Quality & Safety

Right treatment, right patient, right time. Every time.

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Quality is important in every endeavor – from manufacturing, services, government and health care. It is especially important in health care where quality can mean the difference between life and death. Quality is also important because as health care payments shift from fee-for-service to value-based, quality will determine how much we are paid and provide an important opportunity to increase our resources.

For the last four years we have been making significant progress in improving quality and safety, steadily improving our rankings as compared to other academic medical centers. But, we have to do more to continue to remain great.

We have expanded our quality programs to include clinical variation and reduction in cost of care. We call this program “UAB Care.” UAB Care is the UAB WAY of providing the best care. A way to provide valUABle care.

This expansion is just one of many improvements we are making to become the preferred academic medical center of the 21st century - the goal of our AMC21 strategic plan. Thank you for all you do in helping UAB Medicine reach this goal.

Quality is and will always be our number one priority.

Over the past several years, we have made significant strides toward our aim to become the preferred academic medical center of the 21st century and to provide the highest quality care for our patients.

Within the pages of this report, you will learn about some of our quality and safety initiatives and successes and achievements.

None of this would be possible without the strong commitment from our leadership, physician faculty, and nursing and support staff.

In each example shared, significant time and energy has been dedicated to improving the care we provide and the systems that support our caregivers. It’s truly been a team effort. We are excited to share this report with you as we continue our journey toward providing the highest quality, most effective care for our patients.

Dr. Will Ferniany
CEO, UAB Health System

Dr. Loring Rue, III
Chief Medical Officer,
UAB Health System
QUALITY & SAFETY GOALS

Our objective: implement standards and systems to continue achieving the best possible results in clinical care, research and education. Our strategic goals and initiatives will help us to become the preferred academic medical center of the 21st century.

1. IMPROVE CLINICAL EFFECTIVENESS
   Achieve top 10% of UHC

2. INCREASE COMPLIANCE WITH EVIDENCE-BASED GUIDELINES
   Meet 100% compliance as defined by UAB Care

3. DECREASE MORTALITY
   Reach top 10% of UHC

4. INCREASE PUBLICATION SCORE
   Identify baseline and % improvement target for citation scores for top 20 papers per academic unit

5. INCREASE # OF TRAINING GRANTS
   Establish baseline and % improvement target for number of training grants received annually

6. INCREASE PASS RATES
   Increase USMLE Step 2 Clinical Skills pass rate to at or above the national rate and increase specialty board exam pass rates for all residency programs above the national mean
HEALTH SYSTEM INITIATIVES

QUALITY & SAFETY

CREATING A CULTURE OF SAFETY

UAB Medicine’s commitment to Quality and Patient Safety is exemplified through the adoption of the three organizational pillars of quality, satisfaction, and finance. These three pillars serve as key components to creating an integrated health system that focuses upon cost-effective, safe and high-quality healthcare.

UAB’s recognition that safety and quality are inextricably linked has resulted in the adoption of a Just Culture that focuses upon shared accountability versus individual blame. A Just Culture provides balance while recognizing that there is no blame for system related errors.

A Just Culture does not alleviate accountability but balances at-risk behavior, system related errors and human error by providing guidance to measuring; however, certain errors indeed require accountability. To achieve a balanced culture of safety and accountability, UAB adopted the Just Culture provides the balance.

MEASURING A “JUST CULTURE”

Employees here at UAB have several mechanisms available to report and present feedback regarding adverse or near miss events. UAB’s Department of Quality and Patient Safety implemented a Great Catch program that allows employees to report near misses.

The “Great Catch” program is a quality improvement initiative that promotes the identification of potential system errors or problems proactively before they cause harm. The program recognizes staff and physicians for identifying a “good catch” and is designed to share key finding across the organization to support the institutional culture of safety. By implementation of this program we hope to continue to grow the culture of safety throughout UABH as well as recognize staff for their contributions to quality and safety. Through recognition as a “Great Catch”, employee supervisors are sent a signed letter by hospital leadership, detailing their role in reporting an unsafe practice that prevented an adverse event.

