managing this line item becomes extremely difficult given the variations on products offered by a myriad of vendors and physician preference for certain items or vendors over others, all while ensuring the highest quality clinical care. The problem is further complicated when evaluated in a large, multi-specialty, integrated practice such as Mayo Clinic. This abstract examines how Mayo Clinic successfully converted GI supplies to meet contractual obligations for vendor discounts and rebates utilizing shared vendor contracts and a combined supply formulary across six different endoscopic centers in four states.

Planning:
All Mayo Clinic Gastroenterology sites agreed to seek a shared supply contract and thus initiated a formal request for proposals to all major GI endoscopy vendors. A multi-site team reviewed and approved the final contract terms based on current utilization of various vendors, ability to "move" physician preference items to meet vendor terms, and discounts and/or rebates offered. After the contracts were signed, each site was responsible for meeting contract utilization targets; however, successful achievement of the targets was measured collectively. Thus, some sites were incentivized to exceed utilization goals where possible in order to assist other sites where the transition would be more difficult. Crucial to the success of the transition was administration and physician leadership's joint understanding of the degree of interchangeability of supplies and vendors. For example, some supplies could be easily converted (commodity products) while others required physician discussion and even trials to determine the impact to physicians and clinical care (physician preference products). Thus, identifying administrative and physician champions that recognized and supported the goal of conversion was key to successful implementation.

Implementation:
The Mayo Clinic Gastroenterology endoscopy practices focused on the following steps for implementation:
1. Establish a baseline founded on current supply spend.

Baseline utilization was established for each site based on all supply items ordered and frequency of ordering/use. A two-month timeline was established to make the transition before utilization was officially recorded for the vendor's purposes. A dedicated operational analyst FTE was allocated to serve across the six sites to assist both in implementation and subsequent reporting and analytics.
2. Transition high volume, low dollar, non-preference items first.

Converting the most frequently used supply items (commodity products) faced least resistance among staff and was agreed to be the least clinically different among vendors. Vendor representatives were brought in for demonstrations and in-services to prepare the staff for product transition.
3. Transition lower volume, high dollar physician preference items slowly and consistently.

Among every physician subspecialty group within GI, some physicians already used the preferred vendor product. These individuals were key to establishing clinical quality of the supplies to their colleagues and persuading others to trial them. Vendor representatives were on-site during trials to demonstrate optimal use of the products.
4. Continually monitor progress towards goals.

All sites received accurate monthly data on progress towards meeting contract terms. Additionally, sites that were slower to progress received pressure from more successful sites to gain momentum since rebates were dependent on the entire group meeting the target.

Results:
The GI practices of Mayo Clinic successfully met contract utilization terms by the first quarter of implementation, resulting in a 30% movement of dollar spend to the preferred vendor for all endoscopic supplies. Combined, this resulted in rebates totaling $78,198 from the preferred vendor to Mayo Clinic GI thus far. In addition, GI is entitled to $12,000 in rebates from the remaining contracted vendors. Since implementation, the percent of dollars moved at each site has ranged between 22% and 33%. The differences in these percentages are attributed mostly to the amount of physician and administrative support for conversion at each site. A common GI Endoscopic Supply Formulary was created to maintain utilization and formalize the standardization. In addition, many sites have defined a transparent and consistent process to trial and approve new supplies to the formulary in order to maintain current progress. Future plans include one common supply evaluation committee that would continue to standardize utilization and facilitate additional contracting efforts.

The Sinai-Grace Hospital MI STA*AR Collaborative

Objective

Re-hospitalization - patient readmission to a hospital soon after discharge - is both common and costly. In many situations, hospitalization may be necessary and appropriate. However, studies show that nearly one in every five elderly patients who are discharged from the hospital is readmitted within 30 days. Many of these readmissions are avoidable, and thus suggest a failure in the system of transitioning patients into a stable and safe setting of care. Avoiding preventable readmissions represents a win-win opportunity for patients and families, payers, health care purchasers, and providers. The STA*AR collaborative refers to the Commonwealth Fund-supported initiative to reduce avoidable 30-day re-hospitalizations.

Methods

This program was launched on May 1, 2009 taking states as units of intervention. With the Institute for Healthcare Improvement (IHI) providing technical assistance and facilitating a learning system, multi-stakeholder coalitions in three states were selected as partners in this initiative (Massachusetts, Michigan, and Washington). The Sinai-Grace Hospital (SGH) is a Southeastern Michigan community hospital that has been a participant in the Michigan STA*AR (MI STA*AR) initiative since October 2009 and aims to stabilize and improve chronic disease management by implementing processes that provide efficient transitions home and overcoming racial and socioeconomic obstacles in order to build a stronger and more effective continuum of care. SGH's objective is to evaluate all cause readmissions and ultimately decrease by 20% from baseline. The highest admitted population at the hospital and those with the highest readmission rate are congestive heart failure (CHF) patients. Prior to October 2009, the baseline readmission rate for CHF was 33.20%. An initial target reduction of 20% from baseline provided us with a goal readmission rate of 26.57% specifically for this population.

