

MANAGEMENT INNOVATIONS XXIV

Poster Session

**51st
Congress on Healthcare Leadership**

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Chicago, Illinois

**TWENTY-FOURTH ANNUAL POSTER SESSION
51ST ANNUAL CONGRESS ON HEALTHCARE LEADERSHIP**

The Congress on Healthcare Leadership has attracted over 4,000 healthcare executives for a number of years. Begun in 1958, attendees come from all parts of the United States, Canada, and from foreign nations to take examinations, participate in seminars, renew acquaintances and learn about managing healthcare organizations more effectively.

A special event, initiated in 1984, is the Management Innovations Poster Session. Executives, consultants and researchers present the new ideas and methods they have investigated and implemented in organizations, not only to share their successes with their colleagues, but also to obtain suggestions to further refine their innovations. ACHE applauds their initiative.

This document will serve to help those attending the Congress recall the ideas presented for possible implementation in their own organizations. In addition, all of the abstracts are available on ACHE's website:

<http://www.ache.org/PUBS/Research/mgmtinnovations.cfm>

In the Appendix, we list the complete addresses of the senior presenters.

Peter A. Weil, PhD, FACHE
Vice President
Division of Research

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Minutes Matter

OR On-Time Starts & Room Turnover

OBJECTIVE OF PROGRAM

Sacred Heart Medical Center was losing its surgeons and market share. To reclaim surgeon loyalty and provide more effective OR services and optimal access to its OR schedule, Sacred Heart's Perioperative Services had to dramatically improve operations and patient satisfaction. **The goal:** reduce cycle times by at least 30%, achieve top decile patient satisfaction and operational performance, and develop processes and tools to ensure timely start and completion of patient care processes.

PLANNING/RESEARCH METHODS

- Identified bottlenecks and gaps in processes and flow for pre-planning and case day activities
- Defined the ideal state of OR processes
- Identified time stamps for key OR processes
- Established measurement of Key Performance Indicators (KPIs)

IMPLEMENTATION METHODS

- **Patient care processes**
 - Developed training module for each process, including designed work activity, time expectations, use of technology, and formal back-up system
 - Staff trained on modules via web-based learning delivery system.
 - Tested each module for effectiveness and implemented process only when previous processes securely in place.
- **Supporting technology**
 - Designed Operating Room Status Board (ORSB), a case-day real-time monitoring tool
 - Measures, manages and ensures rapid adoption and sustainability of new processes
 - Used by OR staff, receiving inpatient units and the Admission/Transfer Center
 - Developed training and education programs for roll-out and "go-live," deploying mentors to assist in OR, nursing units and the Admission/Transfer Center during roll-out process.

RESULTS: (2004 through 2006)

- **Real-time monitoring system:** ORSB is used by staff, surgeons, inpatient receiving units and surgeon offices. It tracks patient case-day experience, standardizes processes and thresholds for action if KPIs are not met, reduces phone calls to learn status of surgery or location of surgeon.
- **Preoperative screening:** up from 35% to 92%
- **On-time starts:** up from 37% to > 85% for first cases; from 38% to 65% for non-first cases
- **Room turnover:** down 30%, from 30 minutes to 21 minutes average for all ORs
- **Patient satisfaction:** up from 10th to 75th percentile in Ambulatory surgery setting
- **Surgery case volume:** up by 15%

Marilyn Bash, RN, BSN, MBA
Director of Perioperative Services
Sacred Heart Medical Center
Spokane, Washington
(509) 474-4792
bashm@shmc.org

Brent Fisher, MBA, FACHE, FACMPE
Chief Operations Officer
EMPATH Consulting
Point Richmond, California
(951) 454-7099
brent.fisher@empath.md

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The iPod™ Project: Implementing iPod™ Technology to Transform the Patient Experience

Brad Helfand, Director of Strategy, bhelfand@surgery.bsd.uchicago.edu
Alissa Woodworth, Financial Manager, awoodwor@surgery.bsd.uchicago.edu

Objective of the Project: The iPod™ Project was developed and implemented as a personal and innovative approach to educating patients about the clinicians, patients and philosophies at The University of Chicago Medical Center (UCMC). Since launching the program in the summer of 2007, patients in the waiting rooms of two UCMC clinics are able to check out iPods with videos of selected clinicians and patients. The project aimed to accomplish several objectives including: make patients feel extremely comfortable with the staff and their decision to come to the UCMC; increase patient satisfaction and enhance the patient's experience; market the capabilities and expertise of the clinic staff; and share patient testimonials. In addition to being available on the iPods, the videos were also re-edited and posted on the UCMC website.

Planning / Research Methods: The film company Chicago Media Initiative Group (CMIG) was selected to film and edit the videos due to their affiliation and geographic proximity to the Medical Center, as well as their experience with educational institution films. Two clinics of UCMC were selected to participate in the iPod™ project: the Breast Center and the Center for the Surgical Treatment of Obesity. Since the multidisciplinary nature of treatment is a critical component of care at the UCMC, a team of clinicians representative of each clinic was selected to participate in the project, as well as a range of patients. In addition, both clinics would have a video describing general information regarding clinical trials at UCMC, to help patient become familiar with the purpose and process of such research.

Given that the clips would be presented in an interview style format, questions were written to draw out information such as each clinician's background and experience, her/his personal approach to treatment, multidisciplinary nature of the teams, and her/his patient-centered focus. Since the interviews revealed information beyond each clinician's background, patients are likely to learn new information even if a patient had previously met the clinician. In planning for the implementation of the program, several issues needed to be addressed such as security, promotion of the project to the patients, the process of checking out and utilizing the equipment, as well as cleaning and infection control. The Operations Managers of both clinics were included in discussions regarding these issues since they work directly with clinic patients and would assist in implementing the project within the clinics.

Implementation Methods: Four video iPods™ were purchased for each of the selected clinics and the edited videos were loaded onto these iPods™. Protective covers for each iPod™ were also purchased to shield the equipment and ease the cleaning after use. Posters describing the availability of the iPod and procedure for obtaining the equipment are displayed in each clinic. Patients interested in using the iPod™ while in the waiting room are asked to complete a sign-out sheet and leave a piece of identification, such as a drivers license. Laminated instructions sheets are available for patients who were not familiar with utilizing an iPod™. To measure the results of the program with the patients, brief surveys are given to each patient when checking out the iPod™. When each iPod™ is returned, a staff member thoroughly cleans the equipment with a disinfectant. Surveys are collected and given to the Operations Manager for evaluation.

Results: Initial feedback from the patients viewing the iPod™ videos has been positive. Several patients who completed the iPod™ survey gave specific comments including "This is a wonderful tool and I think that this program should continue", "The information I received gave me more confidence in my doctor" and "Great tool!!". Results from the Breast Center surveys revealed that 100% of those patients completing the survey strongly agreed with the statement "The iPod™ videos were an innovative program that I have only seen at UCMC." Also, all of these patients either strongly agreed or agreed that the videos helped them to become familiar with their healthcare team and enhanced their overall experiences.

CMIG, the company who filmed and edited the videos, was recognized for the innovation of the iPod™ project with the award of a Silver Plaque at the Chicago International Film Festival's industry awards (INTERCOM) in the category of Special Achievement – Innovation. The interviews were re-edited and placed on the UCMC website, which was received positively by many patients. One recent patient stated, "I liked being able to see the video clip on-line. It was nice to get familiar with the doctor in advance." The iPod™ project successfully shares information with patients and helps to transform their experience at UCMC.



Innovative Approaches to Improving Access and Throughput Performance

Objective:

The Surgical Services Department plays a key role in the overall success of healthcare provider organizations. The collective team of surgeons, nurses, anesthesiologists, and clinical and support staff achieves growth through innovation, dedicated resources and focus on productivity. Project objectives driving this effort included the following:

- Maximizing significant capital investments made in surgical services facilities;
- Maintaining congruency between multiple campuses;
- Improving workflow processes and integrating innovations in technology;
- Improving preadmissions testing; and
- Enhancing environment of care.

Planning/Research Methods:

The methods deployed included the establishment of Work Groups to consider work flow issues and bottlenecks, conducting Collaborative Design Sessions that challenged the status-quo, and applying PwC Best Practice input where applicable throughout the process. Team members from four distinct Work Groups along the surgical services process continuum: intake/outtake, clinical, materials/sterile processing, and information technology were brought together to document current process workflows, consider PwC Best Practices, compile Key Performance Indicators (KPIs), and to identify potential Quick Wins (easy to implement process improvements requiring limited capital which generate sustainable results). Once the current process flows were documented, the Work Groups were brought together in highly interactive, Collaborative Design Sessions to generate "out of the box" thinking. The Collaborative Design Sessions were innovative, interactive working sessions designed to fundamentally change, without boundaries, delivery of patient care.

Implementation Methods:

Integrating the substantial input provided by the Work Groups during the Collaborative Design Sessions together with PwC Best Practices, PwC put together potential, refined future surgical services work flow processes in a 'Gallery Walk.' The Gallery Walk consisted of poster size process flows of how the future surgical services model could function and served as a unique, open forum for not only Work Group participants but many of their clinical and support peers to provide honest, open feedback (through the use of post-it notes that illustrated their questions, concerns, and suggestions).