Standardized reporting is monitored through the Trend Tracker system and also the Patient Safety hotline 996-SAFE. In addition, escalation pathways have been created for staff to escalate issues that may or may not be potentially unsafe conditions. On an annual basis, employees are provided a survey that measures engagement and their opinions regarding the organization’s culture of safety. Specifically, three questions related to patient safety are asked and the responses disseminated to the organization’s leaders. Organizational leaders are expected to uphold a fair and Just Culture by implementing action plans if results fall below internal and external benchmarks.
On March 12, 2014, more than 50 individuals gathered for a meeting to discuss how patients with heart failure would be treated within UAB Medicine. At the time, only a few of those in attendance had been introduced to “UAB Care”, the new clinical effectiveness program being implemented under the leadership of Dr. Loring Rue and Dr. Ben Taylor. In the weeks leading up to the meeting, several faculty members, including Dr. Gil Perry and Dr. Salpy Pamboukian from the Division of Cardiology and Dr. Eddie Mathews from the Hospitalist service, were asked to define the care for heart failure patients using evidence-based medicine.

The result of their work was a list of key lead practice guidelines and protocols that define the care every heart failure patient should receive at UAB. March 12 marked the beginning of the care redesign process where faculty members with nursing and other clinical and operational leaders and staff reviewed the heart failure guidelines and discussed what it would take to ensure their implementation. What has followed has been a remarkable amount of activity and action all aimed at ensuring patients at UAB receive the highest quality care possible every time.

“Our clinical effectiveness program, which we have labeled “UAB Care”, was established on the principle that providing consistent, evidence-based care, defined by our faculty and hard-wired into our system, will improve patient outcomes and patient, family, and employee satisfaction,” said Dr. Rue. “By focusing on specific clinical conditions such as heart failure and sepsis, we have been able to rapidly identify opportunities to improve existing practices and systems using the evidence-based clinical guidelines created by our faculty.”

UAB Care follows a structured, 12-week process to identify evidence-based practices for each clinical condition, define appropriate practice changes, and implement the recommendations of the faculty and redesign teams. Since establishing the program in January 2014, nine clinical conditions have gone through the redesign process including heart failure, sepsis, VAD, PCI, EP, elective total joint replacement, and hip and femur fracture. More recently, teams have been organized to review the care provided to liver and kidney transplant patients.

“The redesign process asks – Are we doing this best practice? Can we improve it? Who are the people who know best how to make it better and more reliable? Taylor says. “The concept is not complicated or unique and most of us have been doing this our entire career in healthcare...What we bring is a new focus and structure to the process to help ideas become improvements.” Perhaps the most important part is getting everyone in a room in a non-crisis setting to discuss what it takes to deliver high quality care to patients and how we can make it even better.

To date, the UAB Care program has achieved several successes big and small, clinically, operationally, and financially. The measures of success for the program are both outcomes and process oriented. Outcomes measured include mortality, length of stay, readmissions, and patient satisfaction just to a name a few. Process measures are defined by each redesign team to ensure the condition-specific guidelines are followed and to identify additional opportunity for education and interventions. The measures are compiled onto condition-specific scorecards that are reviewed by the redesign teams each month.

“It's been a successful first year and we've learned a lot about how we currently do business and have identified a number of improvement opportunities along the way,” Dr. Rue commented. “One of the greatest lessons learned over the past 12 months which may not come as a surprise is faculty and staff engagement being the linchpin of success. Without the contributions of by my estimation over 200 people thus far we wouldn’t be able to build upon the initial improvements we have made and gain momentum into the future.”
QUALITY WEEK

UAB Hospital and Clinics observed the 2014 National Healthcare Quality Week during the week of October 6-10, 2014 and culminated the week-long observation with a celebration awards luncheon on Monday, October 13. This annual recognition event not only brings attention to the profession of healthcare quality but celebrates the work of the staff members of all departments who work diligently to continuously improve the quality of patient care, patient experience, and clinical outcomes.

The Quality Week Committee—comprised of professionals from Regulatory Quality, Patient Safety, Data Analysis, and Infection Control, as well as representatives from UABHS Marketing, Environmental Services, and Food and Guest Services—begins months ahead to plan the week-long slate of activities. “Lunch and Learn” sessions were held at UAB Hospital, UAB Highlands, and TKC, open to all staff and featuring an array of topics from building resiliency and stress management to current updates on the patient experience and performance improvement.

Annually, one of the highlights of the week is the “Storyboard Symposium”, a day-long display of quality-centric projects from all over the organization. Storyboards and posters were submitted for judging in two distinct categories; Quality Improvement and Quality Education, with UAB Hospital having a total of 40 entries in the Quality Improvement category, and 13 entries in the Quality Education group. TKC and Ambulatory Clinics were represented by 11 Quality Improvement projects and 8 Quality Education entries. Judges were given a set of criteria from which to judge the posters and a first-place winner and runner-up were selected in each category.

Each year, the ever-popular “People’s Choice Award” is voted upon by staff members by secret ballot during the symposium.