Implementation

By focusing on various transitions in care concepts, SGH has begun to move the needle to achieve the target goal and has implemented interventions that improve self-management of chronic diseases by patient or care giver; improve post-discharge follow-up; improve coordination of care between providers and across the continuum of care by promoting seamless transitions from the hospital to home, skilled nursing care, or other providers; and improve medication reconciliation and management.

Results

Between October 1st 2009 and October 1st 2010 SGH had a total of 1168 CHF hospital admissions of which 273 were 30-day readmissions (23%). Our process key changes were in relation to: the enhanced admission assessment for post-hospital needs; patient effective teaching and enhanced learning; real-time patient- and family-centered handoff communication; and post-hospital care follow up. From this intervention we learned that small cycles of change lead to larger results; we learned how to make this a process not person driven change for sustainability; how to partner with our community primary care physicians, skilled nursing facilities and home care agencies for better transitions in care; how to utilize and implement the IHI Four Pillars in Transitions of Care; and how to leverage technology in improving our processes for transitions of care.

Conrad L. Mallett Jr., FACHE
President and CEO
Sinai-Grace Hospital
Detroit Medical Center
Detroit, MI
clmallett@dmc.org

Katie Flannigan, MS, PA-C
Administrative Director
Sinai-Grace Hospital
Detroit Medical Center
Detroit, MI
kflannig@dmc.org

Camelia Arsene, MD, PhD, MHS
Research Director
Sinai-Grace Hospital
Detroit Medical Center
Detroit, MI
carsene@dmc.org

Innovations in Hospitalist Practice: Telemedicine Night Coverage

Eagle Hospital Physicians
Dallas ● Atlanta

Background

The impact of the shortage of hospitalists to manage increasing hospital volumes has many hospitals seeking sustainable, cost effective solutions to bring and/or maintain high quality care in their communities while creating a competitive market advantage. For practices offering 24/7 care, night time coverage can be particularly problematic.

In many hospitals during the night, a nurse may be talking with a physician, but patients and family members may not see a physician until the next day. Through the use of telemedicine technology a hospitalist, or TeleHospitalist, is available within minutes to care for a patient's medical needs during the night. A telehospitalist can interact with the patient, family members and on-site providers face to face in real time and deliver care just like they were there in person.

Management Challenge

Founded in 1998, Eagle Hospital Physicians (Eagle) is elevating healthcare through innovation and insight. As one of the first groups to provide hospitalist care, Eagle continues to serve as a pioneer in the industry today, leading new solutions through the use of telemedicine technology. Eagle provides hospitalist services in a rural community hospital. Having one physician cover 24/7 could not meet the medical services needs of the facility and was simultaneously dissatisfying for physicians. Having an on-site nocturnist at the facility was cost prohibitive.

Planning/Implementation Methods

Key stakeholders were gathered to collaborate and give input on the telehospitalist service operation. Based on the needs of the facility, stakeholders determined the range of services to be provided by the telehospitalist, cross-cover obligations, required back up, location of the on-site technology and service specific parameters of use. Stakeholders also guided the development of additional transfer intake protocols to maximize system efficiencies for care. The infrastructure for on-going monitoring, satisfaction, performance and utilization measures was designed.

The telehospitalist conducts the components of the admission process as if they were physically present. An on-site clinician directed by the telehospitalist supports the physician with the physical exam. To ensure that the physician and patient experience is as consistent with on-site care as possible, Eagle's management team created operational checklists. Existing hospitalist orders and protocols are made available electronically for the telehospitalist to access remotely. Telehospitalists submit orders via secure electronic fax. Dictation is completed through the existing facility dictation system.

Results

The full range of services customarily provided by on-site night hospitalists were provided by the telehospitalists with the exception of procedures requiring hands-on presence. Arrangements for hands-on procedures were made in advance as part of the implementation staging. Of note, a successful code-blue resuscitation with subsequent transfer to the ICU on a non-hospitalist patient was accomplished by the telehospitalist early-on in the implementation. This received widespread acknowledgement and praise from the nursing staff. To date, the telehospitalist service has received both patient and provider satisfaction rates in the 90th percentile.

Conclusions

The experience has shown that night time hospitalist telemedicine services are well accepted by patients, families and nursing staff and that safe, effective, patient-centered, timely, efficient and equitable may be provided using this innovative mode of healthcare delivery.