After the Gallery Walk, the feedback was prioritized and compiled into Initiative Fact Sheets. These Fact Sheets summarized the collective input of the Work Groups and many other constituents and included a description of individual initiatives derived, estimated cost, benefits/savings, activities, resources, KPIs, and timeline. A Decision Grid provided a structured approach to assess each identified improvement initiative applying the Gartner four-quadrant model. Finally, implementation of individual initiatives and associated patient care quality improvements were conducted with a patient throughput and logistics management web-based software application, StatCom.

Results:

Results typically attained include, but are not limited to, the following:

- 24% revenue enhancement
- 15% reduction in medical supply expense/case
- Reduced ALOS by .3 to 1 day
- 11% increase in productive hour/surgical hour
- Enhanced culture and improved teamwork
- 20% decrease in overtime expense
- 15% reduction in labor cost per case
- 12% reduction in total costs
- 10% increase in overall utilization
- Reduced turnover time by 60 minutes
- Enhanced accountability
- Real-time monitoring of Quality, Financial, and/or Operational KPIs
- Decreased ICU ALOS by 1.0 to 1.6 days
- 15% OR volume increase
- 11% increase in first case on time starts

Michael Darling, RN, MS
Director
PricewaterhouseCoopers LLP
314-422-2931
Michael.d.darling@us.pwc.com

Joel Jaglin, MS, CPA
Manager
PricewaterhouseCoopers LLP
312-298-3824
joel.jaglin@us.pwc.com



Raising the Bar on Hospital and Hospitalist Provider Relationships

Objective:

To demonstrate cost savings and an increase in the consistency and quality of care through aligning: a) system improvement, b) quality and c) cost management needs of the hospital with Hospitalist performance measures. Specific areas of focus include:

1. Increased patient penetration under Hospitalist's care influences the Hospitalist's ability to positively impact quality and cost measures and the consistency in care delivery;
2. Improved / targeted hospital information reporting increases confidence from Hospitalists and the management focus on consistency of care delivered;
3. Specific performance measures helps solidify parameters and accountability for Hospitalists and assists in targeting care performance opportunities.

Planning/Research:

Due to reduced reimbursements and increases in regulatory measures oversight, it has become imperative for hospitals survival to take a more proactive stance in contracting strategies with inpatient physicians. By adopting more focused and cost-conscious strategies that work in tandem with Hospitalists, positive impacts on the quality, efficiency, and effectiveness in in-patient management and throughput may be realized. Hospitalists play a pivotal role in DRG management, serve as a conduit to streamline throughput and bridge the gap in transition management from admission through inpatient discharge to the patient's primary care home. Hospitalists in essence are the drivers of the inpatient care delivery system. The impact of contractual affiliations [ranging from informal to exclusive] in select Hospital/Hospitalist agreements was evaluated. Initial review and analysis of quality indicators, lengths of stay, utilization and associated costs was performed in the early stages of a loose affiliation between the facility and Hospitalists. A comparative evaluation was performed again as the contractual affiliation matured into an exclusive agreement.

Implementation:

Requests for exclusivity proposals were distributed and awarded. A variety of contractual agreements were chosen for this project to be included in the evaluation in order to demonstrate the positive impact of hospital penetration on in-patient management by Hospitalists. Criteria defined by the agreements were used as benchmarks and outcomes were trended and documented for further comparative analyses. Criteria included quality standards, core measures on select DRG's to reflect Physician Quality Reporting Measure requirements and specific cost drivers for a given facility.

Results and Initial Outcomes:

As a preliminary result of hospital/Hospitalist agreement maturation (transition from informal to exclusivity), in-patient volume penetration managed by Hospitalists was increased. DRG cost drivers and volume were tracked demonstrating an overall reduction in length of stay. A reduction in cost-per-case was noted per the expected as well as a desired reduction in mortality versus what was expected. Increases in compliance/use of model sepsis protocol was documented at 100%. Patient satisfaction for provider courtesy, diagnosis and treatment, information provided by physician and patients' willingness to recommend provider were documented at over 99%. Synchronizing efforts between the hospital's goals of maximizing efficient use of resources with effective inpatient penetration management by Hospitalists is a stratagem for achieving cost reduction and delivering consistent, high quality healthcare.

Presented by: Catherine C. Pensak, MPA, ACHE, Director of Development, IPC The Hospitalist Company Tucson, Arizona cpensak@ipcm.com

PACS Creates Comprehensive Business Benefits for Community Hospital & Improves Patient Safety

Objective

Community Memorial Hospital (CMH) in Ventura, Calif., implemented a Picture Archiving and Communication System (PACS) to improve patient care and safety and to be competitive with other imaging facilities in its region. CMH's President/CEO was familiar with a top-rated, advanced PACS (DR Systems) that offered substantial clinical, workflow, and financial benefits, including improved productivity and patient safety. Many hospitals fail to recoup full value from their PACS investment because they don't take sufficient advantage of the PACS' capabilities. CMH hoped that its PACS' ease-of-use would help it overcome this potential pitfall.

Planning/Research Methods

CMH was particularly focused on exploiting the PACS' capabilities in the following areas:

Faster radiology report turnaround time (TAT). The unusually well integrated reporting suite made possible significant improvements in report TAT, which sped diagnosis and treatment of patients, while improving workflow and productivity in the radiology department.

Web distribution of images and reports. Referring doctors can view images / reports on any Web-connected computer, instead of coming to the hospital or waiting for delivery of hard copy.

Integration of multiple modalities on PACS. Reading all modalities on PACS improves physician productivity, especially when patient cases involve multiple modalities.

Minimization of film imaging. To extent doctors can be weaned off of film, the hospital can save processing, storage, and retrieval costs for hard copy images. Lost studies can also be avoided.

Voice clips. The PACS' unique "voice clips" feature enables radiologists to dictate their interpretation of the exam and then distribute the resulting audio files on the hospital network or Web. The clips are generally ready within minutes after the exam, far faster than even the expedited TAT for written reports. This is a major advantage in time-sensitive situations.

Implementation Methods

- 1) Staff and CMH-associated physicians were extensively trained by the vendor on the PACS, to ease the transition to PACS and maximize reliance on PACS over film.
- 2) The dictation, transcription, and distribution features of the reporting suite were utilized. The PACS was used to distribute dictation files via the Web to transcriptionists at their homes, and to receive completed reports from transcriptionists. Via PACS, reports can be instantly distributed on the hospital network and Web, or automatically faxed to referring doctors. Reports are automatically filed in the hospital information system as part of the patient record.
- 3) Echocardiograms were integrated with PACS. Mammography is also being integrated.

Results

- PACS has enabled the radiology department to reduce staff by 3 FTEs.
- Film costs have been reduced by almost 90%, from \$457,000/yr. to \$48,000/yr.
- Reading mammograms on PACS avoided expenditure of \$50,000 for mammo workstation.
- Report TAT (ordered-to-signed) has been cut by more than two-thirds. Larger reductions will occur when radiologists begin using the reporting suite's voice-recognition feature.
- Web distribution of dictation files enables transcriptionists to work at home, freeing up valuable hospital space for use by the cancer center. Transcriptionists are also happier and more productive working at home, including being more likely to work when ill.
- PACS technology reduces manual steps, minimizing human errors.

Presenter: Kirk Pieper, Radiology Director, Community Memorial Hospital, 805-652-5028,

kpieper@cmhhospital.org

Co-author: Gary Wilde, President/CEO, Community Memorial Hospital

Easing Data Migration from Legacy PACS to New PACS

Objective

Many hospitals are replacing their legacy PACS with upgraded or otherwise new systems. Switching to a new system requires “data migration” – i.e. electronic transfer of exams from the old PACS to the new one. Migration enables radiologists to compare current exams stored on the new PACS to prior exams originally stored on the legacy system.

Data migrations are notoriously problematic, however. They typically take from several months to a year or more. During that time, radiologists and technologists may have to move back to the legacy PACS to access priors. Imaging staff also face the challenge of mastering the new system. All of these factors negatively affect efficiency and productivity, and can impede timely patient care.

Olympic Medical Center (OMC) of Port Angeles, Wash. believed the usual pitfalls of transition to a new PACS could be avoided with careful planning.

Planning/Research Methods

OMC realized that a successful data migration and transition depends in large part on vendor selection. The vendor (DR Systems) chosen by OMC offered a top-rated PACS noted for its ease of use and efficient workflow. This would be crucial to maintaining high radiologist and technologist productivity during the transition period. Radiologist productivity is particularly important because radiologists are highly paid and scarce in the labor market.

The vendor was also chosen because of its efficient approach to data migration. The vendor used a software product (Laurel Bridge) to transfer as many exams as possible, minimizing the manual manipulation and transfer of exams. Another advantage was the vendor’s expertise in deploying the software, which enabled it to utilize the software’s full power.