The week of activities culminated in the Annual Stephens Quality Awards Luncheon, where UAB Medicine leaders recognized individual and departmental award recipients for not only the Storyboard Symposium competition, but also for the Quality Variance Awards. These awards are presented to Nursing Units and Ambulatory Clinics for year-round excellence in quality outcomes such as hand hygiene, patient safety, high-reliability, and patient centeredness.

Each and every year, this week-long observation of “all things Quality” serves as a reminder of all of the amazing work accomplished by an amazing group of healthcare professionals—all in the quest for the highest quality patient care. There is not one individual who does not feel an intense sense of pride each and every year when the annual “Quality Week” arrives and the quality efforts and accomplishments of UAB Medicine are brought to the forefront.

IMPROVED PREVENTABLES

Several changes were instituted prefacing a dramatic drop in mortality ratio. Our Observed dropped below Expected providing confirmation of positive improvements in outcomes.
UAB Care was established on the principle that providing consistent, evidence-based care, defined by our faculty and hardwired into our system, will improve patient outcomes and patient, family, and employee.

Dr. Loring Rue, UAB Health System, Chief Quality Officer
The Early Warning Score (EWS) was introduced by the UAB Care Sepsis team as a tool to assist with early detection of patients at risk for clinical deterioration. The idea is well-described in the literature, and it grew out of our local experience with an automated alert for sepsis. A previously published scoring system was used as the basis for the EWS, and our health system’s informatics team developed rules in the Cerner health record that would automatically calculate a score with each set of vital signs entered into the system.

The score is based not only on vital signs, but also level of consciousness, oxygen saturation, and the need for supplemental oxygen. Alert parameters were set, and when a patient’s individual score reaches the alert threshold, an electronic alert is delivered to the patient’s primary nurse. The bedside nurse then activates a standardized response protocol, alerting the primary provider and, if indicated, a nurse from the Medical Emergency Team to assist with additional assessment of the patient.

A Power Plan was also developed as a tool for the primary team to use during evaluation and treatment of patients on whom the alert is activated.

After a brief pilot on a medical and surgical unit, the EWS and alert system was systematically introduced to acute care units throughout UAB Hospital, including UAB Highlands. Some early clinical successes using the alert led to overwhelming acceptance of the new protocol.

An analysis in one of our surgical populations demonstrated that life-threatening postoperative complications are preceded by a rising EWS.

The EWS therefore shows promise, in surgical patients, for early identification and intervention to reduce the severity of post-operative complications. We believe it has value in medical populations as well. Data is being collected to look at a number of process and outcome measures related to identification and early treatment of inpatients that clinically deteriorate.

In addition, a number of novel uses for the EWS have led to Quality Improvement projects, including an ICU discharge checklist in the medical and surgical intensive care units.
**MEDICATION RECONCILIATION PILOT**

Our objective was to design and implement a demonstration project (with intent to spread to all hospital units), to improve the admission Medication History collection and documentation process, as evidenced by:

- Accuracy
- Consistency
- Timeliness
- Simplicity
- Sustainability
- Improved Communication
- Reproducibility

**Continuing Process Improvement**

- Decreased auditing (5/week) to free up pharmacist time for ED and Direct Admit interventions
- Developed “Pharmacist Performed Med History” order / documentation
- Implemented External Rx for nurses
- Added interventions on post-admit patients – with circle back to physicians as needed
- Adjusted RPh coverage/work times
- Improved process for identifying patients who are potentials for post-op admission in the PACT
- Investigated coverage models
- UHC ListServe and interviews
- Developed Pharmacist / Pharm Tech pilot

**Pharm Tech Pilot**

**Job qualifications**

- Certified Pharmacy Technician, preferably with retail experience
- Great Communication Skills
- Strong understanding of the following:
  - Generic and brand names of legend medications
  - OTC medications, herbal and dietary supplements
  - Databases, pharmacy computer applications and documentation strategies

**Training of Pharmacy Technicians**

- Formal and interactive training program with current Med History pharmacists
- Pharmacy-based Medication History Model

**What are our next steps?**

Development and roll-out of physician and nursing education related to:

- Pharmacy Med History process
- Changes in electronic medical record
- Nursing process and accountability for Med History
- Physician process and accountability for Admission Med History and Med Rec
- Physician process and accountability for DC Med Rec
- Start planning transition to remainder of hospital

**OBSERVED TO EXPECTED MORTALITY**

Several changes were instituted prefacing a dramatic drop in mortality ratio. Our Observed dropped below Expected providing confirmation of...
TRANSFER OF CARE

Forming a collaborative multidisciplinary team would become the foundation for the development of a cooperative alliance between the UAB Medicine Ambulatory Clinics and Hospital. The first task was to develop a safe transfer process from outpatient to inpatient settings that would result in better Quality outcomes and enhanced Patient Safety.

