Barnes-Jewish Hospital Patient Safety & Quality Report to the Board of Directors
Letter from Richard Liekweg and John Lynch, MD

Dear Barnes-Jewish Hospital Board Members and Leadership,

At Barnes-Jewish Hospital, we rank patient safety and quality as our number one priority every day for every team member. Our nurses, physicians and allied health professionals are committed to providing and practicing the highest standards of patient care. But they can’t and don’t do it alone. They are supported by our board members, leadership and people behind the scenes who contribute valuable services day in and day out.

This report outlines the practices, programs and improvements that we have implemented and sustained to meet the highest standards of patient safety and quality. In a changing health care environment, our job is to keep constant our dedication to delivering advanced health care within a caring environment.

Together with our physician partners at Washington University School of Medicine, we have set the bar high and continue to reach for new options and opportunities to provide our patients with exceptional care.

Sincerely,

[Signatures]

Richard J. Liekweg
President
Barnes-Jewish Hospital and Barnes-Jewish West County Hospital
Group President
BJC HealthCare

John Lynch, MD
Vice-President and Chief Medical Officer
Barnes-Jewish Hospital
Professor of Medicine
Washington University School of Medicine

“...our job is to keep constant our dedication to delivering advanced health care within a caring environment.”
## National Patient Safety Goals

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>2010 GOAL</th>
<th>YTD 12/09 - 11/10</th>
<th>YTD VS GOAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medication Safety</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medications reconciled at <em>admission</em></td>
<td>90%</td>
<td>82%</td>
<td></td>
</tr>
<tr>
<td>Medications reconciled at <em>transfer</em></td>
<td>90%</td>
<td>55%</td>
<td></td>
</tr>
<tr>
<td>Medications reconciled at <em>discharge</em></td>
<td>90%</td>
<td>92%</td>
<td></td>
</tr>
<tr>
<td>Medication labeling</td>
<td>90%</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td><strong>Suicide Risk Assessment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage on suicide precautions - mental health units</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Percentage given mental health resources - mental health units only</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Percentage on suicide precautions - emergency department</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Percentage given mental health resources - emergency department</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Improve the Effectiveness of Communication Among Caregivers</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Use <em>two patient identifiers</em> when taking specimens, administering medications, treatments or blood and blood products</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>“Read back” performed for received telephone/verbal orders or critical test results - nursing</td>
<td>95%</td>
<td>94%</td>
<td></td>
</tr>
<tr>
<td>“Read back” obtained for reported critical test results and values - lab</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Critical results/values reported by lab within 30 minutes of availability of results</td>
<td>95%</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>Critical results/values reported to licensed person who can act, within 60 minutes of notification of results</td>
<td>95%</td>
<td>96%</td>
<td></td>
</tr>
<tr>
<td>Critical test/procedure results reported by radiologist to ordering physician at time of determination/interpretation of test</td>
<td>95%</td>
<td>94%</td>
<td></td>
</tr>
<tr>
<td>Standardize abbreviations, acronyms and symbols, including list of abbreviations, acronyms and symbols not to use</td>
<td></td>
<td></td>
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<tr>
<td>U</td>
<td>95%</td>
<td>98%</td>
<td></td>
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<tr>
<td>IU</td>
<td>95%</td>
<td>100%</td>
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<tr>
<td>QD</td>
<td>95%</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>Q.O.D.</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>HS</td>
<td>95%</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>Lack of leading zero</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Trailing zero</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>MS, MSO, MgSO</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Universal Protocol: Eliminate Wrong Site, Wrong Patient and Wrong Procedure Surgery</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preoperative verification process completed:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating room: checklist completed</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Procedure areas: checklist and/or area-specific elements documented</td>
<td>95%</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>Surgical or procedure-site marking completed prior to procedure:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating room</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Procedure areas</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Time out (final verification process) conducted prior to the start of procedures:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating room</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Procedure areas</td>
<td>95%</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>Bedside procedures</td>
<td>95%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
Barnes-Jewish Hospital achieved an overall Best-In-Class score of 1.06 in 2010. A score of 1.0-1.5 indicates we are in the top quartile compared to other hospitals in the United States. The Clinical Quality Performance Scorecard outlines performance in patient care or treatment delivery. Performance improvement teams are assigned to each quality indicator to evaluate processes, systems, clinical practice and health care worker behaviors, make recommendations for improvement, and share information on best practices.

### Best-In-Class Clinical Quality Scorecard

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>2010 TARGET</th>
<th>YTD 12/09 - 11/10</th>
<th>YTD vs GOAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Surgical Care Improvement Project (SCIP)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical patients receiving prophylactic antibiotic within standard</td>
<td>97%</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>Selection of antibiotic for surgical site infection prophylaxis</td>
<td>97%</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>Duration of surgical infection prophylaxis</td>
<td>96%</td>
<td>96%</td>
<td></td>
</tr>
<tr>
<td><strong>Infection Control</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standardized infection ratio (SIR) for ventilator-associated pneumonia</td>
<td>0.38</td>
<td>0.42</td>
<td></td>
</tr>
<tr>
<td>Standardized infection ratio (SIR) for catheter-related blood stream infections</td>
<td>0.38</td>
<td>0.62</td>
<td></td>
</tr>
<tr>
<td>Standardized infection ratio for coronary artery bypass graft surgical site infection</td>
<td>0.38</td>
<td>0.58</td>
<td></td>
</tr>
<tr>
<td>Standardized infection ratio for hip arthroplasty surgical site infection</td>
<td>0.38</td>
<td>1.24</td>
<td></td>
</tr>
<tr>
<td>Standardized infection ratio for hysterectomy surgical site infection</td>
<td>0.38</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>Contact isolation compliance</td>
<td>95%</td>
<td>91%</td>
<td></td>
</tr>
<tr>
<td>Hand hygiene</td>
<td>95%</td>
<td>87%</td>
<td></td>
</tr>
<tr>
<td><strong>Medication Safety</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continue all Best-in-Class Medication Safety rule sets from previous years</td>
<td>97%</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>Number of meperidine alerts per 1,000 patient days</td>
<td>.55</td>
<td>.34</td>
<td></td>
</tr>
<tr>
<td><strong>Preventable Harm (Precept1: Medical Errors &amp; Patient Safety)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood incompatibility</td>
<td></td>
<td></td>
<td>COMPLETED</td>
</tr>
<tr>
<td>Restraint policy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universal protocol for operating room</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Venous Thromboembolism (VTE)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgery patients who received appropriate VTE prophylaxis within 24 hours prior to surgery to 24 hours after surgery</td>
<td>95%</td>
<td>97%</td>
<td></td>
</tr>
<tr>
<td><strong>Acute Myocardial Infarction (AMI)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percutaneous coronary intervention within 90 minutes of hospital arrival</td>
<td>93%</td>
<td>96%</td>
<td></td>
</tr>
<tr>
<td>Aspirin within 24 hours of hospital arrival</td>
<td>97%</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>Cholesterol testing within 24 hours of hospital arrival</td>
<td>97%</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>Aspirin prescribed at discharge</td>
<td>97%</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>ACE-I/ARB prescribed at discharge</td>
<td>97%</td>
<td>96%</td>
<td></td>
</tr>
<tr>
<td>Beta-blockers prescribed at discharge</td>
<td>97%</td>
<td>98%</td>
<td></td>
</tr>
<tr>
<td>Lipid-lowering agents prescribed at discharge</td>
<td>97%</td>
<td>97%</td>
<td></td>
</tr>
<tr>
<td>Smoking cessation advice/counseling</td>
<td>97%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Coronary Artery Bypass Graph (CABG)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASA/Antiplatelet prescribed at discharge</td>
<td>97%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Lipid-lowering agents prescribed at discharge</td>
<td>97%</td>
<td>98%</td>
<td></td>
</tr>
</tbody>
</table>
### 2011 Patient Safety Goals