Implementation Methods

- 1) *Data mapping.* Prior to the migration, problem files were identified that would need manual manipulation before being transferred. Rules were set for the transfer of non-problematic files. The mapping allowed the migration to proceed with minimal disruption. Software was used to perform most of the mapping, saving labor.
- 2) *Trial run.* A trial run tested the effectiveness of the rules set during the data-mapping phase.
- 3) *Training.* Radiologists and technologists were trained immediately after new PACS went “live.”

Results

- Almost all files -- approximately 36,000 -- were electronically migrated to the new PACS and were available to radiologists immediately after the PACS went live. Only about 50 files needed to be manually manipulated before migrating them. No crucial data was lost.
- OMC’s imaging business has grown by 14,000 exams/year, made possible in part by increased productivity achieved with the new PACS.
- All radiologists and technologists were comfortably and productively using the new PACS within three days after the PACS went live. Such a transition normally takes several months.
- The total cost of the PACS and the migration together was less than the cost of the legacy system the new PACS replaced.

OMC’s data migration was accomplished more quickly than most because the legacy PACS had scant “dirty” – or non-standardized – data. But the same steps used at OMC will minimize the cost and maximize the efficiency and accuracy of any data migration, regardless of size or quantity of dirty data.

Presenter: Jim Sheperd, M.D., PACS Implementation Leader, Olympic Medical Center, 360-417-7770, spinechojim@gmail.com. **Co-authors:** Eric Lewis, CEO, Olympic Medical Center; Damon Harrell, PACS Administrator, Olympic Medical Center; Debbie Nickles, Radiology Supervisor, Olympic Medical Center; Jennifer Nelson, Director of Project Management, DR Systems



DEPARTMENT OF VETERANS AFFAIRS
Samuel S. Stratton VA Medical Center
113 Holland Avenue, Albany, NY 12208

**Improvement in Patient Outcomes in a Central Venous Access Service Program
Run by a Dedicated In-House Vascular Access Mid-Level Provider
in the Veteran Population**

Objective of Program: Intravascular catheters are indispensable in modern-day medical practice. Although such catheters provide vascular access for life sustaining therapies, their usage puts patients at risk for local and systemic infectious complications including local site infection, CRBSI's (Catheter Related Blood Stream Infections), septic thrombophlebitis, endocarditis, and possibly death. Approximately 80,000 catheter related CRBSI's occur in ICUs each year in the U.S. The annual cost for healthcare organizations caring for patients with CRBSI's range from \$296 million to \$2.3 billion. The goal of our initiative was to implement best practice standards in the care of patients undergoing PICC line placement and to standardize the approach with a vascular access mid level provider solely dedicated to this vital service with the expected result being zero PICC related CRBSI's in catheters placed by this dedicated clinician. Leadership support was key to the success of this patient safety initiative.

Planning/Methods: Between 1999-2002, the department of Vascular Interventional Radiology at a local tertiary care level one trauma center provided contractual coverage for the Stratton VAMC for interventional radiology procedures via use of real-time ultrasound including PICC line insertion. There was variability on any given day of 9 VIR contracted providers for PICC line insertion. The rate of VIR provider PICC catheter related blood stream infections ranged from 6-9/year between 1999-2003 costing the organization annually \$315,000 total for all 9 PICC Line Blood Stream Infections (MMWR Guidelines). Stratton VA Leadership invested in the initial training, and yearly refresher course (based on the CDC's recommendation) of a dedicated vascular access mid level provider in placement of PICC lines via use of real-time ultrasound with internationally known infectious disease vascular access experts between 2002-2008.

Implementation Methods: Random invitation throughout 2007 by the dedicated vascular access mid level provider to the Infection Prevention Specialist for observation of all facets of patient care of PICC line insertion in order to identify areas for improvement of CRBSI's with the goal being ZERO: From initial consult, insertion technique and suggested improvements in, monitoring/care of the inserted PICC line, bedside dressing changes, and ultimate discontinuation of the PICC line. Infection Prevention Specialist recommendations of observed technique were implemented. Organizational policy to include maximum sterile barrier protection was revised. A dedicated "line cart" that had all necessary supplies stocked was developed. A standardized checklist for pre, during, and post procedure PICC placement with Central Line Bundle elements reflected was created. A large display of a picture flow sheet in the angiography suite where lines are placed to highlight elements of Central Line Bundle was posted. We also devised successive patient safety checks: Daily multidisciplinary goal sheet, safety walk rounds with nursing staff, and vascular access rounds hospital wide. Standardized dressing care and changes with education to all nursing staff was also developed.

Results: The rate of PICC catheter related blood stream infections (CRBSI's) in PICCs placed by an in house dedicated vascular access mid level provider has dropped significantly to ZERO PICC CRBSI's in 2007, saving patient lives, decreased patient morbidity and mortality associated with PICC line placement, improved quality of care, decreased LOS, and cost avoidance of \$315,000 to the Stratton VAMC in 2007. Close evaluation continues (weekly and monthly) and monitoring by infection prevention specialist and other members of the multidisciplinary vascular access team to maintain standard of ZERO CRBSI's and strict adherence to the Central Line Bundle elements. This outcome details the importance of the relationship and close collaboration between health care executive leadership and clinicians as essential to successful patient safety initiatives/outcomes, and cost savings.

Michele Biscossi MS, ACNP-CS, RN
Acute Care Nurse Practitioner/Clinical
Nurse Lead
Stratton VA Medical Center
518-626-6601
Michele.Biscossi@med.va.gov

Mary-Ellen Piche, FACHE
Hospital Director
Stratton VA Medical Center
518-626-6731
Mary-Ellen.Piche@med.va.gov

Mary Ellen Rafferty, MS, RN, CIC
Infection Prevention Specialist
Stratton VA Medical Center
518-626-6420
MaryEllen.Rafferty@med.va.gov

Deborah A. Spath MS, RN
Associate Director Nursing
Patient Service
Stratton VA Medical Center
Deborah.Spath@med.va.gov



THE BURKE REHABILITATION HOSPITAL

"Lighten Your Load:"

An Innovative, Interactive, Interdisciplinary Program to Enhance Regulatory Compliance and the Quality of Patient Care

Lisa Edelstein MS, OT/L; Sandra Alexandrou, MSPT; and Eugene P. Buccini, PhD

Background and Program Objectives:

As an acute, inpatient rehabilitation hospital, Burke is mandated to provide at least 3 hours of daily rehabilitative therapy to each patient. A collaborative, team-oriented, interdisciplinary approach is required to ensure compliance with these regulations and to assure optimal patient satisfaction with provided services. All departments, clinical and non-clinical alike, must utilize and incorporate shared processes to facilitate efficient and effective daily operations and to ensure quality patient care.

The Lighten Your Load Program consists of a structured series of face to face meetings, led by an outside facilitator, where department representatives met to identify barriers to efficient operations. The program's simple but unique focus allows direct and honest interaction between team members whose daily working relationships and collaborations are integral to the smooth delivery of care. The program, a decidedly low tech approach in today's high tech workplace, fosters open lines of communication, without barriers, and promotes rapport, professional respect, and recognition of each department's unique contribution to patient satisfaction and regulatory compliance, as well as reinforcing the hospital's mission, vision, and values. Time was set aside for these interactive, collaborative, and solution focused meetings, acknowledging that face to face communication and relationship building are the substance of quality health care.

Methods/Implementation:

Departments participating:

- Nursing/environmental services/plant operations
- Occupational therapy/physical therapy
- Nursing/ occupational and physical therapies

The facilitator met with representatives from 2-3 departments at a time. The initial meeting focused on each department identifying: "What we want," as well as listing "What we can do to help." This "walks a mile in my shoes" approach created a safe environment for identification of critical operational processes and details that impacted efficiency, effectiveness, and satisfaction. Following the facilitator's organization and clarification of the material, subsequent meetings identified potential solutions, to "lighten your load," for each issue, which team members evaluated, monitored, and re-evaluated over a several month period. Follow-up meetings were held with each group to insure that all viable solutions were implemented.

Notable Results:

- Improved patient satisfaction from 3rd Quarter 2006 to 2nd quarter 2007:
 - Overall hospital rating increased to 91.0 from 87.7
 - Likelihood of recommending Burke increased to 96.2 from 94.8
 - Staff working together rating increased to 93.6 from 89.7
- Positive comments from staff regarding focus on, and improvement of, operational details that often caused daily angst, such as:
 - Implementation of several strategies to get patients to therapy sessions on time
 - Improved timely communication between disciplines about patient status changes, such as falls, pain, and blood sugar levels
 - Improved patient awareness of repairs made to equipment and supplies by a note left in the patient's room when the patient was not there at the time of the repair
- Improved regulatory compliance:

- To 91% from May through July 2007, from 81% in December 2006

Improved Utilization of Imaging Exams by System Redesign of Ordering Process

Jonathan H. Gardner, FACHE & Ron B. Schifman, MD
Southern Arizona VA Healthcare System, Tucson, AZ 85723

Background: External benchmarking data revealed relatively high utilization rates of imaging examinations and internal data showed a persistent 20% annual increase in orders. Focused review uncovered improper exam selection practices leading to delays or cancellations, duplicate testing, appointment backlogs, and inefficient use of radiologists' time to correct errors.