In 2013, an increase in patient safety incidents were reported to the Ambulatory Patient Safety Committee related to transferring patients from UAB Medicine Ambulatory Clinics to the Hospital. A “transfer team”, composed of members from both Ambulatory and Hospital, was developed by the Ambulatory and Hospital Patient Safety Committees to ensure a safe transfer process and continuum of care for patients.

The primary goals of the multidisciplinary transfer team were to develop a process to ensure consistent communication between all stakeholders and to arrange safe transportation from the clinic to the hospital.

The project was separated into the following phases: (a) developing an electronic transfer handoff communication tool (b) creating a standardized process for transferring a patient to the hospital and (c) implementing an innovative pilot utilizing an ED nurse in the ambulatory clinic to assist with coordinating/expediting the transfer of care.

Not only was the team successful in accomplishing the established goals, but also in developing a healthy working relationship between the ambulatory and hospital leadership. The transfer team would become the foundation for integrating and facilitating future teams between the Ambulatory Clinics and the Hospital.

In FY 2013, 9 patient safety incidents were reported to the Ambulatory Patient Safety Committee regarding transferring patients between the Ambulatory Clinics to UAB Hospital. When reviewing improving the transfer process, the team identified inconsistent communication as one of the opportunities for improvement. A transfer handoff communication form was developed in the electronic medical record which serves as a guide for giving an oral report and as a tool documenting pertinent patient information for the receiving unit.

The transfer handoff communication form was implemented in the ambulatory clinics in December 2012. Baseline data was collected for January 2013, resulting in a 22% compliance rate. A target was set for 90%. With education provided by clinic leaders, compliance increased to 91% by October 2013 and has remained above target as of December 2014. This is a 69% increase in compliance among clinics.

Since the initiation of the new standardized process for transferring a patient from the Ambulatory Clinics to the Hospital, only 1 patient safety incident has been reported to date.

The efforts of the transfer team are highlighted in a number of initiatives such as the development of a transfer handoff communication form in the electronic medical record, standardization of a transfer process from Ambulatory clinics to UAB Hospital, and implementation of a pilot program that utilizes an ED nurse collaborating with the admitting physician to better coordinate the transfer of care.

These are a few examples of how the transfer team has facilitated an open and multidisciplinary practice which in turn bridges relationships between two entities. The structure of the transfer team aided in a culture of continuous improvement that promotes the inclusion of all key stakeholders. Developing innovative solutions that are patient-centered in turn leads to better Quality outcomes and enhanced Patient Safety.
Universal Protocol (UP) includes the systematic use of pre-procedure verification, site marking, and a time-out immediately before starting a procedure. It is effective in preventing the rare but devastating “never event” of wrong-site, wrong-patient, or wrong-procedure. Universal Protocol consists of three steps:

1. Pre-procedure verification which includes verifying the patient’s identity, confirming all documents match current information and ensuring procedural consent is accurately completed and signed
2. Marking of the procedural site
3. A Time Out (final verification) which is performed immediately before starting the procedure with patient involvement

By the end of FY 2013, the UAB Medicine Ambulatory Services achieved target of 95% compliance with completing all elements of Universal Protocol.

To further improve compliance, an interdisciplinary team was formed: (a) develop a standardized process, (b) review and revise current policy, (c) develop a Universal Protocol Safety Checklist and (d) reeducate staff about all components of Universal Protocol.

As a result of the interdisciplinary team efforts, a standardized checklist was developed and implemented. The checklist is used not only to avoid wrong procedures, but also to confirm patient consent is signed and essential personnel, equipment and information are on hand, such as surgical implants, radiology images and the patient’s known allergies. After education and implementation, the compliance increased from 95% to 98% in FY 2014.

Staff from the Ambulatory Quality Department monitors Universal Protocol through real time observations and electronic medical record review. Direct feedback is given on successes and opportunities for improvement. The Quality Department and Clinic Managers collaborate on providing education to staff and providers about identified opportunities for improvement.

CART STANDARDIZATION

Crash carts contain supplies you hope you will never need. With a higher-acuity patient population being cared for in the ambulatory setting, having carts fully stocked, smartly organized and always at the ready is essential. An organized crash cart can bring a sense of structure to a potentially chaotic situation.