Talbot G. McCormick, MD
Dana P. Giarrizzi, DO, FHM
Richard B. Sanders, MPH

Mitchell J. Wilson, MD, SFHM
Scarlett M. Blue, RN-BC, MSN, NE-BC, CPHQ
Raleigh Heard, MHA, FACHE

Success Breed Success

Rebecca Zapatochny Rufo DNSc RN CCRN
Resurrection Healthcare eICU ® Program
Resurrection Healthcare, Chicago, Illinois

Program objectives will focus on demonstrating clinical, operational and financial performance outcomes through leveraging of the Resurrection Health Care eICU® Program and execution of Tele-health initiatives. Organizational strategies and business intelligence tools that impact higher quality at lower costs will be discussed.

1. The participant will discuss strategic initiatives that drive clinical, operational and financial performance following integration of Tele-Health technology
2. The participant will define how Tele-Health technology impacts value-based purchasing and challenges associated with Healthcare Reform.
3. The participant will discuss demonstrations of return on investment following integration of a Tele-ICU.

Planning/Research Methods

One of the most pressing challenges facing the United States today is the demand for the greater quality at the lowest cost (value based purchasing). One solution to improved quality at lower costs is Telehealth integration. The most critical aspect of Telehealth is the revolutionary care delivery model that uses information to streamline the medical care process, improve clinical decision making, promote efficiency, productivity, quality, and support disease management programs. Resurrection Health Care, Chicago Illinois is an early adopter of integrated Telehealth care delivery with proven clinical, operational and financial benefits through implementation of the RHC eICU® Program in 2007.

Implementation Methods

The nationally renowned RHC's eICU® Program integrated 193 critical care monitored beds in 5 acute care facilities, 1 Long Term Acute Care facility and 2 Outreach sites with Tele-ICU technology. The Tele-ICU leverages technology to accelerate critical care delivery using a remote and onsite intensivist model.

Strategies

- Integration of system wide business intelligence tools: severity adjusted mortality reports, standardized benchmark reports, balanced scorecard, quality metrics
- Alignment with Institute of Medicine's 6 dimensions of quality (Systems of Care)
- Sharing of collaborative data and integration of best practice
- Investment in human capital
- Alliance with executive leadership and stakeholders

Results

Quality improvement and physician alignment initiatives have led to substantial performance outcomes from 2007-2010, including over 14,500 ICU days saved ($18.1 M), 32,800 non-ICU days saved ($10.8M) from the 34,400 unite stays in 15 critical care units. Mortality and length- of- stay consistently remain 40% below baseline with an approximate $5-6 M savings in clinical risk reduction interventions. National best practice composite performance improved from 21st to 7th in rank. Integration with Physician residency and Nursing programs affirm our partnership for continued clinical education enhancement. Current integration of the Tele-Neuroscience Program will leverage the existing eICU® Program with mobile devices equipped with audi-video technology to allow for remote presence monitoring for consultation and management. Growth is promising to the emergency departments, skilled nursing facilities, increased Outreach sites and regionalization initiatives.

Mobile Marketing: The University of Wisconsin Department of Surgery Provider Quick Reference Tool Objective

To provide referring physicians direct access to UW surgeons for patient consultation and referral.

Planning/research methods

Accessing and navigating a large academic medical center can be a challenge for referring providers especially if they are unfamiliar with the health system.

In order to foster a culture of collaboration and to ease the referral process, an electronic mobile website was developed to foster direct physician to physician interaction. We first piloted a paper faculty resource guide. The paper guide, categorized by division, contains faculty headshots, cell phone and pager numbers, as well as clinic locations and area(s) of expertise and access center contact information. The paper guide was mass produced and mailed to all referring physicians in the state of Wisconsin and region. Due to much success and positive feedback on this initiative, a mobile platform was developed to further enhance communication and improve overall ease of access.

Implementation of methods

The provider quick reference tool is an extension of the original paper guide and Department of Surgery website, which uses a customized version of Radiant, an open source Content Management System (CMS) written in the Ruby on Rails framework. The CMS uses a PostgreSQL database that is automatically updated through human resource records and is served by Apache on a Linux server. For advanced devices, including iOS and Android, Javascript is used to dynamically load pages for improved performance.

Results

Many physicians rely on their mobile device to access information or consult on patient care. The UW Department of Surgery Provider Quick Reference Tool for referring physicians provides a novel, electronic mechanism to foster physician to physician communication.

Full-scale marketing and implementation efforts of the mobile website are currently underway. Feedback from piloting the program includes:

- Quick faculty adoption
- Ease of use due to widely accepted technology
- Increased presence in market and enhanced relations with referring physicians
- Improved quality of care through physician to physician interaction

Project Team: Wendy Horton, K. Craig Kent, Christopher Kintner, Mary Marshall, Christine Schmieden

Wendy Horton
(608) 265-0720
whorton@uwhealth.org

Improving Bariatric Program Efficiency and Volume-The Role of a Behavioral Therapist

Authors: Roshanak Didehban, T'Nita S. Waters, KristiL. Harold, M.D.