Methods: A strategy for improving utilization practices for radiology examinations was developed based on the principle of "making the right thing to do the easiest thing to do". This was accomplished by redesigning the entire radiology exam ordering process. Over 100 computerized templates were created for MRI, CT, ultrasound and chest plain films based on accepted national appropriateness guidelines with the purpose of guiding clinicians to easily select the most optimal radiology exam for specific clinical indications as well as communicate these indications to the interpreting radiologist. These templates automatically generated prerequisite information from the patient's electronic medical record such as age, weight, lab results, and previous radiology examinations that affected decision making.

Results: For exams that could be ordered by templates, clinicians used this option 87% of the time in preference to the older process. Upon embedding appropriateness criteria directly into the ordering process, radiologists' workload for MRI examinations declined 31% or 2,636 scaled RVU during the first year of implementation. The rate of CT workload increases stabilized and the percent of inappropriate preoperative chest x-rays declined. Concomitantly, average patient wait times decreased for MRI, CT and ultrasound appointments. Used as a control to measure effectiveness of the system redesign process, the volume of plain film exams in which order templates had not been developed continued to show persistent annual increases in utilization.

Conclusions: These results demonstrate that administrative changes in ordering processes significantly affect the utilization of imaging examinations. As a result of improvements in managing appropriate selection of imaging exams, the risk of unnecessary exposure of patients to contrast agents and radiation was reduced. Clinicians are more productive and satisfied in having a simplified ordering process as demonstrated by high acceptance rates. Radiologists have more information about exam indications and spend less time handling inappropriate exams. Finally, trainees are automatically provided with valuable information for learning proper indications for diagnostic testing.



Utilizing Lean Process Preparation (2P) to Redesign an Outpatient Pavilion

Objective: To redesign a high volume Outpatient Pavilion housing ten different clinical services and various administrative functions using the existing 21,000 square foot space. The final design was to improve revenue per square foot, reduce patient walking distance, improve supply flow throughout the pavilion and improve patient privacy.

Planning/Research methods: Ten Good Shepherd associates representing a number of different disciplines convened for a week-long Rapid Improvement Event (RIE). Simpler Consulting educated the team in the Lean 2P Process Design and facilitated the week's programming. Current state process steps for patients, employees and supplies were then mapped. Data points collected for each of the ten clinical areas included: Takt Time (pace of patient demand), average number of patients seen per day, square feet, revenue per square foot, associate walking distance, patient walking distance, patient satisfaction scores and projected growth for services over the next five years. In addition, a Waste Walk performed in each area identified 55 areas for improvement. Front line staff received 6S training (sort and scrap, straighten, scrub/sweep, standardize, sustain, safety) to garner immediate gains in efficiency prior to construction.

Implementation: Using the quantitative data listed above as a guide, the group used the 7-3-1 layout alternative process to create seven different alternatives to the current state. Seven key criteria (privacy, patient flow, minimize walking, accessibility, openness to environment, cost and flexibility/ROI) were weighted to judge the seven alternative layouts. The group voted to give patient flow the most weight and openness to environment the least weight. Each of the seven options was then scored on each of the seven key criteria using a layout decision matrix. Stakeholders from areas not represented on the team were consulted in a WIIFM session ("What's In It For Me") to review ideas and offer suggestions for improvements. A final "hybrid" design was developed using the best elements of each of the redesigns. Implementation was phased over three distinct time periods.

Results:

- Revenue producing space was increased from 57% of the pavilion square footage to 70% - an addition of 2,500 square feet of clinical space
- This new space increased clinical capacity and brought in an estimated additional \$4,951,000 gross revenue per year, resulting in a payback period of less than three years to recover construction costs
- Patient walking distance for the highest volume clinical service area (lab services) decreased 66.3%, or over 300 feet per patient – similar improvements were made in other areas as well
- A centralized storage area was created reducing staff walking distance to find supplies common to multiple areas

Team Members:

Trent E.J. Gordon, MHA, FACHE, Manager, Strategic Planning (trent.gordon@advocatehealth.com)
Tim G. Yusk, MHA, Director, Outpatient Services
Lisa J. Fawkes, RN, Manager, Outpatient Pavilion
Greg C. Headrick, Manager, Sterile Processing Department
Chris N. Bartelt, Senior Consultant, Operations Improvement
Don E. Calcagno, MBA, Vice President, Quality and Performance Improvement

Physical Therapy/Primary Care Collaborative

Title:

**The Harris County Hospital District - Innovation Network's
Physical Therapy/Primary Care Collaborative**

Submitted by: Andrea (Kelley) Harvey

Objective: Houston's Harris County Hospital District, the nation's 4th largest publicly owned health care system, is comprised of three hospitals totaling 1,000 beds, a full array of specialty referral clinics and 13 large community based primary care clinics. With the goal of continuously improving patient care, in 2004 the Hospital District launched a program to foster innovation in the workplace with the goal of improving patient care: The Harris County Hospital District Innovation Network. Among the many innovations implemented since the Network's inception, one that stands out is the Physical Therapy / Primary Care Collaborative. The objective of this innovation was to increase timely access to care for patients presenting to their primary care setting with complaint of low back pain. Low back pain is the 2nd most common condition presenting in the primary care setting, and the most common musculoskeletal condition treated by physical therapy. Due to orthopedic specialty clinic overcrowding, wait times for referral are excessive. When physical therapy was indicated, it was through referral from the orthopedic clinic. This resulted in a multi-step referral process: Primary Care Provider (PCP) to Orthopedic Clinic to Physical Therapy Clinic. The lag time from presentation to treatment often resulted in musculoskeletal problems going from acute to chronic, with the result being poorer patient outcomes and higher long term costs for the health system.

Planning Methods: To address the aforementioned challenge, The Innovation Network sponsored a research and benchmarking initiative. A multidisciplinary task force consisting of representatives from the medical staff, rehabilitation services and administration benchmarked musculoskeletal treatment programs in the Department of Defense and Veterans Administration health care systems as well as the Kaiser Permanente system. Armed with fresh ideas, this team developed a strategy to address the Hospital District's needs. The result was the Physical Therapy / Primary Care Collaborative Pilot Program.

Implementation Methods: In October, 2005 a physical therapist was assigned to one of the system's largest primary care centers, the Strawberry Clinic. The goal was to afford patients presenting to their PCP with complaint of low back pain more timely access to definitive care. In the new care model, when a patient presented to his or her PCP complaining of low back pain, referral was made to the on-site Physical Therapist. Musculoskeletal evaluation was completed, usually on the day of the referral, and when appropriate, treatment begun shortly thereafter at the primary care site in a redesigned physical therapy treatment area.

Results: Specialty referrals for back pain averaged 45 per month prior to implementation of this innovation at the Strawberry Clinic. They now average 17 per month. This reflects a decrease of 40%. Overall wait times, system-wide, for orthopedic referrals from the primary care centers have decreased by 10% due to increased orthopedic clinic appointment availability. In addition, patient and provider satisfaction has markedly improved. Beginning in March 2008, the Physical Therapy / Primary Care Collaborative will be expanded to an additional four primary care clinic sites. In summary, the Harris County Hospital District has realized tremendous benefit through the development of its Innovation Network. Over the past three years, employee generated innovations have markedly improved patient care while saving thousands of dollars which have been reinvested in the delivery of expanded patient care services.

Andrea (Kelley) Harvey

Manager, Innovation Network

Harris County Hospital District

713-873-6100 (office) / 713-873-6104 (fax)

A MODEL FOR HOSPITAL AND COMMUNITY PARTNERSHIP: *IN MY SHOES* PROGRAM VIOLENCE PREVENTION THROUGH DISABILITY EDUCATION

OBJECTIVE OF PROGRAM

The objective of the *In My Shoes* program is to utilize Schwab Rehabilitation Hospital's expertise in working with the disability population to educate inner city youth about physical and cognitive disability that can result from street violence.

PLANNING/RESEARCH METHODS

In response to a high volume of patients who had a permanent disability from street violence, Schwab's inpatient physicians and the Extended Services Department--the outpatient disability support department of Schwab Rehabilitation Hospital--created the *In My Shoes* program. The Extended Services Department applied for grant funding for the *In My Shoes* program and continues to receive grant funding annually. A former Schwab patient who has a spinal cord injury as a result of a gun shot wound was identified to lead the program. *In My Shoes* speakers are recruited from former Schwab inpatients and the speakers' time is paid for from grant funding. Workshop participants complete pre/post intervention tests to determine what they have learned regarding potential disability outcomes of street violence, including physical and cognitive function after a spinal cord injury or traumatic brain injury.

IMPLEMENTATION METHODS

In My Shoes presentations are given to adolescents identified through school, community groups, church groups, and the Cook County Sheriff's office. During an *In My Shoes* presentation, former Schwab inpatients who have a spinal cord injury or a brain injury as a result of street violence talk to their peers on the pathology of their injury, their resulting function, and share what a typical day is like for a person who has a spinal cord or brain injury. *In My Shoes* presenters educate their peers on their personal stories of their past street life and the circumstances behind their injury. The *In My Shoes* presenters create a dialogue with the adolescent participants about the consequences of violence and of involvement with drugs, guns and gangs. *In My Shoes* is available in two formats; workshops and presentations.