UAB Hospital’s Medical Emergency Team (MET) began helping with coverage for The Kirklin Clinic of UAB Hospital (TKC) in 2014. During a mock MET call, it was identified thatTKC used different crash carts from what the MET team and hospital staff were familiar. For patient safety, it was decided to standardize every crash cart in UAB Medicine. By doing so, time is saved and confusion is lessened so whoever is responding to a code can quickly find needed emergency equipment, which in turn may save a life.

The MET team worked with TKC Nurse Stat leadership to educate TKC staff on the new carts. Education was also reinforced in Healthstream for all TKC staff. The new crash carts were pushed out to TKC in November 2014.

During the standardization process, it was also identified that the MRI departments used different types of crash carts. In the standardization process, the carts in the MRI departments were converted to Low Iron, to help reduce safety risks for potential codes in any UAB MRI department.

In addition, the Crash Cart Exchange policy was reviewed by MET team, TKC Nurse Stat, and Hospital Material Management to update the policy so it reflects the new changes across all departments.

IMPROVED ACCESS FOR NEW AMBULATORY PATIENTS WITHIN 14 DAYS BY 85% (FY 2014 vs. FY 2013)
Critical lab results require prompt notification to the appropriate provider. The Ambulatory Clinics created a standardized process that allows laboratory personnel an efficient mechanism for critical lab result notification with an escalated pathway if there is no response from the ordering provider.

In order to properly relay critical lab values to ordering providers an algorithm must be in place to get the results to the provider so appropriate measures can be taken to provide excellent patient care. Critical labs and tests require rapid notification of the results.

One of the concerns in critical lab reporting is ensuring providers answer pages to receive critical lab values. Our system has had a critical lab policy in place; however, in the past it was not followed in a timely manner. Providers had various algorithms for whom to call including academic secretaries, nurses, residents, fellows, and attendings with no consistency in the process. Our goal was to develop a policy to standardize the process to get the correct information to the ordering provider to ensure patient safety.

A review of the various algorithms in place for notifying providers was completed. A meeting between Ambulatory, Pathology and Laboratory Leadership was convened to develop a standardized process for notifying providers of critical lab results.

The initial step was to develop an accurate policy to manage unanswered pages:

1. The ordering provider is paged.
2. If no answer within 15 minutes, the ordering provider is paged again.
3. If no response after two pages, the pathology resident on call is paged who then pages the Medical Director for that respective clinic.
4. If the Medical Director does not respond within 15 minutes, the Associate Chief Medical Officer for Ambulatory Services is paged.

This new process was reviewed and approved at the Medical Director Council meeting and disseminated to all providers.

Implementation of this critical call notification has greatly improved the critical lab value reporting. Providers are now paged by the lab with a statement of “Critical Lab Results”. This method allows providers to quickly return the page to retrieve the critical value and limit any phone calls made to their Medical Director.

On occasion, Medical Directors have been unavailable to answer the call. In this situation, the Ambulatory Chief of Staff has been contacted to receive the reported lab value. The following day, the Medical Director is contacted by the Associate Chief of Staff to reinforce the policy and the importance of making sure the ordering provider is accountable for managing critical labs. In turn, Medical Directors are then aware of the importance of their “backup” role of responding to critical lab values.

A new process was put into place and tested with great success:

1. The ordering provider is paged.
2. If no answer within 15 minutes, the ordering provider is paged again.
3. If no response after two pages, the pathology resident on call is paged who then pages the Medical Director for that respective clinic.
4. If the Medical Director does not respond within 15 minutes, the Associate Chief of Staff is paged.
The best part of developing the Critical Response System is seeing that the process gets activated and it works. Providers usually respond but when they don’t, the prescribed steps are followed. When/if it gets to me I am able to address it, reinforce the policy and explain why it is so important.

Dr. Rich Rosenthal, Associate CMO Ambulatory Services, Associate Professor of Medicine
HAND HYGIENE

Hand Hygiene is crucial to preventing the spread of infection. UAB Medicine Ambulatory Services initiated a process to increase hand hygiene compliance among healthcare personnel through active patient engagement. By seeking real-time input from patients who hold staff accountable for preventing infection, compliance with hand hygiene increased across ambulatory clinics.

Hand Hygiene is well recognized as a basic tenet of healthcare for reducing the spread of infection. Despite established guidelines and education regarding Hand Hygiene, compliance varies depending on how it is measured. Direct observation is the gold standard for determining Hand Hygiene compliance. However, research shows people change behavior and habits when being directly observed to meet standards and expectations.

In an effort to obtain an accurate compliance rate reflecting everyday practice, a Hand Hygiene questionnaire was developed allowing patients to provide real-time input on whether the provider, nurse, or technician performed Hand Hygiene in his/her presence.