Background:

The Multidisciplinary Bariatric Program at Mayo Clinic in Arizona was implemented in 2001, and included providers from multiple specialties, including: Endocrinology, Nutrition Services, Internal Medicine, Psychiatry, and Minimally Invasive Surgery. At the initiation of the program, volume quickly grew to 143 cases in 2003. However, surgical volume began to fall in 2004, and hit a low in 2008 with only 41 cases performed. This drop in volume threatened the long term viability of the bariatric program, as Center of Excellence designation requires a minimum of 125 cases per year.

In January 2008, a Bi-monthly Bariatric Conference was implemented to actively manage the flow of patients through the continuum of care. A database was implemented, allowing tracking of time from initial evaluation to surgery and the length of time spent in each portion of the program. This database allowed the Program to identify the most significant barriers to program completion. At the start of this effort, the average time from initial evaluation to surgery was 294 days (approximately 10 months).

Current standard of care for pre-operative work-up for bariatric surgery includes evaluation by a psychiatrist and ongoing therapy sessions to treat any emotional or eating disorders. In 2007, the initial evaluation was completed by a psychiatrist at Mayo Clinic, but ongoing therapy was provided by non-Mayo Clinic providers. It was noted that the ability of patients to find therapists with knowledge of bariatric surgery and behavioral changes necessary for success was challenging. Additionally, the initiation and completion of therapy was the factor that most often extended the patients' total time program prior to achieving their goal of surgery. Without clearance from a therapist, Mayo Clinic was often unable to secure authorization from insurance to proceed with a surgical intervention.

Implementation:

In 2008, the Multidisciplinary Bariatric Team worked collaboratively with the Department of Psychiatry and Psychology to hire a 0.40 FTE contract therapist to work 2 days per week with Mayo Clinic bariatric patients. This individual quickly integrated with the Multidisciplinary Bariatric Team, and became fully engaged in the Bi-Monthly Bariatric Conference.

Results:

The addition of a Behavioral Therapist quickly improved the efficiency of the Multidisciplinary Bariatric Program, and patient satisfaction with the overall process. The outcomes from the project included:

- 41% reduction in average time from initial evaluation to surgery, reducing the length of the of the program from 294 days (10 months) to 175 days (6 months)
- Improved patient satisfaction with the program has increased Bariatric surgical volume from 41 cases in 2008 to 62 cases in 2009. This growth has continued, with the ultimate goal of achieving Center of Excellence designation in the next 24 months.
- Financially positive impact to the institution. The revenue generated by the therapy visits covered the expense of the additional FTE.

Contacts:

Roshanak Didehban
Operations Administrator
Didehaban.roshanak@mayo.edu

T'Nita S. Waters
Operations Manger
water.tnita@mayo.edu

Transformational Care at Catholic Healthcare West: Improving status accuracy of patients admitted from the Emergency Department

OBJECTIVE:

As part of the Catholic Healthcare West (CHW) system-wide Transformational Care initiative, over 15 hospitals through September 2010 have implemented solutions to increase status accuracy of patients admitted to hospital inpatient units from the Emergency Department (ED). Improving status accuracy of patients (correctly designated as inpatient or observation) results in increased revenue, decreased risk of RAC audits, and it ensures patients are admitted to the most appropriate unit for their condition.

PLANNING/RESEARCH METHODS:

Using the Transformational Care philosophy of utilizing front-line staff to analyze opportunities and implement solutions, hospitals across CHW organized teams consisting of front-line ED staff (case managers, nurses, clerks) and physicians. To assess the current state, at each hospital these team members:

- Analyzed baseline data by conducting chart audits to determine the status accuracy
- Used Lean process improvement diagnostic tools and participated in first-hand observations and interviews to determine key issues causing status inaccuracies

IMPLEMENTATION METHODS:

After ascertaining key issues, team members were able to implement customized solutions fitting the needs of their individual hospitals in addition to taking advantage of Transformational Care solutions implemented at prior hospitals. Common solutions (albeit customized at each facility) implemented across CHW include:

- Quick status determination tool to assist ED physicians when writing admission orders
- Standard processes for case managers on prioritizing which cases to review and in what order
- Visual signals on ED electronic tracking boards to flag case managers that a patient will be admitted
- Increased collaboration between ED physicians and case managers
- Regular audits to monitor continued progress

RESULTS:

After conducting pre and post solution implementation chart audits of patients admitted from the ED, status accuracy leaving the ED increased from roughly 65-85% on average to 90-100% on average at all hospitals. Overall, this resulted in over $8.7 million in value across CHW. This consists of actual additional revenue collected for patients and the reduction of potential denials from RAC audits.