RESULTS

- Pre and post intervention tests of 12 questions related to knowledge of disability were administered to participants. Pre-intervention mean = 6.59 questions correct (out of 12 questions), post *In My Shoes* intervention mean correct score = 8.14. This represents a significant gain (paired t-test $p < .001$) in knowledge regarding disability from a violently acquired injury.
- 85% of the participants felt that the speaker had a good understanding of what their lives were like.
- 91% of the participants stated that following the *In My Shoes* presentation, they will now think regularly about the possible consequences of the choices they make.
- 95% of the participants indicated that they had learned something from the *In My Shoes* presentation.

The *In My Shoes* program is a successful model of a hospital utilizing its healthcare expertise to meet a need in the community.

David Rahija, MPT, MBA, FACHE
Vice President
Schwab Rehabilitation Hospital and Mount Sinai Hospital
(773) 522-5860
rahd@sinai.org



PATIENT CHECK-IN KIOSK SYSTEM

Objective:

The VA Pittsburgh Healthcare System (VAPHS) sought to improve and centralize the administrative services for veterans in one main area of the medical center. The goal of the centralized business center was to allow veterans to move through the check-in process easily and swiftly, while increasing the accuracy of the patient record.

Implementation:

VAPHS, in collaboration with Vecna Technologies, Inc., successfully implemented the Department of Veterans Affairs' first comprehensive self-service pre-registration and patient check-in system. The project was implemented in October 2005 in conjunction with the opening of a new consolidated business service center. The system has a flexible design that easily accommodates centralized and decentralized operations and has proven to be a success at VAPHS. The patient self-service system has reduced the manual efforts and costs of checking patients in for visits and has also supported Central Office's requirements for pre-registration.

The system developed and implemented includes hardware, software, and professional services to provide integration with the VA's VistA hospital information system. Hardware associated with this system includes free standing kiosks (which are adjustable for wheelchair patients) and desktop models. Associated accessories include items such as printers, bar coders, magnetic stripe readers, and enclosures to house the equipment. The system allows patients to self check-in for appointments by using a combination of their Veteran Identification Card and touch screen input at a kiosk. A privacy glare has been built into the screen in order for HIPAA guidelines to be met so that the information on the screen can only be viewed by the veteran using the kiosk.

The kiosk provides a series of prompts for the veteran and queries the patient as to correctness of demographics, insurance carrier, appointments, and other information deemed necessary by the VA. The veteran responds to each question by pressing "yes" or "no" on the screen. If the veteran identifies that updates to his information is needed, he is directed to a pre-registration clerk for assistance. However, if no changes are needed, the veteran receives a printout of the scheduled appointments for the day, and is not required to wait in line. In less than one minute a veteran can pre-register and proceed to his appointment.

The system is expandable and scalable to allow integration of additional functionality such as viewing of patient education information, signing of consent forms, administration of patient surveys, and the addition of kiosks at clinic destination locations to complete the check-in process. VA staff is able to view and manage patient checked-in lists, monitor patient flow through the organization, and generate various types of reports from the kiosk systems.

Results:

The use of technology has significantly improved the pre-registration process for the veteran population and has been well received by the patients that are treated at VAPHS. Benefits of the kiosk system include:

- ✓ Correction of thousands of errors in veterans' demographics, decreasing the volume of undeliverable mail and prescriptions, and improving no-show rates. Cost avoidance: \$24,609 (annualized)
- ✓ Cost savings associated with veterans successfully passing through the kiosk: Cost avoidance: \$92,113 (annualized)
- ✓ Updating patient insurance information. Projected increased revenue: \$249,934 (annualized)
- ✓ Verifying and correcting enrollment and eligibility errors. Projected increased revenue/cost avoidance: \$224,434 (annualized)

The net potential gain/cost avoidance after implementation costs is \$483,612 (annualized). A 95% satisfaction rate has been scored by veterans using the kiosk system.

As a result of the great success of the kiosks, VISN 4 has expanded its kiosk check-in program to its remaining medical centers. Additionally, VISN 4 is in the process of installing the kiosks for check-in at many of the Community Based Outpatient Clinics.

Jana Budde, JD
Presidential Management Fellow
VA Healthcare – VISN 4
(412) 784-3939
jana.budde@va.gov

Christine Fuoss, RN, MSN
Manager, Patient Accounts
VA Pittsburgh Healthcare System
(412) 365-4998
christine.fuoss@va.gov

“Redefining the Landscape” includes Lowering Clinical Equipment Service Costs

Objective:

To Significantly Reduce Expenses via Innovations in Clinical Equipment Performance Management

Planning/Research:

In many healthcare organizations, “the landscape” includes:

- Outsourcing equipment maintenance to Original Equipment Manufacturers (OEMs), especially for sophisticated modalities such as high-end digital and imaging equipment. Contract terms usually favor vendors.
- Carrying expensive equipment insurance. These agreements usually involve some loss of control over equipment acquisition and maintenance decisions.
- Managing equipment assets within traditional department structures. “Turf” limitations make it difficult to coordinate technical and financial processes for maximum equipment program performance.

The Clinical Equipment Performance Team at Beaumont Hospitals theorized that, by minimizing reliance on these typical practices, it could significantly reduce equipment maintenance expenses. After the team documented the baseline cost for “full” vendor service coverage in key hospital departments, it initiated a phased approach to achieve service cost reductions.

Implementation:

Component #1: Beaumont selectively in-sourced equipment maintenance historically performed by OEMs. This action translated into savings on labor, while still allowing the vendor to take virtually the entire parts risk. (An In-House Imaging Support Group was established; it began by servicing general radiology equipment.)

Component #2: Beaumont established an internal hospital Risk Pool or Self-Insurance Fund. As specific insurance contracts expired, lower liability equipment systems were “picked up” by the internal fund. Hospital departments have become “stakeholders” who enjoy economies that previously benefited the outside insurance providers. (As the Self-Insurance Fund got underway, the In-House Imaging Support Group expanded its service to the Catheterization Laboratory, Angiography, and Electrophysiology departments.)

Component #3: Beaumont dedicated an internal resource to Service Cost Analysis and Management. This service assists departments in equipment planning and budgeting. The Analyst/Manager (who has a biomedical engineering background) participates in negotiations for favorable purchase/replacement prices and service contract terms. This dedicated resource allows the In-House Imaging Support Group to focus on fulfilling their part of the negotiated “shared” service contracts, i.e. ensuring equipment up-time for quality patient care. (With all three components in place, the program’s business savvy attracted even more departments: Computerized Radiography, Ultrasound, Radiation Oncology, Computerized Tomography, Digital Radiography, and Nuclear Medicine.)

Results:

Approximately 600 high-end pieces of equipment (Total Asset Value = \$148M) are now managed using our three-component program. “Full” vendor service solutions for this inventory would cost \$13.6M, but thanks to this program, current service costs stand at \$11.4M. Beaumont has realized total savings of \$2.2M, or 16.2% annually.

A Vendor Invoice Reconciliation process saves an additional \$500K per year. The Service Cost Analyst/Manager reviews both financial and technical information to validate vendor service charges, either approving or recouping costs per contractual agreement. This process increases Beaumont’s annual savings to 20% of full vendor service expenses.

Discussion:

The savings achieved in this Clinical Equipment Performance Management Program are above and beyond what Beaumont, a large three-hospital system, obtains from high-volume and point-of-sale discounts.

Beaumont’s Clinical Equipment Performance Team has almost “maxed out” the savings that can be derived from shared service agreements. We are planning to implement the next wave of savings (an additional 10-20%) by moving the risk of high liability parts, such as flat panel detectors, x-ray tubes, and ultrasound transducers, from vendor coverage into the Self-Insurance Fund.

Timothy S. Elder, FACHE
Vice President, Operations
Beaumont Services Company
Phone: (248) 551-1645
Email: telder@beaumontservices.com

Beaumont Hospitals
3601 W. Thirteen Mile Road
Royal Oak, Michigan 48073



3925 River Crossing Parkway, Third Floor
 Post Office Box 40368
 Indianapolis, Indiana 46240-0368

Tel: 317.472.2200 - 800.469.7206
 Fax: 317.208.1200
 www.somersetcpas.com

State of the Art Financial Reporting is Key for the Success of the Employed Physician Network

Objective:

To develop financial and managerial reporting model to assist hospitals and health systems successfully manage an employed physician network, as well as provide managerial help screens in the identification of unacceptable performance.

Planning/Research Method:

Development of a financial/best practice tool specifically designed for an employed physician network became a viable alternative to the traditional hospital/health system accounting model. It was determined the tool would have the following Key Reporting Suites: *Financial Performance; Statistical Data; Physician Coding & Histograms; Revenue Cycle Performance Indicator; Fee Analyzer.*

Implementation Method:

A four suite tool was developed that demonstrates actual financial performance and captures best practices. Managerial help screens are embedded within each of the suites that ask a series of questions particular to the information contained within each suite. Through the use of the management help screens, the root cause of under performance can be identified. Once the root cause is identified, the program prompts management to engage in a corrective action planning session. A sub-ledger system was created that interfaces with the hospital general ledger system to the financial reporting suite. The tool interfaces with all systems resulting in minimal disruption to the hospital/health system.