Upon registration, the questionnaire is automatically generated at each clinic visit. The registration staff gives the patient the questionnaire and discusses the importance of hand hygiene and partnering in his/her healthcare. Healthcare personnel encourage each patient to complete and return the questionnaire at the end of the visit. The questionnaire has been revised to accurately reflect the healthcare personnel providing patient care.

The Hand Hygiene questionnaire was piloted in 6 ambulatory clinics in December 2012 to ensure the tool was effective and user-friendly. The data obtained during December, which showed a compliance rate of 90.9%, served as the baseline.

A target range of 91-92.9% compliance was established for the remainder of FY2013. In January 2013, the questionnaire was distributed to every patient upon registration in 60 Ambulatory Clinics. The compliance rate increased monthly. By the end of FY2013 the compliance rate was 95.7%, an overall improvement of 4.8%. The target range was further increased for FY2014 to 95%. As of January 2015, the current compliance rate was 98.3%.

The compliance rates are shared with clinical leadership and staff monthly. Medical assistants/technicians have had the greatest improvement (90.8% to 98.2%).

Nurses improved from 92% to 98.2% and providers from 90.8% to 98.2%.

The results were strong. Implementation of the Hand Hygiene questionnaire served as a catalyst for patient engagement and awareness to ensure he/she is receiving quality and safe care through Hand Hygiene practices. Increased awareness and accountability is demonstrated by greater than 4% increase in Hand Hygiene compliance since implementation.

Furthermore, the Hand Hygiene compliance rates are part of a Quality scorecard that is shared monthly among all clinics which in turn aids in “healthy” competition and allows clinic leadership to implement interventions to better communicate with patients. Examples of interventions include standardizing staff scripting and explaining to patients the importance of partnering.

Ambulatory leadership meets individually with clinics that are not meeting the targeted goal to identify barriers. Clinic based leadership develops an action plan to achieve the goal.

Patients value efforts at improving their safety as well as having input into their care. The patient is truly the winner of this initiative.
UAB Medicine is creating ways to effectively educate regarding quality and process improvement, data use and analysis, and measures and tools. All necessary to be a national leader in quality and safety.

**THE UAB MEDICINE QUALITY ACADEMY**

UAB Medicine has successfully created and implemented the UAB Medicine Quality Academy – officially known as the UAB Graduate Certificate Program in Healthcare Quality and Safety. The certificate is a unique, multidisciplinary approach to the analysis of and solutions for today’s medical problems.

The program prepares clinical and administrative professionals to deploy quality and safety-focused strategies for their work environments. It is an academically rigorous forum for developing individual knowledge and skills necessary to conduct clinical and operational process improvement projects in complex medical environments, and leads to the participant’s earning 15 hours of graduate-level academic credit in Healthcare Quality and Safety.

In the fall, we will be enrolling our fifth cohort of participants in the UAB Medicine Quality Academy. To date, more than 100 key administrative leaders, clinicians, nurses, and those in roles relating to Quality and Safety have completed this certificate. Many of them have gone on to additional job responsibilities or promotions in the field of Quality and Safety.

As part of the Quality Academy, participants are divided into teams, and complete a substantial improvement project relevant to UAB Medicine and its clinicians and patients. To date, 19 such projects have been completed, with substantial improvement in processes, and some have progressed to system-wide adoption.

Given the need for Quality and Safety competency across the system, UAB Medicine has also created the Mini-Quality Academy, a condensed version of the certificate course, which will be delivered to all UAB House Staff, nurses and other leaders, and many clinicians going forward. Eight one-day sessions are planned this year, with more than 400 physicians and staff receiving training.

Finally, in partnership with the UAB School of Health Professions, UAB Medicine has helped to create and support the delivery of a new Masters Degree in Healthcare Quality and Safety. This degree, one of only a handful in the United States, will begin in the fall of 2015. Many Quality Academy certificate graduates will pursue the Masters degree.

“\n
The UAB Medicine Quality Academy, officially known as the UAB Graduate Certificate in Healthcare Quality and Safety, prepares clinical and administrative professionals to deploy quality and safety-focused strategies for their complex work environments. This unique, multidisciplinary approach will prepare our leaders to effectively improve important clinical and operational processes while reducing costs, increasing value, and measuring change.