TOTAL FINANCIAL IMPROVEMENT: $8.7 Million

Don Dracoulis, MHA, Transformational Care Lead, donald.dracoulis@chw.edu
Joanne Jeffords, MPA, RN, Senior Director Transformational Care, joanne.jeffords@chw.edu
Heather Miller, MBA, RD, Transformational Care Lead, heather.miller@chw.edu
Lacey Newbry, RD, CDE, Transformational Care Systems Analysts, lacey.newbry@chw.edu

Improving point of service collections and streamlining the billing processes in the Emergency Departments at Catholic Healthcare West

OBJECTIVE:

Over the past year (August 2009-September 2010), as part of the Catholic Healthcare West (CHW) system-wide Transformational Care paradigm, over 15 hospitals have implemented solutions to increase ED co-pay collections and decrease patients left without being registered (LWBR). Increased co-pay collections result in increased overall revenue and reduction of re-work and dedicated resources. Decreasing patients left without being registered improves the billing opportunity and optimizes ED throughput.

PLANNING/RESEARCH METHODS:

As part of TC, hospitals across CHW organized teams consisting of front-line ED staff to redesign current processes for improved efficiency. Team members:

- Analyzed baseline data by evaluating point of service (POS) collections and left without being registered percentages in the ED over a 12 month time-frame
- Used Lean process diagnostic tools and participated in first-hand observations and interviews to determine key issues related to co-pay collection and patients LWBR
- Key issues and mindsets causing poor collections and LWBR:
    - Not for profit mindset fostered a practice of chartable care even for those patients having a payer source
    - ED staff did not understand implications of patients LWBR
    - Poor communications between ED clinical staff and registrars regarding patient location and status

IMPLEMENTATION METHODS:

After ascertaining key issues, team members were able to implement customized solutions fitting the needs of their individual hospitals in addition to taking advantage of Transformational Care solutions implemented at prior hospitals. Common solutions (albeit customized at each facility) implemented across CHW include:

- Unique disposable ID bracelet to signal staff that a patient has not been fully registered
- Visitor badges to identify non patients
- Common scripting for ED registrars when collecting POS dollars
- Incentive plan for meeting co-pay collection targets
- Daily huddles between clinical ED and registration staff to discuss metrics and briefly problem solve for continuous process improvement
- Posting of performance metrics in public areas
- Restructure of work stations for optimal flow and timely collections
- Use of electronic patient location monitor
- Limit patient entrance and exit to prompt seamless location of patient
- Standard work created by staff to decrease variability of registration staff
- Rounding for influence by senior leaders

RESULTS:

Solutions to increase ED co-pay resulted in a system wide increase of 116% with individual facility improvement ranging from -2-413%. The 116% increase in POS collections translates to 7.1 million dollars across the system.

Similarly, patients LWBR demonstrated a system improvement of 63% with individual facility improvement ranging from -14-80%. A 63% improvement in capturing patients left without being registered represents 4.5 million dollars in savings across the system.

TOTAL FINANCIAL IMPROVEMENT: $11.6 million

Don Dracoulis, MHA, Transformational Care Lead, don.dracoulis@chw.edu
Joanne Jeffords, MPA, RN, Senior Director Transformational Care, joanne.jeffords@chw.edu
Heather Miller, MBA, RD, Transformational Care Lead, heather.miller@chw.edu
Lacey Newbry, RD, CDE, Transformational Care Systems Analysts, lacey.newbry@chw.edu

HOSPITAL-CARDIOLOGY INTEGRATION

"A Successful Integration Case Study"

Objective - Parkview Health is a not-for-profit, community-based health system serving a northeast Indiana population of more than 820,000. With nearly 7,000 employees, they are the region's largest employer. Parkview Health System is committed to improving the outcomes of the population while at the same time growing their cardiovascular program. Paramount to this effort was the engagement and alignment of leading cardiologists to better meet the overall system mission of:

- Best place for physicians to practice
- Best place for co-workers to serve
- Best place for patients to receive care
- "Excellent Care, Every Patient, Every Day"

The project objective was to conduct due diligence to determine the optimal alignment structure, determine fair market valuation, model a potential compensation package, and determine the financial impact on the hospital going forward. As with multiple alignment projects all options were considered; co-management, PSA, and joint venture. After evaluating multiple models the system and physician practice, Fort Wayne Cardiology, pursued an employment strategy in order to build a more competitive program in their market.

Planning and Research - Parkview Health contracted with TRG Health Care Solutions to guide both the physician practice and hospital through the multiple alignment options and ultimately help facilitate the negotiation of employment terms including a compensation package. As in any effort to bring multiple parties together by aligning their goals and objectives, it takes an impartial, competent third-party to create the necessary buy-in, continuous focus, and rationale for change necessary to satisfy all participants.

As a part of this project TRG recommended employment terms and compensation package, conducted a 5 year financial analysis to evaluate the financial impact of employment, determined any capital requirements required to establish a new clinic , reviewed the scope of Cardiology practice services and current medical staff, and analyzed the optimal cardiology physician practice governance and organizational structure as it was integrated into the existing governance structure of the Parkview Physician Group.