Results:

Selected indicators of actual performance to benchmark after organizational implementation of best practice tools:

Benchmark	Performance Pre Best Practice Implementation	Performance Post Best Practice Implementation	Improvement Time-Frame
Financial & Growth (Individual Practice)			
Profit/Loss from Operations	(\$86,445)	\$18,046	12 months
Network Subsidy/Physician (includes strategic practices)	(\$136,000)	(\$50,000)	3 years
Targeted Loss/Physician @ (\$35,000)	(\$136,000)	(\$50,000)	18 months
Days in A/R – Target 55 Days	63 days	38 days	18 months
New Patient Growth	6%	14%	6 months
Operational Improvement			
Staffing Ratio – Targeted @ 25.2% of NPR	27%	20%	12 months
Provider Cost Ratio – Targeted @ 44.5% NPR	44.3%	37.3%	12 months

Regina Elkins, Healthcare Consultant
 Somerset CPAs, P.C.
 3925 River Crossing Parkway, Third Floor
 Indianapolis, Indiana 46240-0368
 helkins@columbus.rr.com
 740-817-2301



Creating Value and Fostering Continuous Improvement With Operational Excellence

Objective:

With nearly 60% of Wheaton Franciscan Healthcare's operating expenses attributable to wages and benefits, the Operational Excellence (OE) initiative provides leaders in the organization with "real-time" information that can be analyzed and used to align work with efficient staffing models that provide excellent service to our patients, providers, and associates. The tools associated with this approach are designed for more effective management and accountability for achieving performance targets. It is thought that by analyzing select metrics in a "real-time" manner, front-line leaders can immediately follow-up on events that are still fresh and vital to maintaining optimum performance as well as proactively adjust staffing if performance targets are not being met.

Planning/Research Methods:

A review of published literature in addition to internal review of today's payer environment suggested that the need for improvement is continuous. As a result, Operational Excellence, in conjunction with Service Excellence and Clinical Excellence, was established to support leaders in achieving substantial operational improvements and drive the behavioral change necessary to achieve and sustain success.

Implementation Methods:

A fifteen week implementation of the Operational Excellence components combines improved management tools, work measurement, process redesign, and accepted best practice to assist in improving productivity, cost, quality and service. The implementation teaches managers, supervisors, and frontline staff members to identify and remove barriers to optimal performance, calculate appropriate labor allocations, establish achievable targets, and continuously manage the required daily resource requirements to maximize productivity and improve the quality of care.

Results:

Implementing process redesign and work measurement to improve patient flow has increased **Press Ganey patient satisfaction** scores from the 50th percentile to the desired target of the 90th percentile in some areas. Most notably, one facility within the system has decreased **the CMI adjusted average length of stay** by one day (a \$550,000 savings). This was accomplished by establishing the expectation of strict adherence to the Milliman Guidelines and process redesign that allowed for expanded coverage of the Case Managers within the facility.

To date, the Operational Excellence initiative has achieved 75% of its strategic target of completing Operational Excellence implementations in 30% of all departments in the Wheaton Franciscan Healthcare organization in the 2008 fiscal year. Of the implementations completed, \$32 million in financial opportunity has been identified with regard to annualized wage and benefit savings, average length of stay, revenue cycle, supply chain, and quality and service. With the OE department as a key resource for the system's leaders, Wheaton Franciscan Healthcare can continue to create value and improve its financial performance.

Andrew M. Hillig, MBA, MT (ASCP)
Project Manager, Operational Excellence
Wheaton Franciscan Healthcare
414-465-3658
Andrew.hillig@wfhc.org

Devin McKeever
VP - Operations
Wheaton Franciscan Healthcare
414-465-3104
Devin.McKeever@wfhc.org

Cost Savings Achieved with Executive Support of Reduction in Bloodstream Infections

Objective

Every year, about 250,000 catheter-related bloodstream infections (CRBSIs) associated with central venous catheters occur in U.S. hospitals. Up to 25% of these infections are fatal. The infections also drain hospital finances. They cost between \$8,000 and \$57,000 to treat and increase length-of-stay by an average of 15 days. Starting in October 2008, CMS will end reimbursements for treatment of nosocomial CRBSIs. Other insurers will follow suit.

At St. Luke's Boise Medical Center/Meridian Medical Center, in Idaho, clinical staff had already reduced CRBSI rates to well below the national average by following recommendations from CDC and the "Transforming the ICU" (TICU) project of VHA, Inc. St. Luke's had become involved in TICU when a board member read about the project and urged SL to join.

Research showed that further drops in St. Luke's CRBSI rate would require changes in the catheter insertion / site care "bundle" (group of preventive practices). These needed to encompass the addition of evidence-based practices, best practices from other institutions, and innovative technologies.

Planning/Research Methods

The support of key St Luke's executive and medical leaders was needed for these reasons:

- The planned bundle could over time achieve a zero CRBSI rate if compliance was 100%. To accomplish this, both executive and medical champions had to emphatically support the goal.
- The bundle required purchase of two evidence-based technologies: BioPatch®, a protective disk with chlorhexidine gluconate (CHG) -- identified by CDC as effective against CRBSI -- and ChloraPrep®, an antiseptic skin prep with CHG and alcohol.
- One goal was to have the new bundle codified in the organization's policies and procedures. For example, nurses should be empowered to enforce compliance by MDs and all staff.

Implementation Methods

Support was obtained from potential medical and executive champions. Executives were approached first. They were told that if the preventive methods used in various studies could be replicated at St. Luke's, the studies' results could probably be replicated. Financial savings were projected based on a \$20,000 per case treatment cost for CRBSI (national average).

The hoped-for executive support and policy changes were achieved, easing the process of obtaining support from others. Executive support also reduced the barriers to purchasing BioPatch and ChloraPrep. The support was vital, as well, in overcoming resistance to the policy changes from physicians and other clinical staff, and to increasing compliance with the bundle.

Results

Financial savings: \$454,381 has been saved over 2 years in CRBSI treatment costs.

Reduced infections. The CRBSI rate per 1,000 line days reached 1.49 (as of Sept. 2007). This is a 67.8% reduction from the baseline rate of 4.62/ 1,000 line days (as of Jan. 2005). It represents continual progress toward zero, which we believe is possible with bundle impeccable compliance.

Presenter: Rick Bassett, RN, BSN, CCRN, Transforming the ICU Project Manager, St. Luke's Regional Medical Center, 208-381-1193, bassetr@slrmc.org

Co-authors: 1) Gary Fletcher, CEO, St. Luke's Boise/Meridian 2) Alice Hennessey, Trustee, Board of Directors, St. Luke's Health System



“Online Patient Safety Reporting System” U.S. Naval Hospital, Rota, Spain

Comprehensive Patient Safety event reporting ensures that quality of care issues are identified and addressed at the systems level. In July 2007, U.S. Naval Hospital Rota, Spain converted from paper-and-pen reporting to a server-based, online reporting system.

Objective:

We sought to develop an innovative program with industry-wide application, and built-in process efficiencies. Our objectives were to: 1) Increase the security of patient safety event data; 2) Increase staff satisfaction with reporting; and 3) Increase reports of Good Catches (improvements) and Near Misses (errors that are stopped before they reach the patient).

Planning Methods:

Patient Safety, the Performance Improvement Physician Advisor (PIPA), and Information Management (webmaster), with support from the Patient Safety Committee, worked collaboratively over a period of four months to develop, beta-test, and refine the new system.

Implementation Methods:

Staff are educated about patient safety event reporting during Command Indoctrination, Patient Safety Rounds, and Leadership Rounds by the Commanding Officer and Directors.

To use this online system, staff members enter Good Catches, Near Misses, and Adverse Events from their desktops. The report goes to the Patient Safety Manager, who comments and sends the report through the appropriate chain for follow-up action. Notification is via an automated e-mail system, but all data is stored and routed by a secure server.

Events (“cleaned” of identifiable information) are reported to the Executive Committee of the Medical Staff, and improvement actions are taken.

Results:

- 1) Increased security of data (all information is processed and stored by a secure server, rather than on a desktop; and no paper is generated);
- 2) Staff express increased satisfaction with reporting; and
- 3) Reporting of Good Catches and Near Misses has greatly increased, from an average of <2 per month to an average of 15 per month.

U.S. Naval Hospital Rota is a small facility, with relatively low raw numbers. But patient safety reporting requirements and challenges are similar, across all hospitals. This reporting system can be adapted by any facility with an IIS/SQL/ASP Intranet structure.

