

18TH ANNUAL REPORT ON QUALITY 2015

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UPDATING WORKFLOWS PROMOTES OPTIMAL GLYCEMIC CONTROL FOR DIABETIC PATIENTS

In late 2014 and 2015, a system-wide analysis of nursing workflows for bedside glucose monitoring allowed Crozer-Keystone Health System to update and streamline its processes and implement new monitoring tools to ensure effective treatment for diabetic patients.

Because effective glucose control is critical for healing and recovery in the inpatient setting, a multi-disciplinary team tackled an in-depth analysis of nursing workflows. Crozer-Keystone's Performance Improvement team partnered with subject matter experts from the Point of Care Testing Laboratory, Pharmacy, Nutrition, and Nursing departments, as well as Information Technology and the Endocrinology medical staff.

According to Performance Improvement Coordinator John A. Modrzynski, MPA, BS, RN, "Our analysis identified variations in the glucose-monitoring process at each hospital, as well as gaps in the communication and transcription of point-of-care testing results. These

gaps were contributing to delays in the assessment and treatment of glycemic patients across the health system. In addition, we recognized the need to provide efficient and effective communication of bedside blood glucose levels to physicians and nurses on a daily basis."

The team's strategy was to introduce standardized point-of-care computer software at every CKHS hospital to record bedside testing results. Although the same type of glucometer was being used to test patients' blood sugar across the health system, each hospital was using different recording software. The programs also were incompatible with each other, making it impossible to share data or track trends across the health system.

"During our daily safety check-ins, there were regular discussions related to patients' blood sugars being too high or too low," says Modrzynski. "Initially, we thought these issues were related to the insulin-administration process, but our analysis determined that the problem



Members of the team involved in an effort to update and streamline glucose monitoring processes included, left to right, Robert Rossi, Susan Brady Bagosy, BSMT (ASCP) and John A. Modrzynski, MPA, BS, RN.

was rooted in the process delay of recording patients' test results at the point of care. These problems, we discovered, were contributing to over- or under-administering insulin in certain cases."

In particular, the team learned that in some cases, nursing staff had been recording patients' glucose readings on paper and manually entering the data into the computer—sometimes up to an hour after the finger-stick test was performed. In addition to not being timely (glucose values can vary throughout the day and after mealtimes), this step in the process had the potential for human error.

With new point-of-care technology now in place, staff members test blood using a glucometer which, when put in a docking station, automatically downloads the test results in real time to the electronic patient record and the medication administration record for access by nurses and physicians. This streamlined process eliminates the superfluous paper and data-entry steps and makes it possible for glucose values to be entered into patients' electronic medical records immediately—a dramatic improvement on the old manual process.

Taking this patient safety success one step further, a wireless glucometer system will be implemented in every CKHS hospital in 2016.

"Our goal is to ensure optimal glycemic control in the inpatient setting," says Modrzyński. "The more precise and prompt communication of glucose readings allows for immediate recognition, assessment and intervention by nurses. It can immediately show if a patient's blood sugar is too high or too low, which is a good practice and safe medicine. Since we introduced a standardized system, we are no longer having those diabetes-related discussions at our daily check-ins."

¹ <http://www.crozerkeystone.org/community/community-health-needs-assessment/>

² <http://www.crozerkeystone.org/community/community-health-needs-assessment/>

³ <http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf>

⁴ <http://www.crozerkeystone.org/app/files/public/4333/Crozer-Community-Needs-Assessment-April-2013.pdf> (See page 65).

DIABETES RATES IN DELAWARE COUNTY

According to Crozer-Keystone Health System's 2013 Community Health Needs Assessment, 12.3 percent of adults in Delaware County, Pa., are living with diabetes¹ — slightly more than the statewide rate of 9.5 percent² and the national rate of 9.3 percent.³ Our most recent needs assessment also shows that diabetes diagnoses increased several percentage points between 2010 and 2012.⁴

Number and percentage of adults diagnosed with diabetes in CKHS service areas:

CROZER-CHESTER MEDICAL CENTER



14,800
or **13.7%**

DELAWARE COUNTY MEMORIAL HOSPITAL



12,400
or **11.8%**

SPRINGFIELD HOSPITAL



7,600
or **8.7%**

TAYLOR HOSPITAL



6,900
or **12.6%**

PATIENT SAFETY EVENT REPORTING GOES DIGITAL

Throughout the last year, Crozer-Keystone Health System has improved its documentation and resolution of staff-reported safety concerns by launching a Web-based event-reporting system. Now, adverse patient events, near-miss events/"good catches," and routine patient complaints are viewed from a proactive "big-picture" perspective.