Implementation - TRG facilitated an 8 month process that covered 4 steps; evaluation, valuation, key terms, and acquisition.

- Evaluation: all options considered – expanding medical directorships, co-management agreements, PSA's, and joint venture.
- Valuation: conducted fair market value analysis looking at historical trends and forecasting future assumptions; number of physicians, volume, and reimbursement. Other expenses were also analyzed including real estate, work force, and furnishings.
- Key Terms: created compensation model that mirrored historical experience. Total compensation was based upon a combination of wRVUs, previous guarantees related to 'non-partners' in practice, historical medical directorship agreements, and call coverage.
- Acquisition: developed a 5 year financial analysis to quantify the impact of acquisition based on historical volume and future healthcare trends.

Results - 100% of stock of practice acquired, effective January 1, 2010. The historical private practice is now functioning as a business unit of the hospital practice group. The cardiologists maintain 2 of 15 board seats on the hospital practice group. In-office ancillaries converted to hospital based. Patient volumes and clinic visits have increased as a result of the integration. Cardiovascular surgical cases have increased 15.7% while cath lab volumes are up 7.2%.

New EMR Implementation – The Value of Identifying Changes in Workflows

Mayo Clinic in Arizona

Authors: Hope E. Greig, MSH, FACHE, Kevin A. Paige, MHA, Keith A. Frey, M.D., Ann M. Meyers, MSIE, MBA, Benjamin D. Farrar, MHSA, Radhika Ramachandran, MHA

Objective:

This abstract describes the crucial importance of documenting and mapping the "current state" clinical and business workflows when designing, then implementing, an organization's change from an existing to a new electronic medical record (EMR). This disciplined, system-based approach is on the critical project pathway for design, staff training, and post-implementation modifications.

Planning and Research Methods:

Our institution began planning for an EMR to EMR transition in September 2008 for an implementation date of September 4, 2010 (Labor Day weekend). It was understood from the beginning that a new EMR was not just a change in computer screens and the number of clicks, but rather is a change in the way work is performed (workflows). In order to create the workflows of the new EMR, the current-state workflows were identified, documented and studied. After successfully performing these tasks, future-state workflows could be better predicted, documented and taught. The teaching of these new workflows was paramount and was achieved through different methods. The methods that we chose were simulations using table-top exercises and patient simulations. Table-top exercises simulate the new workflows in a conference room setting with various key constituents (team members) to process. The team members of the group took turns in the sequence of their operational duties using the new electronic applications to workout imperfections and bottlenecks in the workflow. Patient simulations did the same, but used "mock" patients within the clinical setting. All the findings were incorporated into the future-state workflows.

Implementation Methods:

In order to provide a means of simulating the departmental workflows and identifying areas of vulnerability, a tool kit was developed to assist departmental coordinators who were responsible for EMR implementation. The tool kit included a step-by-step guide for tabletop simulation, as well as examples of patient scenarios. Each department was responsible for creating their own examples of patient scenarios to use during tabletop exercises and mock patient simulations. In addition, test patients within the "test" environment of the EMR had to be created ahead of time for each department to create most realistic experience possible. In order to carry out the tabletop exercises, a non-interrupted setting, such as conference rooms, was reserved for two hour blocks and was equipped with computers that had large-audience video capability. The department coordinators for EMR implementation were responsible for selecting key members of their respective departments to play roles during the tabletop exercises. Any issues that were identified were documented for further troubleshooting after the exercise.

Results:

The real success of simulation testing is demonstrated by a seamless conversion to the EMR accompanied by a low percentage of post-implementation unforeseen issues. We observed that the clinical practices that spent much time and attention to simulation testing, especially table-top exercises, were the most successful on and after "go live." Out of forty (40) outpatient practices, all but one was demonstrating success with their new workflows. In addition, we were able to make our major computer conversion on-time (two years) and on budget while maintaining the satisfaction of our patients (overall improvement change of 2.8% excellence rating). By taking the time to understand the differences between current-state and future state workflows before EMR implementation, healthcare institutions can better predict unforeseen nuances with the applications in order to plan, staff, and adapt accordingly. Table-top exercises and patient simulations provide such a means.

Contacts:

Hope Greig, MSH, FACHE
Operations Administrator
Mayo Clinic in Florida
Email: greig.hope@mayo.edu

Kevin A. Paige, MHA
Chair, Clinic Operations
Mayo Clinic in Arizona
Email: paige.kevin@mayo.edu

Title: Hardwiring Best Practices to Improve Inpatient Satisfaction and HCAHPS Scores

Objective of the Program: Develop a core patient satisfaction program with a focus on process to create sustainable and reproducible improvements in patient satisfaction and HCAHPS scores at our partner hospitals.