D.S. Loup, MD
CAPT, Medical Corps, U.S. Navy
U.S. Naval Hospital, Rota
PSC 819 Box 18, FPO, AE 09645
Comm: 011-34-956-82-3511 / DSN 727-3511

Jeanne Casey, MA, CHES
Patient Safety Specialist
U.S. Naval Hospital, Rota
PSC 819 Box 18, FPO, AE 09645
Comm: 011-34-956-82-6421 / DSN 727-6421

davonne.loup@med.navy.mil

jeanne.casey@med.navy.mil



Integrating Strategy Management into Mercy's Core: Innovation for Excellence

The Case for Change: In 2001, Mercy Health Partners was facing operating losses, resulting in the organization focusing inward to improve financial performance and operations. –The emphasis of the organization was on reducing expenses, improving productivity and improving financial results rather than on the other strategic areas of importance such as quality or growth. Frequently expressed by employees and physicians was the concern that Mercy Health Partners was a financially focused organization. At a board retreat in November 2001 the concept of the balanced scorecard was explored. The outcome of this retreat was the decision by Mercy's leadership and board to adopt the balanced scorecard framework as a way to assure MHP pursued a "balanced" agenda for its performance including quality, service, people, growth along with finances.

Implementation Methodology: Mercy launched its balanced scorecard on a pilot basis in September 2002 and in 2003 fully utilized a balanced scorecard framework. Recognizing the BSC as the pivotal link between strategy and operations, key developments in process included adjusting the Board agenda and committee roles to support the BSC, re-defining Executive meetings to create a focus on inter-related strategic themes, each guided by a 'Shepherd', cascading the Scorecard to business units, revising leader objectives to have a BSC focus, re-branding internal communications to align with strategy, and developing disciplined core Initiative Management processes.

Innovation in Performance Management: Taking the Balanced Scorecard Concept to the Next Level:

Research on best practices across industries for a structure that would improve execution of scorecard targets and initiatives led to the development of a formal Office of Strategy Management (OSM) and the adoption of Mercy Health Partner's Strategy Management System (SMS). In late 2006, Mercy refreshed its, balanced scorecard and added a strategy management capability staffed by an Office of Strategy Management (OSM). The OSM was formally established in December 2006 with the realignment of roles and hiring of staff. Mercy's CEO was an advocate and sponsor of the OSM and implementation of Mercy's strategy management systems. There now exists growing awareness of the central role the OSM can and has played in developing strategy management competencies to foster a results-focused culture.

Has the Journey Been Worth It? A. Case in Point: Turning Challenges & Opportunities into Desired

Outcomes: Finance: Since 2002, Operating EBIDA margin % has remained well above established benchmark (Moody's AA), trending between 11%-13%. Net Patient Revenue increased 4.8%, 8.4%, and 12.5% over the prior year respectively from 2005-2007. Community benefit %, a measure of our commitment to our mission, has steadily trended up to over 9% of total expenses, well above the CHA benchmark of 7%. People: Associate separation rates fell from 14.1% in 2002 to 10.8% in 2003, and have stayed stable between 8%-9% since the last 4 years, well below national (Saratoga Institute for all Hospitals) benchmark of 11.8%. Service: An increasing percentage of our patient population would recommend us each year, and MHP was awarded JD Power recognition in 2006. Spiritual Support rose from a low of 55% in 2002 to all of our 6 hospitals offering it to more than 85% of their in-patient populations by 2006. Growth: MHP saw marketshare grow and admissions grow since 2002. Quality: Above top quartile performance on the CMS Appropriateness of Care measure (87% vs. 78% benchmark). Resource Management: Labor costs and Supply costs have been maintained at a constant % of Net Operating Revenue and Net Patient Revenue (49% -50% and 16% -17% respectively) since 2002, in spite of a highly competitive market and spiraling healthcare costs. **B. Intangibles:** A committed, motivated workforce; Steady financial results; Strengthened physician relations; Multiple clinical excellence awards and recognition; Commitment to service; Resource stewardship; Increased faith in leadership; Visionary community-oriented goals; Greater strategic focus.

Dr. Rohini Wadhawan, M.H.A., B.D.S
Business Performance & Initiatives Specialist
Mercy Health Partners
419-251-2153
rohini_wadhawan@mhsnr.org

Dennis Sherry, M.H.A.
Sr. VP, Office of Strategy Management
Mercy Health Partners
419-251-2001
dennis_sherry@mhsnr.org

Relationship-Based Physician Recruitment at a Rural Hospital

Objective of Program:

To recruit physicians to rural Cheboygan Memorial Hospital and the community of Cheboygan, Michigan with a focus on those individuals with ties to the local area.

Planning/Research Methods:

- Establishment of a multidisciplinary physician recruitment team with community involvement.
- Analysis of physician needs based on demographic and market share data.
- Exploration of multiple methods for comprehensive physician recruitment processes.

Implementation Methods:

- Development of comprehensive physician recruitment materials (hard copy and DVD) that highlight the hospital and the community.
- Initial distribution of physician recruitment materials to Board of Trustees, Medical Staff, Hospital's Leadership Team, and community leaders with processes established for further dissemination.
- Establishment of regular, ongoing communication processes with medical students, interns/residents, and practicing physicians with ties to the local area.
- Customization of planned physician recruitment visits that involve hospital and community stakeholders.

Results:

- Significantly increased physician recruitment activity that includes the signing of six (6) physicians with local ties, and two (2) more physicians actively in the recruitment process at this time.
- Significant cost savings, but not fully quantifiable, that include at a minimum:
 - Five of the six physicians that have signed thus far have been without use of recruitment agency or related expense.
 - Permanent physicians reduce need for locum providers and improve access.
- WTOM/TV 7 and 4 did a story on the strength and innovation of our physician recruitment program (12/11/07).

Barbara Cliff, PhD, FACHE President/CEO
CHEBOYGAN MEMORIAL HOSPITAL
748 South Main Street Cheboygan, Michigan 49721
(231) 627-1450 barbara.cliff@cheboyganhospital.org



DEPARTMENT OF THE AIR FORCE
305TH AIR MOBILITY WING (AMC)

A Model for Satisfaction and Time Savings Alignment with New Employee Orientation

Objective:

In October 2007, a multidiscipline team of 11 members formed to critically review and improve the new employee orientation program. At the time, there were three different orientation plans based upon employee classification as Active Duty, Civilian, or Contractor. The team was able to develop one orientation plan that met the needs of all employee classifications. Specific aims include:

1. Increase new **employee satisfaction** with the orientation program
2. **Eliminate disorganization and redundancy** during the process
3. Have employees ready to **start work sooner** upon arrival to the facility

Planning / Research Methods:

The team created a forum called a Rapid Improvement Event (RIE) to hone on major issues of the orientation process. The overall consensus of the team was that the main issues of the orientation process were duplication, disorganization and customer satisfaction. We went over the orientation checklist step by step, color coded duplications in the process, which enabled us to pin point the redundancy, and eliminate processes that were unnecessary. Identified duplications were discussed in detail and assigned an action for resolution. An action item list of 41 change tasks was generated as a result of our critical inspection of the program.

Implementation Methods:

Thirty-days after the Rapid Improvement Event and completing the 41 items on the action list, we implemented our new orientation process. We advertised process changes to our customers via medical group newsletter, incorporated a "one-stop" registration center for new employees, and streamlined briefings to provide value added information and reduce redundancy. Finally, a customer satisfaction tool was developed and is provided to each month's orientation group to measure results on an on-going basis.

Results

With the new orientation process we decreased the number of briefings by 16%, decreased checklist steps 250%, total time in-processing the organization decreased by 50%, and overall customer satisfaction increased from good to excellent. Total money spent for the new change was zero. Manpower savings realized, using the assumption of 150 new employees annually and reducing in-processing from two weeks to one, was three (3) equivalent people saved.

Master Sergeant Karen L. Muncey
Unit Training Manager
305 Medical Group, McGuire AFB, NJ
609-754-9509
Karen.Muncey@mcguire.af.mil

Major Robert A. Groves
Flight Commander, Education & Training
305 Medical Group, McGuire AFB, NJ
609-754-9794
Robert.Groves-02@mcguire.af.mil

Six Sigma – An Innovative Solution for Nursing Retention

Objective:

The nursing shortage has led to extreme competition between health care organizations for valued nursing expertise. This has resulted in high RN turnover and vacancy rates, increased costs due to the need to pay premium dollar agency nurses to backfill vacant positions, re-training costs for refilled positions, and a less stable work environment on the units. The objective of this project was to decrease the RN turnover rate throughout our four hospital system by applying the Six Sigma tools and methodology to this very challenging issue.

Planning/Research Methods:

The make-up of the project team was critical for this topic to get the right “brain trust” at the table. A Six Sigma Master Black Belt led the project, with team members including bedside nurses, nurse managers, nursing directors, human resource personnel, and a nursing educator. The project champion was the CNO. Data was used from key sources including termination data from the human resource system, and survey data from two different objective and statistically valid nursing surveys. Extensive analysis of cause and effect was done using both the data provided and brainstorming with an extended team of bedside nurses using Six Sigma quality tools such as Affinity Diagrams, Ishikawa, Cause&Effect Matrices, and Failure Modes/Effects Analysis, allowing the team to review where the retention process might fail.