**Improve the Accuracy of Patient Identification**
- Use two patient identifiers
- Eliminate transfusion errors related to patient identification

**Improve Safety of Using Medications**
- Medication reconciliation across the continuum of care

**Reduce Health Care-Associated Infections**
- Meet hand-hygiene guidelines
- Implement evidence-based practices to prevent health care-associated infections

**Identify Patient Safety Risk**
- Provide information about community resources (e.g., crisis hotline) to patients and families at discharge from the hospital or emergency department

**Universal Protocol**
- Prevent wrong site, wrong procedure and wrong person surgery

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#### Percutaneous Coronary Intervention (PCI)

<table>
<thead>
<tr>
<th></th>
<th>Maximum</th>
<th>Target</th>
<th>Threshold</th>
<th>Minimum</th>
<th>Below Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASA/Antiplatelet prescribed at discharge</td>
<td>97%</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Congestive Heart Failure (CHF)

<table>
<thead>
<tr>
<th></th>
<th>Maximum</th>
<th>Target</th>
<th>Threshold</th>
<th>Minimum</th>
<th>Below Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE-I/ARB prescribed at discharge</td>
<td>97%</td>
<td>95%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left ventricular function assessment</td>
<td>97%</td>
<td>99%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antithrombotics prescribed at discharge for patients with AFib</td>
<td>97%</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge instructions</td>
<td>94%</td>
<td>92%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking cessation advice/counseling</td>
<td>97%</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Pneumonia

<table>
<thead>
<tr>
<th></th>
<th>Maximum</th>
<th>Target</th>
<th>Threshold</th>
<th>Minimum</th>
<th>Below Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood cultures before antibiotics (ED)</td>
<td>97%</td>
<td>96%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial selection of antibiotic</td>
<td>96%</td>
<td>93%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal vaccine screening and/or vaccination</td>
<td>96%</td>
<td>91%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoking cessation advice/counseling</td>
<td>97%</td>
<td>99%</td>
<td></td>
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</tr>
</tbody>
</table>

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Shanita Bryson, RN, confirms identification for patient Anthony Geiler.
Goldfarb Patient Safety and Quality Fellowship Program

The Goldfarb Patient Safety and Quality Fellowship Program, established in 2008 through the visionary, generous support of the late Alvin Goldfarb and the Goldfarb Foundation, has become a catalyst for patient safety and quality efforts throughout Barnes-Jewish Hospital. The program remains the only hospital-based initiative in the nation focused on patient safety and quality training and research for physicians. Patient safety and quality is Barnes-Jewish Hospital’s highest priority, reflected in the ongoing annual investment of more than $5 million in departmental operations and initiatives.

Goldfarb fellows take on some of the most persistent challenges at the hospital and in the nation, developing solutions that are transforming the hospital culture, and making measurable differences in patient safety and health outcomes at Barnes-Jewish Hospital and the twelve other hospitals within the BJC HealthCare system.

The snapshots that follow offer an update on fellows’ targeted research, interventions and results achieved. In all cases, their work will or has already improved treatment, reduced or prevented harm, and reduced costs by sparing patients additional days in the hospital or other treatment to address complications.

Christopher Carpenter, MD, MSc, Assistant Professor, Emergency Medicine, Director, Evidence-Based Medicine

Chris Carpenter, MD, was the first two-year Goldfarb fellow (July 2008-July 2010). His research focused on improving the safety and outcomes for geriatric patients who arrive in the emergency department. He recruited more than 500 patients for several distinct research protocols that have thus far yielded eight manuscripts in five journals.

One major focus of his work included earlier and better recognition of cognitive impairment and frailty in older adults in the emergency department. Dementia and delirium are common among older adult patients seen in the emergency department, but are often missed or misidentified, creating a risk factor for falls and future or extended hospitalization. Falls are the leading cause of trauma-related death in aging adults.

Dr. Carpenter’s research showed that three standardized, easy-to-use screening tools had 95 percent sensitivity to detect dementia. This research can be used to improve communication between the emergency department and hospital floors (or with primary care providers or home caregivers) to identify demented patients at risk of falling and to ensure implementation of fall precautions.

As an attending physician of emergency medicine at Barnes-Jewish Hospital, Dr. Carpenter serves as a teacher and mentor to medical students at local universities including Washington University School of Medicine, St. Louis University and the University of Missouri. In 2010, he presented to multiple universities across the country focusing on evidenced-based medicine and measures to improve the care of older adults in the emergency department. Recently, he received a grant from the Washington University School of Medicine Clinical Research Training Center for KM1 Comparative Effectiveness Research that began in January 2011. His research focuses on developing a sustainable, cost-effective model to identify prevalent geriatric syndromes such as dementia, delirium, frailty and functional decline in the busy emergency department. This student or volunteer screening model will not rely upon nurses or physicians since they are already consumed with maintaining patient flow in crowded emergency departments.
Michael Lane, MD, MSc, Instructor in Medicine, Infectious Diseases – Internal Medicine

Michael Lane, MD, is in the final months of his two-year patient safety fellowship (April 2009 – April 2011). His work has focused on maximizing the benefit of blood-thinning and immunosuppressive medications while minimizing risk. Immunosuppressive drugs used to treat rheumatoid arthritis – a common inflammatory disease of the joints – can have severe side effects. Dr. Lane’s goal is to prevent adverse drug reactions.