Planning/Research Methods: Providing high-quality clinical care is no longer sufficient to meet the expectations of today's patient population. Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores will be tied directly to hospitals' financial performance beginning in FY2013 with Medicare's Value-Based Purchasing program, making patient satisfaction scores a top priority for hospitals. However, hospital executives need alignment from the physicians, nurses and staff on the front lines to implement and execute their visions.

Juhie Parnami, Regional VP of Operations, and Mark Rudolph, MD, Chief Training Officer, researched best practices and tactics proven to create and sustain high HCAHPS scores from our hospital partners and other leaders in patient satisfaction, including Quint Studer and Studer Group. They took those best practices and made them applicable for our providers by creating a training and implementation plan to hardwire a comprehensive approach to delivering care that is patient-centric and measurable.

Implementation Methods: Sound Physicians established six key elements to achieving consistent results:

1. Physician Training – Sound Physicians developed an educational module that is mandatory for all physicians as part of the on-boarding process, which includes an on-line course, on-site training and ongoing use in team meetings. It addresses key physician questions and establishes buy-in through training on the HCHAPS survey and the psychology of patient satisfaction, specifically focusing on managing expectations, improving perceptions and having empathy for our patients and humility about our own performance.

2. Physician and Nursing Education – We took Studer Group's *AIDET℠* and Managing Up principles and developed specific examples based on the interactions our physicians and hospitalist RNs have with patients. Managing Up education includes sessions with nursing leadership and ward staff to promote a team approach in the hospital, including the appointment of a nursing liaison for hospitalist patient satisfaction efforts.

3. Patient Communication Tools – Our hospitalist physicians distribute materials to patients at the time of admission. Each physician's photo, contact information and a brief explanation of hospitalists and how they work with primary care physicians is included in these materials. They allow each hospitalist to rapidly build rapport with patients and their families and reduce their anxiety about what to expect or who to contact.

4. Physician Implementation Tool – Once physicians understand they need to improve, they still require guidance on what exactly they should do differently. We developed a physician intervention tool with very specific, tangible things physicians can do differently during their patient encounters. These interventions are tied to specific *AIDET℠* fundamentals to help show physicians the "why" behind each action.

5. Patient Call Center – Patients are called 2-5 days post-discharge and asked transition of care questions and patient satisfaction questions, including "In the event you were hospitalized in the future, how likely is it you would want Dr. ___ to care for you?" This provides the physician-level data required to motivate physician improvement.

6. Routine Data Sharing – Data is shared at team meetings in a simplified format that just includes percentile and "Top Box" scores. Physicians discuss progress toward goals and strategies for improvement. This peer-to-peer discussion engages the physicians and motivates change. Each regional leadership team also reviews patient satisfaction performance data with hospital leadership during our Quarterly Business Reviews.

Results: Juhie Parnami and Mark Rudolph, MD, initially implemented this program at a long-standing partner hospital where HCAHPS scores have always been a challenge due to a number of factors, including payor mix and community dynamics. In the first quarter, the hospital had scored in the **2nd to 4th percentiles** on the three HCAHPS "Communication with Doctors" questions with a composite score in the **3rd percentile**. Our patient satisfaction initiative was implemented just prior to the start of the third quarter. HCAHPS scores on the same questions in the third quarter jumped into the **35th to 56th percentiles** with a composite score in the **45th percentile**. Additionally, our call center found that **93% of patients** who received our patient communication materials found them helpful, and **75% of patients** who received them were able to name the discharging hospitalist – a stark contrast to data from a 2009 study in the *Annals of Internal Medicine* that found only 25% of patients admitted were able to name a single doctor and only 10% could correctly identify their physician.

A Team Approach to Improve Patient Communication

Objective:

Effective communication has been shown to decrease anxiety and improve patient compliance, resulting in improved clinical outcomes and patient satisfaction. Gastroenterology (GI) outpatient clinic patient satisfaction scores at Mayo Clinic in Rochester were not meeting expectations. This abstract describes a process to improve communication between physician and allied health care team members and patients, thus improving satisfaction and clinical outcomes.

Planning Methods:

The AIDET^{SM} patient communication tool developed by the Studer Group was chosen based on experiences and successful outcomes in other areas of Mayo Clinic practice. This program provided a consistent framework that engaged physicians and allied health. All GI staff were included in the program, both patient care and support staff, since positive communication between staff supports enhanced patient communication. GI physician leadership promoted the program and established expectations for physician participation. A physician leader from another Mayo practice area shared the site's positive results after implementing the communication program. Supervisors provided information to allied health staff regarding program implementation details.