The implementation of a secure online event-reporting system replaced the less efficient paper-driven process. Paper-based reports have become obsolete and impractical, no longer meeting Crozer-Keystone's changing needs or supporting its ability to securely share data electronically with the Pennsylvania Department of Health and other external healthcare agencies.

"We have provided easy access at every workstation for staff to be able to enter a concerning event or incident. Having a streamlined process allows us to evaluate and respond to events in a consistent way across each hospital and ambulatory facility. We're also now better able to identify systemic or process-related problems that can lead to medical errors in a more proactive manner," says CKHS Director of Patient Safety Anne Marie Browne.

In addition to typical incidents such as patient falls, the new system allows employees to report facility or equipment issues, instances of patients who leave against medical advice (aka "elopements"), and other continuum-of-care concerns involving other inpatient units, the pharmacy, clinical laboratory, dietary services, and additional ancillary departments.

After a report is submitted, the system automatically sends an e-mail alert to the manager of the associated clinical area, providing a direct link to the report so the manager can view the pertinent details and take appropriate corrective actions. An established system-wide process also ensures that each event gets reviewed by any associated department leader as well as the patient safety and risk management team.

"It's important for all departments involved, not just patient safety and risk management, to have access to these reports. They give us a sense of where our vulner-



Members of the team involved with the project to enhance adverse event reporting were, left to right, Patricia Gramlich, Sandra Caprisecca and Anne Marie Browne.

abilities are so we can strengthen any weaknesses and proactively prevent harm," Browne says.

Integrated Culture of Safety

This system-wide conversion to electronic adverse event reporting is part of Crozer-Keystone's development of an integrated culture of safety across the organization. Newly introduced policies and procedures are guiding physicians, nurses, technicians, and other staff members in handling various scenarios that may arise.

"We've been telling employees that no issue is too small to report," Browne says. "Small things may point to another potential problem we can fix before harm occurs. Every report is looked at by multiple people in the health system. We care—and we will take action."

With the new event-reporting system fully implemented across CKHS, the organization's next priority is to leverage its robust data-reporting features.

"Our goal for 2016 is to identify real-time trends regarding the changes we make and thus support the more timely identification of vulnerabilities and risks," says Browne.

CAREPRICER BOOSTS HEALTHCARE COST TRANSPARENCY

Crozer-Keystone is helping patients learn, up front, what their out-of-pocket costs for deductibles and co-pays will be with innovative cost-of-care estimation software known as CarePricer.

Launched in February 2014, CarePricer lets Crozer-Keystone financial counselors and other staff members provide patients with an accurate, written estimate of projected out-of-pocket costs for inpatient care, outpatient services and testing. Putting such detailed cost information into consumers' hands allows individuals to make informed decisions and plan for healthcare expenses, says Robert Perry, vice president, revenue cycle.

"Prior to CarePricer, we asked for a deposit and then told the patient he or she would be billed for services," he explains. "This was a very manual process that made it nearly impossible for us to easily calculate a patient's full out-of-pocket responsibility. In addition, out-of-pocket patient estimates were often inconsistent and after-service statements frequently left patients confused and worried about being able to pay for the care they received."

Crozer-Keystone's financial counselors, ambulatory surgical center staff, and centralized scheduling/pre-registration staff have been consistently using CarePricer since it first launched. The Patient Services Center's pre-encounter unit also uses the estimating tool to start financial and insurance-related discussions as soon as someone schedules a procedure, rather than waiting until the day of care. Pre-service estimates can be provided even when patients are still deciding where to schedule a procedure or service.



Robert Perry

“When we can answer patients' questions in a clear, consistent manner and provide knowledgeable staff to answer these questions, patients are more positive.”

CarePricer works by automatically combining information from payer contracts, claims history, and procedures being performed with information from each patient's insurance benefit structure to calculate an accurate upfront estimate. The system guides staff through the process of capturing necessary information from the patient while providing systematic, well-organized experience. Patients with additional questions about out-of-pocket expenses and payments may consult with a Crozer-Keystone financial counselor.

If initial feedback from patients and referring physicians' offices is any indication, Crozer-Keystone and CarePricer are successfully increasing the transparency of health-care delivery in our community.