Dr. Scott Buchalter, UAB Health System, Chief Quality Education Officer\n"
QUALITY ACADEMY
PROJECTS 2013-2015

Fall 2013
- Management of patients who require non-rebreathers for rescue in a non-ICU setting
- Developing a process for expanded QI training for staff, students, and non-master's faculty, mini-course concept
- Improving the effectiveness of admissions from the ED
- Improving the process of placing and standardization of CVL placement
- Appropriate measurement (data) and reduction of readmission rates for a specific patient population (CHF, pneumonia, MI)

Spring 2014
- Decrease in-hospital sepsis mortality
- Decrease CLABSI rate in university hospital CCUs
- Improve the effectiveness and reduce variation in transitions of care within the hospital setting
- Reduce the unplanned readmission rate for patients with community acquired pneumonia
- Develop and implement an OR febriefing process within key surgical services

Fall 2014
- Critical lab values – improving the process
- Reducing unnecessary laboratory testing for UAB Medicine in-patients
- Development of a morbidity, mortality, and improvement process for pediatric solid organ transplantation
- Implementing a process for handoffs at UAB Hospital

Spring 2015
- COA – Standardization of an acute care nursing “watchers” list
- Developing a process for determining QI vs. Research (IRB)
- Improving the process for hourly rounding in the in-patient setting
- Improving DVT prophylaxis on an acute care floor
- Reducing the use of unnecessary lab testing

ADVANCING KNOWLEDGE

RESIDENTS COUNCIL

The House Staff Council was established many years ago in accordance with the Accreditation Council for Graduate Medical Education (ACGME) Institutional Requirements. Institutional Requirement II.C states “The Sponsoring Institution must ensure available of an organization, council, town hall, or other platform that allows residents/fellows from across the Sponsoring Institution’s ACGME-accredited programs to communciate and exchange information with each other relevant to their ACGME-accredited programs and their learning and working environment.”

The purpose of UAB’s House Staff Council is to serve as a resident advocate and voice through the hospital, university and community and to provide representation as it pertains to university affairs. Communication and education is a main priority for the UAB House Staff Council. It is also a place where residents/fellows can raise concerns or confidential comments and information. The House Staff Council meets monthly and minutes from the meetings are distributed through the house staff council representatives to others in their programs.

During academic year 2014-2015 the House Staff Council has hosted a variety of speakers and discussions based on needs from the residents/fellows and the institution. Presentations are focused on policy changes or educational matters that need resident/fellow attention. Presentations included preparation and education for the Sponsoring Institution’s, University of Alabama Hospital, first Clinical Learning Environment Review (CLER) visit and a Joint Commission Update to educate the house staff on the mock survey findings in order to improve for the upcoming survey. Representatives from HSIS are present monthly at each meeting and shares Impact changes or updates and any planned down-times that may affect the workflow of residents/fellows on service at the time of the downtime.

In the upcoming academic year, we will focus on improving how minutes are disseminated. The current process is that the House Staff Council secretary writes the minutes and sends to the GME office to distribute. The minutes are also posted monthly in MedHub, the residency management software. Our goal is to improve the number of “views” the minutes receive in MedHub. Currently, the minutes receive less than 5 views each month. To improve, we will educate the residents/fellows on where there minutes are posted in MedHub and notify the program coordinators of the same information.

The House Staff Council is an important forum for different departments in the organization to communicate with residents/fellows and for residents/fellows to give feedback and notify the appropriate individuals if there are concerns or issues.
The Chief Quality Resident Program teaches better medicine.

As part of the push to expand quality across the clinical enterprise, UAB Medicine started a Chief Quality Resident Program (CQRP) this year that exposes participants to relevant concepts and prepares them for potential leadership positions.

In addition to their primary residency duties, the 10 residents chosen for the inaugural year of the program have been given the opportunity to attend monthly lectures, participate on a clinical effectiveness redesign team, complete a quality and patient safety project, and audit UAB Quality Academy courses for a semester.

Led by Chief Medical Officer Loring Rue, MD, and Associate Chief Medical Officer Ben Taylor, MD, the program helps residents further their practical understanding of quality improvement concepts and techniques necessary to build and sustain high-quality patient care.

“Our intent is to get them exposed to the quality process and better understand how the things they learn in the curriculum are applied on the front lines of a large, complex organization,” Dr. Taylor says. “It’s an opportunity to connect with leaders and learn some of what they don’t teach you in medical school.”

Lecturers include Drs. Rue and Taylor as well as Hugh Shoff, MD, UAB Medicine’s first Quality and Patient Safety Fellow.

“The Chief Quality Resident Program is an excellent introduction into a growing field that will ultimately change the landscape of medicine,” Dr. Shoff says. “These residents will gain a knowledge advantage in patient quality that will help groom them to become leaders in the discipline.”