Dr. Lane recently completed a study of the risk factors and frequency with which patients with rheumatoid arthritis develop severe infection. His study showed that patients treated with a newer therapy option are at significantly increased risk for developing infections that require hospitalization. His findings have just been accepted for publication in the journal Medicine, which will help physicians at Barnes-Jewish Hospital and nationally weigh the risks and benefits before prescribing these drugs.

An ongoing study examines the risk of developing a serious bleeding event due to drug interactions between warfarin – a powerful blood thinner – and certain antibiotics. The results of this study will help create standard protocols for the use and monitoring of these medications.

Dr. Lane also received a KM1 Career Development Award from Washington University School of Medicine that began in January 2011. The focus of his research project is to develop better diagnostic tools for patients with culture-negative prosthetic joint infections so that patients can receive targeted antibiotic therapy instead of empiric therapy. The goal is to limit the use of unnecessary antibiotics and prevent potential harm caused by these medications.

*Drs. Lane and Carpenter have teamed up to serve as faculty advisors for a local chapter of the Institute for Healthcare Improvement’s Open School.*

This student organization has members drawn from Washington University School of Medicine, St. Louis College of Pharmacy, Washington University’s physical therapy program and the St. Louis University MBA program in health care management. The group has scheduled interactive lunch sessions and evening workshops to train the next generation of health care professionals in patient safety and quality improvement. Future plans include providing students with hands-on experience in debriefings and root-cause analyses of patient safety events. Long-term goals include the development of an elective rotation for students in patient safety and quality improvement.
Over the past few years, Barnes-Jewish Hospital has adopted a “just culture” philosophy with respect to patient safety and quality. This philosophy supports a culture that is neither blame free nor overly punitive. The just culture paradigm provides a set of practical tools that reconcile the punitive culture of blame that has existed within hospitals for decades with personal and professional accountability.

Several years ago, Barnes-Jewish began the process of educating leaders and staff about the just culture philosophy.

**Incorporating Just Culture philosophy**

- **2008** Executive leadership trained
- **2009** Directors and managers trained
- **2010** Just Culture training materials developed specifically for Barnes-Jewish Hospital
  - Nearly 500 managers, supervisors and senior leaders trained
  - Human resource department incorporates just culture into leadership classes

At the end of 2010 a 12-question survey to evaluate understanding and acceptance of just culture was taken by 2,414 hospital and medical staff. The results provide a gauge as to how the hospital, as an organization, functions as a just culture.

Respondents were asked to rate a number of statements about the hospital overall as well as their individual manager’s behavior and methods. Statements included:

- **My manager’s actions demonstrate that patient safety is an important organizational value.**
- **Work systems and processes are changed to reduce patients’ safety risks in response to reported hazards or near misses.**
- **Team members report hazards and near misses that could impact patient safety.**
- **My manager treats all team members fairly and equitably in response to an adverse patient safety event.**

Survey results positively demonstrated that the hospital overall has a learning and just culture.

The results, benchmarked against other organizations that received comparable just culture training, were similar or better than the benchmarked data. The same survey will be repeated in 2011.

The next step is to train all remaining staff members. The just culture steering committee is creating three video vignettes that demonstrate how the principles of a just culture relate to everyday work experiences. The videos will be rolled out to staff in 2011, with the first scheduled for distribution in the first quarter. Throughout 2011, the steering committee will work to ensure that a just culture is “hard-wired” into all event investigations and employee corrective actions.

*Working as a team, Kim Hamlin, MD, and Karen DuPatz, RN, check on a newborn in the well-baby nursery.*
Stop the Line

One way the hospital is addressing patient safety on a personal level is through its efforts with “Stop The Line.” Stop The Line empowers staff to speak up when they observe a situation where a patient may be at risk for harm. Any team member who is concerned about a patient’s safety can request a “safety pause.”

During a safety pause, the work will stop immediately so that staff can reassess the safety of the situation.

Sophronia Willis, a licensed practical nurse at Barnes-Jewish Hospital, used the Stop the Line action for one of her patients whom she felt had been prescribed too much medication. Her efforts prevented potential harm to the patient and, as a result, she received the hospital’s 2010 Best Catch Award (see next page for details.)

In late 2009, Barnes-Jewish Hospital, Washington University School of Medicine and St. Louis Children’s Hospital joined efforts to develop a Stop The Line policy. The policy and education of staff began in the second and third quarters of 2010. For example, an introduction to what just culture is and how it is addressed at Barnes-Jewish is included in new employee orientation and nursing orientation. A more detailed training segment is included in the nurse residency development program.

Posters, flyers and email updates encourage all team members to put patient safety before all other concerns.
“Great Catch” Awards

Barnes-Jewish Hospital’s “Great Catch” program rewards staff who identify risk and prevent harm, or who take extraordinary measures to promote a culture of safety at the hospital. All team members are eligible and are evaluated based on the open, timely disclosure of a “near miss” incident that prevented new or further harm to a patient. Criteria considered include:

- Impact of prevention on a patient or on the hospital’s culture of safety
- Timelines
- Methods for diverting harm
- Communication during and after the event

Up to three Great Catch awards are given monthly. The annual Great Catch award recipients are chosen from the monthly winners. Awards include Courageous Catch, Critical Catch and overall Best Catch.

This year, the Courageous Catch award was a tie presented to Delores Bass and Ruth Miller, both members of the housekeeping staff. Bass entered a patient’s room for daily rounds when she noticed the patient did not look well and appeared to be having difficulty breathing. She immediately notified the patient’s nurse who was able to rush to the room. The patient proceeded to go into cardiac arrest, a code was called and the patient was eventually transferred to an intensive care unit. Bass’ quick actions minimized harm to the patient.

Ruth Miller felt that a patient in one of the rooms she was servicing “didn’t look right” and immediately sought medical attention. She called the Acute Care Team (ACT) and the patient was able to quickly receive urgently needed medical help.

The recipient of the Critical Catch award is Patty Fisher-Keller. Fisher-Keller was the scrub nurse in a surgical procedure when her patient’s clinical condition suddenly decompensated. A code was called. As the physicians were thinking through what could have triggered the event, Fisher-Keller realized that the ultrasound cover that had recently been introduced into the sterile field was probably not latex-free and the patient had a latex allergy. She confirmed that the product contained latex and immediately removed it from the operating room. The patient was subsequently treated for anaphylactic shock. Her great catch allowed for timely and appropriate treatment for her patient.

Sophronia Willis, LPN, on acute psychiatry unit 15500, is congratulated as the recipient of the 2010 Best Catch Award by Barnes-Jewish Hospital President Richard Liekweg at the annual awards presentation.