Says Perry, "We are receiving fewer patient complaints, questions or concerns regarding statements and payments. Patients are better prepared and not surprised about their out-of-pocket responsibility. This builds trust with patients, which provides the opportunity for Crozer-Keystone to be their healthcare provider of choice.

"Often, care can be delayed or ignored because patients fear a cumbersome process, lengthy waits, and staff who cannot answer questions," he adds. "When we can answer patients' questions in a clear, consistent manner and provide knowledgeable staff to answer these questions, patients are more positive. Crozer-Keystone has worked hard to provide tools and education to remove such barriers to care."

PASTORAL CARE SERVICES PROMOTES SPIRITUAL HEALING IN THE HOSPITAL AND THE COMMUNITY

Since Pastoral Care Services was established at Crozer-Chester Medical Center in 2011, the department has been advancing Crozer-Keystone Health System's mission by supporting our patients' spiritual needs and helping to reduce emotional suffering and enhance healing.



Rev. Dr. Bayard Taylor

"All patients have the right to access Pastoral Care Services," says Rev. Dr. Bayard Taylor, director of Pastoral Care Services for Crozer-Keystone Health System and pastor of Calvary Baptist Church in Chester, Pa. "We serve patients and families of all faiths and those who do not identify with a particular religion. Regardless, patients will find that their belief and values are honored by the pastoral care team."

Taylor, who also is founder of the Chester Police Chaplain Corps and co-founder of the Law Enforcement Chaplains of Delaware County, played a key role in bringing pastoral care to Crozer-Keystone after two teenagers were killed and eight others were injured in a tragic random shooting at a birthday party in the City of Chester five years ago.

"I thank the chaplain for visiting my mother. We felt it was a blessing for our family to have a chaplain available to offer prayer and comfort."

— Family Member

"The police chaplains were called to Crozer-Chester Medical Center, where nine of the gunshot victims were taken, to provide pastoral care to the families of those involved," Taylor says. "Our caring abilities and skills in handling the difficult and emotional situation

were noted by a CKHS senior leader, who later asked if I would be interested in developing a pastoral care program for CKHS that would not only meet the needs of victims of traumatic events but also direct and assist pastors and volunteers who regularly assist patients with a wide variety of spiritual and emotional needs."

"My clinical pastoral care supervisor, Rev. Dr. Taylor, has been indispensable. I don't believe we have had a single conversation when I did not walk away having learned something about how to approach being a hospital chaplain."

— Seminary student

In its few years of serving patients, their families, and the community, Pastoral Care Services has made an impressive impact. The program is offered in partnership with the Palmer Theological Seminary and Neumann University. Under the guidance of Taylor, seminary students complete 40 hours of instruction in hospital chaplaincy and 120 hours of supervised visitations with patients.

"There is no doubt that pastoral care makes a unique contribution to the care of persons in a variety of settings," Taylor says. "The unique expertise and skills that the pastoral care team brings to CKHS enhances the whole person, not only by focusing on potential areas of spiritual injury and distress, but also by identifying and communicating a person's or family's belief and value system and serving as a source of spiritual support and meaning. What chaplains do is distinctive care and contributes in numerous ways to the persons in our care and the organizations we support."

Pastoral Care Services at Crozer-Chester Medical Center is also bridging cultural differences and supporting the community and clinical team in other meaningful ways. For example, the chaplain program hosts an annual

luncheon and forum for area clergy. In May 2014, Pastoral Care Services also held its first-ever Congregational Care Training Program, organizing a three-part seminar series for spiritual leaders and associates from the local religious community.

“We invited lay pastors, lay leaders, members of the clinical team, and staff for three consecutive Thursdays to engage in material that impacts hospital visits, listening skills, and loss and grief,” says Taylor. “Our presenters included volunteer pastoral care staff, social workers from the City of Chester, a member of the CKHS Palliative Care Department, and 75 to 80 participants, each of different religious practices.”

Participant feedback was extremely positive, and Pastoral Care Services plans to offer the seminar series every other year.

“In the four years I have served as chaplain of pastoral care, I have seen the community and the hospital form a closer bond,” says Taylor. “It makes me proud to

see how colleagues at Crozer-Chester Medical Center welcome and rely on the services we provide. I’m equally grateful for the response from Palmer Theological Seminary and Neumann University and the trust they and their students have placed in our program. Patients, families, staff and community members really feel like someone cares about them and their loved ones.”

“Chaplain Taylor taught by example. He demonstrated very effectively the things I needed to do. I was able to capitalize on his experience and apply them in this setting.”

—Seminary student

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