Implementation Methods:

The critical causes of nurse termination that our tools identified included: the nurse manager to RN relationship, equity on the unit in shift/holiday/vacation assignment, proper precepting of new nurses in an environment that is conducive to learning, stress and hectic pace on the unit, relationships with patients and de-escalating stressful situations, and respectful relationships with physicians. Innovative solutions included:

- An increased focus on the relationship between the Nurse Manager and his/her employees via a program of progressive education in retention techniques for Nurse Managers. Our Nursing Directors were trained to be “retention coaches”, or experts in this area.
- A “Meeting Free Zone” was implemented every day throughout all 4 hospitals for all employees for two hours each morning. This allows the Nurse Manager to be on the unit and not always off in meetings, and was a culture change that has proven very successful. Senior Management also rounds during this time to be in touch with the employees.
- Policies were re-inforced throughout the hospitals on fair scheduling.
- Two “orientation units” for new nurses have been established, so that they may be precepted by expert RNs who enjoy teaching while they work.
- Focus groups were created where nurses may de-stress, and a daily program allowing nurses to break away for a massage, soft music and relaxation techniques during lunch was implemented.
- Techniques for de-escalating stressful situations with patients were communicated via education.
- A social event was held featuring a physician band led by the president of our medical staff hosting 400 nurses and physicians in a fun setting (addressing respect from physician to nurse).
- Communication of these changes to the bedside RN was key via Nursing Newsletters.

Results:

Turnover rate dropped from 14% in 2006 to 10.9% in 2007. This is one of the lowest in the area. Very conservative annual savings from this change strictly based on reduction in agency/contract backfill costs was set at \$609,000. True estimates are over 1 million per year if you factor in the cost of training new nurses who are hired after a termination. After improvements were put into place, turnover data was monitored for one full year to ensure that the gains were sustained.

Lisa Johnson, MS, MSN, RN-CNAA

Chief Nursing Officer
Vice-President Patient Services
Morton Plant Mease Health Care
BayCare Health System
727-462-7838
lisa.johnson@baycare.org

Pam Guler, MHA

Administrative Fellow
Six Sigma Master Black Belt
Morton Plant Mease Health Care
BayCare Health System
727-298-6729
pam.guler@baycare.org

Solving a 50% Nurse Vacancy Rate Objective

Recruit, hire, and train 23 staff nurses for a medical and surgical telemetry unit in a timely and cost effective manner.

Planning

This problem originated when our biggest competitor opened a new telemetry unit and implemented an aggressive marketing campaign heavy with financial incentives. We lost five nurses at a time when vacancy was already high due to regular turnover and the inability to fill positions. It was apparent that we had at least another six nurses considering leaving for the competitor. Planning involved several different individuals, including: CEO, CNO, CFO, Directors, Educators, Human Resources, and Managers. One challenge was training 23 nurses with a limited number of experienced preceptors. We created a Lead Preceptor position to oversee this overwhelming project. We had a well-regarded 12-week new graduate nurse residency program in place. While we usually train our nurses on the unit one on one, we knew we did not have enough preceptors for everyone. We decided to try an idea that would pair one preceptor with two and three orientees to help address this problem.

Implementation Methods

We were losing nurses and had to stop more from leaving. We initiated a retention bonus and set up a telemetry differential that would pay an extra \$6.00/hr for hours worked on the telemetry units. We asked for a verbal commitment by the staff receiving the bonus. This helped keep the staff that had not left. We hired 14 contract nurses to help us get through the orientation of possibly 24 nurses. Many of the contract nurses helped in the training of the newly hired nurses. We then worked with our human resources department to develop a plan to attract new nurses. This again included new hire bonuses as well as referral bonuses. We decided that we could only train 12 nurses at one time. It would be best to hire half early in the year and the other half later that same year. We approached the preceptors to sell the new idea and to receive feedback. Most were excited to try a new method of precepting new employees.

Results

This program resulted in a vacancy rate less than 10%. Cost savings were realized in decreased vacancy rates, low turnover, and the elimination of contract labor.

David D. Muggli RN, BSN
Unit Manager-Telemetry/Transplant
HealthONE-Presbyterian/St. Luke's Medical Center
Denver, CO
303-839-6263 | David.Muggli@HealthONECares.com

APPENDIX
MANAGEMENT INNOVATIONS XXIV

Marilyn Bash, RN
Director of Perioperative Services
Sacred Heart Medical Center
West 101 8th Ave.
Spokane, WA 99204
(509) 474-4792
bashm@shmc.org

Michele Biscossi, RN
Acute Care Nurse Practitioner/Clinical
Nurse Lead
Stratton VA Medical Center
113 Holland Ave.
Albany, NY 12208
(518) 626-6601
Michele.Biscossi@med.va.gov

Barbara Cliff, PhD, FACHE
President/CEO
Cheboygan Memorial Hospital
748 South Main St.
Cheboygan, MI 49721
(231) 627-1450
barbara.cliff@cheboyganhospital.org

Lisa Edelstein
Director of Occupational Therapy
Burke Rehabilitation Hospital
785 Mamaroneck Ave.
White Plains, NY 10605
(914) 597-2256
ledelste@burke.org

Regina Elkins
Healthcare Consultant
Somerset CPAs, P.C.
3925 River Crossing Parkway, Third Floor
Indianapolis, IN 46240-0368
(740) 817-2301
helkins@columbus.rr.com

Trent E.J. Gordon, FACHE
Manager, Strategic Planning
Advocate Health Care – Good Shepherd Hospital
450 W. Highway 22
Barrington, IL 60010-7509
(847) 530-9336
trent.gordon@advocatehealth.com

Rick Bassett, RN
Transforming the ICU Project Manager
St. Luke's Regional Medical Center
190 E. Bannock St.
Boise, ID 83712
(208) 381-1193
bassettr@slrmc.org

Jana Budde, JD
Presidential Management Fellow
VA Healthcare – VISN 4
Delafield Rd.
Pittsburgh, PA 15240
(412) 784-3939
jana.budde@va.gov

Michael Darling, RN
Director
PricewaterhouseCoopers LLP
2001 Ross Ave., Ste 1800
Dallas, TX 75201-2997
314-422-2931
Michael.d.darling@us.pwc.com

Timothy S. Elder, FACHE
Vice President, Operations
Beaumont Hospitals
Beaumont Services Company
3601 W. 13 Mile Rd.
Royal Oak, MI 48073-6712
(248) 551-1645
telder@beaumontservices.com

Jonathan H. Gardner, FACHE
Director
Southern Arizona VA Healthcare System
3601 S. 6th Ave.
Tucson, AZ 85723-0002
(520) 629-1821
jonathan.gardner@med.va.gov

Pam Guler
Administrative Fellow
Six Sigma Master Black Belt
Morton Plant Mease Health Care
BayCare Health System
300 Pinellas St. MS 21
Clearwater, FL 33756
(727) 298-6729
pam.guler@baycare.org

APPENDIX
MANAGEMENT INNOVATIONS XXIV

Andrea Harvey
Manager, Innovation Network
Harris County Hospital District
Ben Taub General Hospital
1504 Taub Loop
Houston, TX 77030
(713) 873-6100
Andrea_Kelley@hchd.tmc.edu

Andrew M. Hillig
Project Manager, Operational Excellence
Wheaton Franciscan Healthcare
400 W. Riverwoods Pkwy
Glendale, WI 53212
(414) 465-3658
Andrew.hillig@wfhc.org

David D. Muggli RN
Unit Manager-Telemetry/Transplant
HealthONE-Presbyterian/St. Luke's Medical Center
1719 E. 19th Ave.
Denver, CO 80218
(303) 839-6263
David.Muggli@HealthONECares.com

Catherine C. Pensak
Director of Development
IPC The Hospitalist Company
6367 E. Tanque Verde Rd.
#200
Tucson, AZ 85715-3832
(520) 290-5888
cpensak@ipcm.com

David Rahija, FACHE
Vice President
Schwab Rehabilitation Hospital and Mount Sinai Hospital
1401 S. California Ave.
Chicago, IL 60608-1858
(773) 522-5860
rahd@sinai.org

Rohini Wadhawan
Business Performance & Initiatives Specialist
Mercy Health Partners
2200 Jefferson Ave.
Toledo, OH 43604
(419) 251-2153
rohini_wadhawan@mhsnr.org

Bradley Helfand, FACHE
Director of Strategy for Surgical Services
University of Chicago Medical Center
5841 S. Maryland Ave.
Mail Code 5031
Chicago, IL 60637-1447
(773) 834-0546
bhelfand@surgery.bsd.uchicago.edu

Davonne S. Loup, MD
CAPT, Medical Corps, U.S. Navy
U.S. Naval Hospital, Rota
PSC 819 Box 18, FPO, AE 09645
Comm: 011-34-956-82-3511 / DSN 727-3511
davonne.loup@med.navy.mil

Master Sergeant Karen L. Muncey
Unit Training Manager
305 Medical Group, McGuire AFB, NJ
(609) 754-9509
Karen.Muncey@mcguire.af.mil

Kirk Pieper
Radiology Director
Community Memorial Hospital
147 N. Brent St.
Ventura, CA 93003
(805) 652-5028
kpieper@cmhhospital.org

Jim Sheperd, MD
PACS Implementation Leader
Olympic Medical Center
939 Caroline St.
Port Angeles, WA 98362
(360) 417-7770
spinechojim@gmail.com