Sophronia Willis, a licensed practical nurse on acute psychiatry unit 15500, is the recipient of the 2010 Best Catch award. Willis noted that the order for the drug Cogentin for one of her patients was five times the typical dose. She questioned the resident physician about the order who insisted that was the dose he wanted. She also checked with the pharmacist who had verified the order, and he confirmed the dose. Still uncomfortable with such a high dose, Willis called the attending physician to obtain further confirmation. The attending physician stated that Willis was correct. The dose was five times higher than what the patient should receive. Essentially, Willis implemented a “Stop the Line” action, which encourages any team member or physician to halt a process when they see a potential patient safety concern.

- Courageous Catch 2010 - Delores Bass and Ruth Miller, housekeeping
- Critical Catch 2010 - Patty Fisher-Keller, scrub nurse
- Best Catch 2010 - Sophronia Willis, licensed practical nurse
Leaders and team members at Barnes-Jewish Hospital believe that everyone has a role in making health care safe. They also believe that people on the front lines delivering health care and support services have some of the best ideas for improving the quality of health care.

Several years ago, the hospital created the **Team Award for Quality Improvement** to demonstrate and encourage the valuable use of performance improvement and measurement tools. The award is presented annually to teams that have successfully used process and outcome measures to improve organization performance and quality of care delivered to patients.

This year, four teams received the award.

**Daily Interdisciplinary Communications Team: A Plan of Care for Every Patient**

**Project** – To enhance and facilitate plan of care discussion among multidisciplinary team members

**Results** –
- Implemented a five-component plan of care checklist used for daily rounding on each patient
- The interdisciplinary team meets daily to devise a plan of care for every patient
- Improved compliance for addressing the checklist by a minimum of 20 percent in all categories

**Team Members** –
- Liz Pratt, DNP, ACNS-BC, leader
- Lydia Allen, RN, BSN
- Suzette Berry, RN, BSN
- Jeff Crippin, MD
- Savannah Davis, LCSW
- Amanda Keller, RN, BSN
- John Lynch, MD
- Regina Markus, RN, BSN
- Ben Voss, MD
- Kim Vyers, RN, BS
- Laurie Wolf

**“Pituitary Remix” Team: Transsphenoidals You Can Count On**

**Project** – To standardize and streamline the practice of counting instruments and equipment before transsphenoidal surgery

**Results** –
- Decreased counting time by 78 percent from 45 minutes to 10 minutes
- Went from using 450 instruments to 100
- Surgery time decreased
- Staff satisfaction increased

**Team Members** –
- Diane Desmond, RN, BA, leader
- Denise Fisher
- Stephanie Franklin, RN, BSN
- Cheryl Halbert, RN, BSN, RN, CNOR
- Tania Ndungu, RN, BSN
- Deon Nourse, RN, BSN
- Liz Rodriguez
- Sheila West, RN, BSN

**Supply Chain Redesign – Interventional Radiology Team**

**Project** – To optimize the process for reorganizing, locating and ordering supplies through the use of standard work

**Results** –
- Reduced inventory costs by 30 percent, from $144,923 to $100,977
- Established standard work, which improved staff workflow, communication and satisfaction
- Process defects are identified and corrected quickly
- Similar efforts have been implemented in other radiology departments

**Team Members** –
- Joe Lombardo, RT, leader
- Jim Naes, RT, leader
- Andrew Gregory
- Brian Hoff
- Olivia LaRoe
- Michelle Morris, RT
- Alan Smith
- Bill Tallent, RT
- Tracey VonderHaar
- Ed Wallace
- Mary Williams
- Shane Wolf, RN

**Tissue Implant Tracking Team**

**Project** – To create an electronic tissue tracking system allowing for immediate access to and review of implanted tissue

**Results** –
- 100 percent tissue documentation compliance rate achieved because of standardized follow-up system
- Staff can access information in real-time
- Improved fiscal responsibility

**Team Members** –
- Colleen Becker, RN, MSN, leader
- Laura Steiner, RN, leader
- Mike Channel
- Keith Chilton
- Mary Dillard, RN
- Mary Estes
- Rich Ficker, RN
- Jason Gagne
- Lauren Garrick
- Denise Gray
- Robert Guardado
- Kathryn Landolt
- James Lotz
- Mac McMasters
- Miranda Miller
- Phil Stallings, RN, BSN
- James Thomas, RN, BSN
Hospital Epidemiology and Infection Prevention

The goal of infection prevention is to minimize infection risk to our patients by educating patients, staff and family. Infection prevention specialists work closely with physicians and nurses on the front line to implement practices that have been shown to prevent infections. In 2010, Barnes-Jewish Hospital epidemiology and infection prevention focused its attention in the following areas:

Catheter-Associated Bloodstream Infections

Central venous catheters intended for long- and short-term treatment are an essential part of medical care today. However, one of the major complications of these catheters is bacteremia (bacteria in the blood). An estimated 248,000 central line-associated bloodstream infections (CABSIs) occur in U.S. hospitals annually. These infections result in significant morbidity for individual patients and excess health care costs of $11,000-25,000 per episode.

There are evidence-based practices1 that greatly reduce the risk of central line-associated bloodstream infections. In April, the infection prevention team partnered with critical-care leadership to develop a campaign to increase awareness of multiple evidence-based practices for decreasing CABI rates. Binders with evidence about these best practices were developed and distributed to all intensive-care unit nursing staff and medical directors.

This standard work campaign was implemented using the acronym LEADS, which stands for:

- **Line insertion** – using the insertion checklist and subclavian vein as the preferred site for inserting central venous catheters
- **Evaluate** the necessity of the line daily
- **Assess** and maintain integrity of the dressing
- **Decrease** the number of blood cultures drawn from central lines
- **Scrub the hub** of needleless ports before accessing the line and change caps with each use

The slogan “Critical Care Medicine LEADS the way in reduction of CABSIs” was used throughout the hospital to focus on efforts and results. Since implementation of the awareness campaign, the hospital’s intensive care units have seen a 45 percent decrease in CABSIs.

Hand Hygiene

Hand hygiene remains one of the best ways to protect patients from acquiring infections while in the hospital and the public is increasingly aware of its importance. The hospital’s infection prevention team has implemented many initiatives to increase hand-hygiene compliance for both staff and visitors.

A dashboard was created to increase awareness of compliance rates and several hand-hygiene themed events were held, including informational tables with displays and hand-hygiene products.

Hand-hygiene rates have been monitored since early 2008, when the compliance rate was 76 percent. The overall 2010 hand-hygiene rate was 87 percent, although rates reached 90 percent in June and October, and 91 percent in December. Convinced that consistent reinforcement yields increased compliance, the infection prevention team continues to plan educational activities and interventions surrounding hand hygiene.