Implementation Methods:

Physician and allied health training modules were created based on the communication fundamentals (**A**cknowledge, **I**ntroduce, **D**uration, **E**xplanation and **T**hank you) and tailored to work units (direct patient care and non-direct patient care). Over a two week time period, physicians received one hour of training during noon education conferences and allied health participated in two hours of training; both programs were videotaped for future viewing by new staff. A core group of trainers completed four hours of training. 70 physicians, 35 fellows and 130 allied health staff were trained and they began using the fundamentals in their daily work as soon as they completed training. All training was conducted during normal work hours without any loss in GI clinic capacity or overtime. Following training, supervisors worked with staff during work unit meetings to focus on each fundamental. A blog of stories and compliments, many coming from patients, was maintained on the GI website. Posters and website tools were used to reinforce each fundamental. The importance of positioning co-workers in a positive light, "managing up", was emphasized. Words and actions of kindness between team members made everyone more positive about their work and this was observed by our patients. Patient comments were shared with staff, and individuals were recognized at work unit meetings. After the program was in place for nine months, the process of hardwiring was started. Supervisors rounded to observe interactions between staff and with patients, and patients were interviewed for their feedback. We noted that work units differed in their comfort level with each fundamental. For example, communicating duration was difficult for reception staff and introduction was an opportunity to manage up fellows. In these situations scripts were developed to help staff communicate with patients.

Results:

Prior to implementing the communication program, GI's excellent patient satisfaction scores were 75.7% and the practice ranked in the 74th percentile. At that time, 79.6% excellent was needed to be in the 90th percentile, which was the Mayo Clinic expectation. Three months after completing patient communication training, the GI practice had 85.5% excellent scores. The Mayo 90th percentile target was 81.1% excellent and as a result the GI practice ranking increased to the 98th percentile Nine months after training GI ranking among Mayo outpatient practices dropped slightly, demonstrating the importance of continuous reinforcement of the communication fundamentals. Improvements in patient satisfaction were achieved by enhancing communication between the staff and with patients, without incremental expense.

Contacts:

Shalini Prabhakar, MBA
Quality Advisor
Mayo Clinic in Rochester
Prabhakar.shalini@mayo.edu

Lorraine Uthke, MS, MBA, FACHE
Operations Administrator
Mayo Clinic in Rochester
uthke.lorraine@mayo.edu

Dianna Bryant-Sendek, BSN, MBA
Operations Manager
Mayo Clinic in Rochester
bryantsendek.dianna@mayo.edu

APPENDIX
MANAGEMENT INNOVATIONS XXVII

For further contact information please use the affiliate directory or contact ACHE

Camelia V. Arsene, MD, PhD
Research Director
Sinai Grace Hospital
Detroit, MI

Akofa A. Bonsi
Operations Manager
UAB Hospital and Health System
Birmingham, AL

Marsha Chan, PharmD, FACHE
Chief Quality Officer
St. Francis Medical Center
Lynwood, CA

Elizabeth J. Craig, RN
Vice President Patient Services
Lankenau Hospital - Main Line Health
Wynnewood, PA

Sheri L. Dahlstrom, FACHE
CNO/Associate Administrator
Banner Gateway Medical Center
Gilbert, AZ

Roshanak Didehban
Operations Administrator
Mayo Clinic
Scottsdale, AZ

Donald Dracoulis
Transformational Care Lead
Catholic Healthcare West
San Francisco, CA

Danielle Drummond
VP, Administration/Quality
Lankenau Hospital
Wynnewood, PA

Barbara J. Fry, FACHE
VP of Operations
Sound Physicians
Houston, TX

Michelle C. Gardner
Vice President, Quality Improvement
American Heart Association
Milwaukee, WI

Hope E. Greig, FACHE
Operations Administrator
Mayo Clinic Florida
Jacksonville, FL

Wendy M. Horton, PharmD
Surgery Program Director
University of Wisconsin Hospital and Clinics
Madison, WI

Beth Boyer-Kollas, PhD
Vice President
Orlando Health
Orlando, FL

Kripa Krishnan
Operations Manager
Mayo Clinic
Scottsdale, AZ

Kevin Lieb
Senior Director
TRG Health Care Solutions
Denver, CO

Philipp N. Ludwig
Assistant Vice President Operations
Baptist Health South Florida
Miami, FL

Juhie Parnami
Regional Vice President
Sound Physicians
Tacoma, WA

Rebecca Rufo DNSc, RN
Resurrection Healthcare
Chicago, IL

Richard Sanders
Operations Manager, Telemedicine Services
Eagle Hospital Physicians
Atlanta, GA

Lori Stier
AVP Clinical Excellence & Quality
North Shore-LIJ Health System
Great Neck, NY

Lorraine D. Uthke, FACHE
Administrator
Mayo Clinic
Rochester, MN

Angelo C. Venditti, RN
Operations Director
Geisinger Health System
Danville, PA

Brian Yee
C&P Director
Carl Vinson VA Medical Center
Dublin, GA