In addition to the international ambassadors (below) who visited Barnes-Jewish during an epidemiology course in St. Louis, the infection prevention team also hosted visitors from Singapore and Australia. These groups reviewed the hospital’s interventions surrounding CABI prevention and lean transformation in infection prevention.
International Visitors

The infection prevention team has gained national and international recognition for its efforts in research and the prevention of infection. Barnes-Jewish Hospital, Washington University School of Medicine Infection Diseases Division and BJC HealthCare were honored to host a group of international ambassadors as they attended the Society for Healthcare Epidemiology of America/Centers for Disease Control Epidemiology course in St. Louis. The ambassadors toured the hospital complex and attended a presentation outlining the Barnes-Jewish Hospital infection prevention program and its interaction with the BJC Infection Control Consortium. Discussion focused on challenges faced by the ambassadors in their home countries.

National Health and Safety Network

Barnes-Jewish Hospital joined the patient safety component of the National Health and Safety Network (NHSN) this year in preparation for changes in reporting requirements. In 2011, all hospitals must report intensive care unit-associated CABSIs to NHSN to comply with the Centers for Medicare and Medicaid Services. NHSN is a secure, internet-based surveillance system that enables health care facilities to collect and use data about health care-associated infections, as well as other important patient safety measures. Results of health care-associated infection data submitted to NHSN are published to provide facilities with risk-adjusted metrics for benchmarking purposes. The infection prevention team currently uses NHSN rates for many benchmarks.

Team Awards and Recognition

In 2010, the Association for Professionals in Infection Control and Epidemiology, Inc. and the Society for Healthcare Epidemiology of America recognized the Barnes-Jewish infection prevention team for numerous poster presentations addressing strategies for reducing hospital-associated infections. The team also developed a presentation titled Flood, Fire… Famine? Everyday Environmental Emergencies – Covering all the Bases for Bi-State Development Agency.

Marti Craighead, an infection prevention specialist, was awarded the hospital’s Patricia Potter Quality Improvement Award during nurses’ week. Her efforts to help 10ICU improved its performance in specific infection control measures: ventilator associated pneumonia, ventriculitis and central line-associated infections. Tony Russo, a statistical analyst, received the first Bi-State Infectious Disease Conference Technology Award for his work related to technology upgrades.

1 Strategies to Prevent Central Line–Associated Bloodstream Infections in Acute Care Hospitals, Infection Control and Hospital Epidemiology, October 2008, vol. 29, Supplement 1
Preventable Harm to Patients

The term “Never Event” was first introduced in 2001 by Ken Kizer, MD, former chief executive officer of the National Quality Forum (NQF), in reference to particularly shocking medical errors such as wrong-site surgery that should never occur. Over time, the list of Never Events has expanded to include adverse events that are identifiable, preventable, measurable and create serious consequences for patients. Most Never Events are very rare. However, they are devastating and health care organizations are under increasing pressure to eliminate them completely.

BJC HealthCare, the parent organization of Barnes-Jewish Hospital, views Never Events as well as hospital-associated conditions as preventable. In 2008, the Preventable Harm Initiative (PHI) was instituted system-wide including Barnes-Jewish Hospital. The PHI is a cross-functional and cross-organizational effort to eliminate preventable harm events across the BJC HealthCare system. This initiative is part of an overall clinical excellence vision: By 2012, BJC HealthCare and its physician partners will eliminate all major causes of preventable harm and mortality and will establish clinical processes to ensure optimal outcomes for all patients and families we serve.

The Preventable Harm Initiative is organized into Preventable Harm Teams, each linked to a specific type of preventable harm. The teams include:

- Hospital-Associated Infections
- Adverse Drug Events
- Serious Patient Safety Events
- Falls with Injury, Pressure Ulcers
- Venous Thromboembolism
- Birth Injury
- Surgical & Procedural Complications
- Preventable Mortality

Each Preventable Harm Team is composed of multiple projects focused on specific items of work. Barnes-Jewish Hospital has subject-matter experts serving on each team ranging from physicians to front-line nurses to housekeeping staff. While some of the teams are still organizing, many have been meeting for the last one to two years. The teams include:

Health Care-Associated Infections Program

A health care-associated infection is defined as any patient care event that results in the patient acquiring an infection that does not originate from their admitting diagnosis. National data suggests that approximately two-million acquired infections occur each year in U.S. hospitals. These events can cause serious harm to patients including death. This team is focused on preventing health care-associated infections throughout the patient’s continuum of care and reducing preventable health care-associated infections to near zero levels.
When it comes to infection prevention, even the smallest of efforts contributes to a healthier environment. The newly renovated gynecological oncology unit (17300) has a more infection-control friendly environment due to the absence of carpet. This unit also has a new curtain in semi-private rooms that is much easier for housekeepers to take down and clean, making the environment safer for patients and employees. Housekeepers no longer need a stepladder to reach the hooks of the old curtains that were near the ceiling.

Adverse Drug Events Program
This team is focused on preventing any injury (e.g., physical harm, mental harm, loss of function) due to medication. National data suggests that at least 400,000 preventable adverse drug events occur each year in U.S. hospitals. The outcome, as a result of such an event, can be devastating to the patient and/or family. The goal of this team is to reduce preventable adverse drug events by 75 percent.

Serious Patient Safety Events Program
Serious patient safety events are adverse events that have known prevention methods and should never occur within a health care facility. These events can cause severe complications to an already complex medical situation. Due to these events, patients endure additional morbidity and mortality as a direct result of their care. The Serious Patient Safety Events program is focusing on a variety of transformation efforts including increasing safety requirements, establishing a comprehensive safety event management system and raising awareness. The goal of the program is to reduce preventable serious patient safety events by 90 percent.

Falls with Injury Program
A patient fall is an unplanned descent to the floor or extension of the floor (e.g., trash can or other equipment) with or without injury to the patient, and occurs on an eligible reporting nursing unit. There are approximately 2,500 falls within BJC HealthCare facilities annually with slightly more than 100 patients experiencing a serious injury. These events can cause significant harm to patients and even death. The goal of the Falls with Injury program is to reduce preventable falls with injury by 75 percent.

Pressure Ulcers Program
Pressure ulcers, often referred to as decubitus ulcers, pressure sores or bedsores are localized areas of skin breakdowns that often occur over bony prominences such as the hips, ankles, heels, elbows and the sacrum. Pressure ulcers have a tremendous physical and emotional impact on patients and their families. They often occur due to underlying medical conditions, are debilitating and can lead to infections and death. The goal of the Pressure Ulcer program is to reduce preventable pressure ulcers by 75 percent.

Venous Thromboembolism Program
Venous thromboembolisms are blood clots that develop in deep veins, impairing blood flow, especially in the legs. Portions of clots may break off and move to the lungs creating a pulmonary embolism, which can lead to death. To reduce the potential for patient harm associated with these events, this program is focused on applying the appropriate prophylaxis assessment for all inpatients and ensuring that sufficient transfer of information and care for patients being discharged on an anti-coagulation medication has been communicated to the next provider of care or service.
Since September 2006, the operational excellence department has hosted bi-weekly Lean “outbrief report” meetings every Friday morning for hospital leadership; performance improvement professionals, team leaders and team members; and any additional employees or guests interested in hearing about Lean initiatives and events taking place throughout the hospital. The outbriefs provide team members with an opportunity to hear about Lean principles and work accomplished by individual departments or service lines.

Initially, these meetings were not publicized hospital-wide, and were only attended by those participating in and supporting the events. In 2008, the hospital hired a public relations coordinator to be responsible for communicating the Lean initiatives to all 9,300 employees. This was accomplished by attending the outbriefs, summarizing each initiative presented and sharing the information with employees through various media such as print publications, the intranet and e-newsletters.

Through Lean outbrief attendance and communication efforts, employees are aware of what projects are beginning, progressing and are being sustained throughout the hospital. The outbriefs and post-meeting communications help highlight practices working in one area that could be applied to another area in an effort to standardize processes and identify best practices.

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A key component of the outbrief report summary is the bottom-line impact: what this project means for the patient.

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By centering the featured initiative on the patient, the communication pinpoints how the hospital is working to continually improve patient safety and quality. Throughout the past few years, these communication efforts have produced an increase in outbrief attendance and interest in learning how to use and apply Lean principles in a variety of work environments.

Below is a sample of the summaries employees received in 2010 highlighting some of the outstanding initiatives taking place throughout the hospital.

**Pharmacy Repackaging**

As part of the medication management value stream, the inpatient pharmacy conducted a rapid improvement event (RIE) to further improve the medication repackaging process. Most medications are delivered to the hospital in bulk and the pharmacy repackages the bulk medications into more than 100,000 individual doses each month. To improve quality and patient safety in this critical area, the team addressed standard work, tested new equipment and improved documentation strategies. They also created a check station to keep records in the production area while reducing the distance a team member walks to complete the repackaging process.

Dave Kirksey, pharmacy technician, fills the automatic repackaging machine in the hospital’s inpatient pharmacy.
What this project means for the patient:

Patients will receive the right dose of the right medication every time it’s ordered and administered to them.

What this project means for the patient:

ICU patients will be treated in the best care environment possible based on direct input collected from ICU staff, patient families and their caregivers.

84ICU (Surgical Intensive Care Unit) Workspace Renovation

A process-based facility planning event is used early in the design of a new or renovated patient care area to ensure workspace, activities and equipment are designed to support processes and workflow. 84ICU will eventually move to unit 4400, and the space will be completely renovated. The planning, design and construction department worked with a multidisciplinary team from 84ICU to develop the ideal new workspace during the event. They developed a best-practice model for care in an intensive care setting. The team interviewed 14 families during the process to obtain a voice-of-customer point of view. The team created adjacency diagrams by evaluating rounding needs, patient and family traffic, visibility needs and flexibility of the space. By creating priorities, the planning, design and construction department took these ideas and implemented as many as possible into the design for the new space.
Since the Institute of Medicine published a report in 1999 identifying medication errors as having contributed to more than 7,000 deaths each year, medical centers throughout the country have been challenged with implementing processes to improve patient medication safety. One way in which Barnes-Jewish Hospital is improving medication administration safety is through the implementation of Knowledge-Based Medication Administration (KBMA) bar-coding technology. When utilized as designed, medication bar-coding technology has been demonstrated to reduce medication errors, thereby improving patient safety.

The KBMA module in Compass, the electronic medical records system used at Barnes-Jewish, utilizes patient-specific clinical information along with pharmacy dispensing information to ensure that the “Five Rights” of medication administration are validated:

- right patient
- right medication
- right dose
- right route
- right time

When a clinician scans the barcode on the patient’s identification band and the barcode on the medication package, the KBMA application compares the scanned data to the active medication orders in Compass to the medication dispensing data in the pharmacy. The results of this data comparison then display in a time-oriented electronic Medication Administration Record (eMAR), validating a match. If a medication match is not found, the clinician will be alerted to stop the medication administration and address any alerts or warnings. KBMA also supports the sixth right of medication administration by providing real-time documentation of the medication scan time in the eMAR.

To further promote patient safety at the point of care and support the success of the KBMA application, Barnes-Jewish Hospital deployed new workstations on wheels for all patient rooms that did not previously have a permanent electronic workstation. Clinicians can review the patient’s electronic medical record and document patient data and care provided without leaving the patient’s bedside. Clinicians choose the scanning device to be used, which is wireless and reads both 1-D and 2-D barcodes. The scanner projects a crossbeam that analyzes the patient identification and medication barcodes, and beeps to alert the clinician when the barcodes have been successfully decoded. The rollout of KBMA has been successful with staff finding the scanners easy to use and the system easy to navigate. The first nursing unit went live with KBMA in September 2010. By the end of the year, more than 1,700 clinicians had been trained to use KBMA and all inpatient nursing units were using the bar-coding technology.

The ultimate success of the system will be improved patient safety with a decrease in medication errors and harm to patients. A few anecdotal instances where KBMA has helped to improve patient’s medication safety include:

1. Folic Acid 5 mg ordered – only 1 mg scanned, system alerted that four additional 1 mg tablets were needed.
2. Glyburide 5 mg scanned – system alerted that Glypizide 5 mg was ordered. Pharmacy was notified to correct the Pyxis pocket stock.
3. Metoprolol 50 mg ordered – 100 mg tablet scanned, system alerted that scanned tablet exceeded ordered dose.
4. Theragram Plus was scanned – system alerted that Theragram (without minerals) was ordered. Pharmacy notified to correct Pyxis pocket stock.

The effectiveness of the bar-code medication administration system is only as good as the compliance of end users. To monitor compliance, KBMA reports are available for clinical managers to review staff scan compliance as well as reasons staff are documenting why the KBMA system is not being utilized as designed. While it is the ultimate goal that all patient wristbands and medications are scanned, the hospital’s goal for scan compliance is 95 percent – realizing that there will always be emergent or special situations in which scanning is not appropriate. The successful implementation of KBMA was part of the Barnes-Jewish Hospital 2010 Safety and Quality Strategic Goal to improve clinical workflows on an enhanced information technology platform.
In its most simplistic form, “cultural competence” refers to an ability to interact effectively with people of different cultures. As a nationally recognized academic medical center with a diverse patient and employee population, the leadership at Barnes-Jewish Hospital knows there is nothing simple about ending health disparities that exist due to cultural differences.

Research shows the connection between the practice of culturally competent health care and decreases in health disparities. The majority of this research shows that cultural competence can affect patient education, use of services, satisfaction and quality outcomes.

In 2006, the hospital hired a director of cultural competence to develop a culture of inclusion and to address health disparities. For the past four years, the focus has been on building a framework for integrating cultural competence into day-to-day practices.

With more than 9,000 employees, 1,700 physicians and one of the largest patient populations in the country, this was no small feat. The blueprint for this organizational change has focused on harnessing the power of the individual through Barnes-Jewish Hospital’s Cultural Competence train-the-trainer program. Launched in 2008, this program trains select hospital employees to be experts on cultural competence. These trainees then train their colleagues in the skills and knowledge necessary to competently care for diverse populations.

Each trainee’s progress is measured to examine competency in areas such as:

- Understanding the impact of culture on health care decision making of providers, patients and families
- Understanding worldview from a theoretical and practical standpoint
- Understanding regulatory, patient safety and quality in relation to culturally competent care delivery
- Identifying regional demographics trends and their impact on health care
- Understanding key concepts and terminology in the field of cultural competence
- Understanding strategies to bridge language and cultural differences
- Understanding the process to access and utilize interpreter and translator services to bridge language and cultural barriers
- Using written, audiovisual and experiential training methods designed for staff training and development

The train-the-trainer program has been crucial in laying the foundation that has educated employees, served as a catalyst for implementing improved processes and sustained considerable change. In 2010, more than 2,500 team members completed the program and almost all departments have at least one trainer able to train colleagues.

Other efforts this year include a cultural competence lecture series for employees and the creation of the Health Outcomes Management and Evaluation Committee. The existing Utilization Case Management Committee adopted a new name and a new charter – to review performance improvement measures and identify strategies and interventions to address groups of patients. In 2010, they formed subcommittees and began analyzing current hospital data.

The efforts to improve cultural competency at Barnes-Jewish Hospital have had a positive impact on both patients and families.

After Robin Kidder, RRT AE-C, a clinical instructor in respiratory care, completed the train-the-trainer program, she trained more than 20 staff members to lead efforts in her department of more than 100 employees. Although training is still underway, Kidder says it already has made a significant impact on improving patient care. Kidder tells the story of a colleague who encountered a patient who spoke no English and was using family members to talk to his clinical providers. The training Kidder provided this colleague helped him to intervene and provide a qualified interpreter. Joint Commission policy prohibits the use of family members or untrained employees to serve as ad hoc interpreters. “Many people assume that patients who speak limited English understand what they’re talking about when they use certain words and hand gestures,” says Kidder. “But after going through training, we’ve learned not to make general assumptions when patients’ lives are at stake.”
Barnes-Jewish Extended Care, as its name implies, is an extension of Barnes-Jewish Hospital. The same high standards of quality care and safety that are met at Barnes-Jewish Hospital also exist at Barnes-Jewish Extended Care. Barnes-Jewish Extended Care offers a variety of care that goes beyond traditional skilled nursing services including intensive rehabilitation and medically complex care.

Barnes-Jewish Extended Care was a charter member of Advancing Excellence in America’s Nursing Homes and continues to participate. This care-improvement initiative started in 2006 to benchmark and share best practices among nursing homes across the country. The following are a few of the Barnes-Jewish Extended Care performance improvement initiatives for 2010.

Skin, Wound Assessment and Treatment (SWAT)
This team made significant improvements in communication with the Wohl Clinic at Barnes-Jewish Hospital where a number of their residents are initially treated. Barnes-Jewish Extended Care has two specially trained wound nurses on staff as well as nurse practitioners from the clinic who consult one to two times each week. These nurse practitioners also assist in training the facility’s wound care nurses and updating them on advances in wound care.

Infection Prevention
The infection prevention team focused on reducing urinary tract infection rates by 10 percent. A hydration program was implemented in which residents are offered water or juice during hourly rounds and during all group activities. The team presented in-service training to the staff and emphasized the importance of educating residents and family members.

All foley catheters are removed at the time of admission to Barnes-Jewish Extended Care unless there is a documented medical necessity, and fluid intake is encouraged. Residents also are offered bathroom breaks during hourly rounds.

Medication Error Reduction Team
This team has been reviewing medication processes and how to reduce the risk of errors. The focus in 2010 has been order transcription. The team reviewed medication processes beginning with order transcription and prompt delivery of medications from the off-site pharmacy. The Pyxis formulary was increased to ensure availability of medications at the time of admission and in emergencies. Emphasis was placed on improving the accuracy of order transcription. An order transcription checklist was implemented to ensure that two licensed nursing staff check all order transcriptions for accuracy and follow up with the pharmacy for medication delivery.

Fall Prevention Team
The goal for 2010 was to reduce falls with injury by 10 percent. A Failure Mode Effects Analysis was conducted to review the fall prevention process. Improvements were made in the assessment process and a list of interventions to reduce the risk of falls was created and posted. Each resident is assessed upon admission. Interventions are put in place and monitored each shift for effectiveness. Education on fall prevention is given to the resident, family members and visitors, and documented on the multidisciplinary education form. Fall prevention is a multidisciplinary effort with input from the departments of nursing, social services, rehabilitation, dietary, activities and housekeeping.

Last fall, Irene Dresner celebrated her 105th birthday at Barnes-Jewish Extended Care and 105 years as a member of the Catholic Church.
Pain Management Team
This team revised documentation tools for pain assessment and training of staff. Significant progress has been made towards documentation improvement on the second floor (Medicare/Rehab) as evidenced by a recent mock survey.

Infection Rates

<table>
<thead>
<tr>
<th>Nursing Unit</th>
<th>2009 rates</th>
<th>2010 rates (through 3rd quarter)</th>
<th>10% reduction threshold</th>
<th>Actual Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Floor-Medicare</td>
<td>3.12</td>
<td>2.42</td>
<td>2.81</td>
<td>22.4% reduction from 2009</td>
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<tr>
<td>3rd Floor (Long-term Care)</td>
<td>1.68</td>
<td>0.8</td>
<td>1.51</td>
<td>52% reduction from 2009</td>
</tr>
</tbody>
</table>

(Rates measured in amount per 1000 patient days)

Fall Prevention Rates

<table>
<thead>
<tr>
<th>Nursing Unit</th>
<th>2009 rates</th>
<th>2010 rates (through 3rd quarter)</th>
<th>10% reduction threshold</th>
<th>Actual Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Floor-Medicare</td>
<td>1.5</td>
<td>1.3</td>
<td>1.35</td>
<td>13% reduction from 2009</td>
</tr>
<tr>
<td>3rd Floor (Long-term Care)</td>
<td>1.3</td>
<td>0.8</td>
<td>1.17</td>
<td>38.5% reduction from 2009</td>
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</tbody>
</table>

(Rates measured in amount per 1000 patient days)

Order Transcription Compliance

<table>
<thead>
<tr>
<th>Nursing unit</th>
<th>2009 compliance</th>
<th>2010 (through 3rd quarter) compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd floor</td>
<td>86%</td>
<td>96%</td>
</tr>
<tr>
<td>3rd floor</td>
<td>95%</td>
<td>98%</td>
</tr>
</tbody>
</table>

Accuracy of order transcription is audited and reported monthly.
Outpatient Clinics

Barnes-Jewish Hospital continually strives to enhance and improve systems and processes to better serve patients and families with respect to safety, quality and the overall hospital experience. Often these improvements address the outpatient setting during clinic encounters and both surgical and non-surgical procedures.

During 2010, construction began on a new Center for Outpatient Health that will vastly improve the clinic experience by:

- Consolidating and coordinating care and support services across the hospital’s clinic system
- Modernizing the resident training experience
- Improving processes to enhance safety and the patient experience
- Relocating services from other locations to the clinic for patient convenience
- Offering new services to patients such as hyperbaric oxygen therapy (the medical use of oxygen at levels higher than atmospheric pressure to treat a variety of medical issues such as non-healing wounds, compromised grafts or flaps, radiation injury and others)

The new building, which will open in 2012, will move clinics from five sites around the medical center campus to this new location. The 12-story building will house the Barnes-Jewish Hospital resident clinics on three floors, offer one floor for private physician offices, and seven floors of office space for both the hospital and BJC HealthCare departments. In addition, retail space on the main level will be available.

Design work for the clinic floors was completed in early March. Following this, a Planning and Activation Task Force set to work to evaluate current practices and workflow, assure that all clinics have a patient-centered focus and implement Lean techniques to improve current workflow. In support of this effort, a performance improvement engineer was hired to support ambulatory services, with a focus on redefining the patient experience in the clinics. Clinic teams are already using their new floor plans to determine how they will operate on a day-to-day basis. Physicians are examining how to best load-balance each clinic to ensure optimal patient flow; managers are working to understand nursing assignments; and everyone is partnering to standardize processes and workflow to create a common, friendly look and feel for patients.

Other non-construction progress has been made in the Medicine INR (International Normalized Ratio) Clinic that monitors and manages patients on medications to prevent blood clots. This year, the team in the Medicine Clinic developed a new INR patient database and standard work to ensure timely draws. Patient visits to this clinic increased by several hundred per month despite keeping the same panel size, which indicates enhanced protocol compliance and much improved patient safety.

The Ob/Gyn Clinic implemented a new adult-centering model to improve outcomes and respond to patient demand for group therapy among obstetric patients. This complements the hospital’s nationally recognized teen centering program. The American Congress of Obstetricians and Gynecologists (ACOG) electronic prenatal record was also completed this year. This was the last piece of paper documentation remaining in the clinic to be converted to an electronic document, which now gives colleagues in the Pregnancy Assessment Center and Labor & Delivery areas seamless access to a patient’s complete obstetrics record.
Environmental Safety

Environmental Compliance

- The Barnes-Jewish Hospital Environmental Sustainability Team was established with executive leadership to develop strategic solutions for waste management and specific waste streams.
- The hospital’s recycling program resulted in 1,324 tons of waste (20.6 percent of all waste) being diverted from landfill or incineration.
- A best practices webinar on Laboratory and Pharmacy Waste Management and Regulatory Compliance was developed for use by BJC HealthCare entities and external colleagues.
- Barnes-Jewish began collaborating with the United States Agency for International Development on waste management for expired pharmaceuticals in selected Caribbean and African countries from AIDS and disaster relief programs.

Community Emergency Preparedness

- Barnes-Jewish Hospital’s environmental safety team coordinated Community Emergency Response Team training for employees with the assistance of the City of St. Louis Emergency Management Agency.
- The hospital participated in two regional disaster drills:
  - BJC HealthCare “Lights Out Exercise” (Regional Power Outage)
  - Missouri Hospital Association “The Day the Earth Quaked Exercise” (Regional Earthquake Event)

Employee Safety/Workers’ Compensation

- Barnes-Jewish surpassed its target of reducing the total number of “Days Away From Work” due to workplace illness or injury by 100 days or 10 percent. This decrease of 36 percent reflects a continued performance better than the hospital industry rate benchmark set by OSHA. The improvement was due to the increased use of light/restricted duty assignments allowing workers to return to functional duties.
  - 2009 Actual – 992 days
  - 2010 Actual – 634 days

Other 2010 Highlights

- The hospital’s departments of environmental health and safety and performance excellence collaborated to create a reference guide for Lean events incorporating regulatory requirements.
- The hospital received a best practice acknowledgement from the Joint Commission for its use of unit-based secretaries to facilitate the removal of equipment in corridors to ensure compliance with the life-safety code.
Achievements and Distinctions

Barnes-Jewish Hospital accreditations and certifications include:

- The Joint Commission Accreditation Gold Seal of Approval
- The Joint Commission Accredited Programs
  - Hospital
  - Long-Term Care
  - Behavioral Health Care
- The Joint Commission Advanced Certification
  - Lung Volume Reduction Surgery
  - Stroke (Primary Stroke Center)
  - Ventricular Assist Device
- The Joint Commission Certification
  - Epilepsy

Additional quality awards and honors include:

- The American Nurses Credentialing Center recognition as a Magnet® hospital, redesignated in 2008
- The American Heart Association’s “Get with the Guidelines – Gold Performance Achievement Award”
- The American Stroke Association’s “Get with the Guidelines – Stroke Bronze Achievement Award”
- The American Society for Bariatric Surgery – Bariatric Center of Excellence
- Barnes-Jewish Hospital has been listed for 18 consecutive years on the U.S. News & World Report Honor Roll of America’s Best Hospitals.
- The National Research Corporation has recognized Barnes-Jewish Hospital as a 2010/2011 Consumer Choice Award winner for 15 consecutive years, indicating Barnes-Jewish achieved a high level of service valued by consumers in the St. Louis area.

The Siteman Cancer Center at Barnes-Jewish Hospital and Washington University School of Medicine is recognized with the following distinctions:

- A member of the National Comprehensive Cancer Network
- Designated by the National Cancer Institute as a Comprehensive Cancer Center
- The highest recognition from the American College of Surgeons Commission on Cancer
Cherry Nievera, RN, BSN, (left) and Patricia Fiebig, RN, practice using the new Knowledge-Based Medication Administration (KBMA) bar-coding technology with Compass, the hospital’s electronic medical records system.
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Professor and Head of Radiology  
Washington University School of Medicine

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