Resident Response

“As a resident, improvements in such a large hospital seem very daunting, but the leaders of the CQRP break down each aspect to make it more manageable,” Dr. Steinhilber says. “Though they teach us aspects of doing a project and quality improvement principles, I found the best part to be learning the intricacies of the UAB system as they relate to quality – the structure of those involved, where data come from, who the stakeholders are, and how outcomes are measured.”

“The CQRP has provided a unique opportunity to broaden my exposure to and involvement with quality improvement processes, under the guidance of key hospital leadership figures,” Dr. Pasko says. “The benefits extend beyond my personal professional development, as I feel well-suited to share my experiences and improved understanding with my fellow residents.”

Dr. Taylor says it’s crucial to get new physicians involved in quality early in their careers. They tend to approach new situations with fresh eyes toward making improvements, and understanding the reasons behind major initiatives and industry trends helps prepare them for such inevitable changes down the road.

“A lot of the dissatisfaction in medicine comes from feeling like something new is always being imposed upon you,” Dr. Taylor says. “This is an opportunity to learn it organically along the way as part of your training, and there is value in residents sharing with their peers.”

The Chief Quality Resident Program is currently offered to residents entering their junior or senior year.
We promote a culture of accountability and leadership at UAB Medicine that prioritizes patient and consumer engagement and satisfaction.

HARD STOPS

When given to patients with certain diagnoses or co-morbid conditions, medications can cause significant adverse reactions. Two medications, Haloperidol and Ketorolac are contraindicated in certain patient populations; however, they continue to be prescribed in these populations. To ensure no harm reaches a patient through the inappropriate prescribing of these medications, the use of “hard stops” was implemented in IMPACT.

Haloperidol, a dopamine receptor antagonist, is contraindicated in patients with Parkinson’s disease as it may cause severe worsening of symptoms. A hard stop will fire when a patient with a diagnosis of Parkinson’s disease is prescribed Haloperidol and the medication will not be dispensed.

Ketorolac is not approved for use in patients 65 years or older or who have a GFR < 60. A hard stop will fire when a patient that meets either of these criteria is prescribed injectable Ketorolac and the medication will not be dispensed.

Since the implementation of hard stops, there has been a significant decrease in number of attempts to prescribe these medications in both the inpatient and ambulatory settings. The graphs below show the number of total and unique patient activations by location.

Each hard stop activation prevents harm from reaching our patients!

PATIENT EXPERIENCE & SATISFACTION

Our patient experience goal is to build a service-oriented culture that focuses on Patient- and Family-Centered Care (PFCC) with the initial focus of improving the patient experience across the care continuum through the adoption of the core concepts of PFCC - Respect and Dignity, Information Sharing, Participation, and Collaboration.

We started with a list of recommendations designed to improve the experience and satisfaction of our patients and their families:

1. Implement Evidence-Based Leadership
2. Adopt the PFCC model to guide planning and delivery of care
3. Form a Patient and Family Advisory Council
4. Initiate a “Welcome to UAB Medicine” program
5. Unify the approach to guest services
6. Develop an operational approach for utilizing HCAHPS
7. Improve billing processes
8. Measure patient experience using several metrics including, HCAHPS and Press Ganey patient satisfaction, internal surveys, and ROI of Reaching for Excellence
REACHING FOR EXCELLENCE

EMMI SOLUTIONS

Healthcare professionals who engage and coach patients in self-management are essential in improving care delivery. However, staff resources are expensive. The proposal described how one organization used Interactive Voice Response (IVR) technology and RN Coaches to successfully engage patients in their post-discharge care.

Our objectives with this program were to describe the challenges and solutions in implementing Interactive Voice Response technology for transition phone calls, as well as discuss results and findings related to patient participation and patient perception of the transition phone calls.

IVR technology allows for RN to spend time on essential clinical interventions with patients instead of on unsuccessful attempts to contact patients or on interacting with patients who are not having problems. The program operates by enrolling patients in the automated call series as part of the hospital discharge process. The calls provide education and collect information related to their current health status. A daily report is developed based on patient reported information and is sent to the RN coaches so that appropriate support can be provided. In addition, educational videos are prescribed for patients and their circle of care to view in their own homes. These interactive multimedia programs support self-management of health conditions and prepare patients for upcoming procedures or clinic visits.

Prior to implementation there were concerns:
- How would appropriate patients be identified for the calls?
- Would patients answer automated phone calls and report their symptoms and other information?
- Did the population have email and access to computers to view the multimedia programs?
- Could behaviors be changed with information provided in an automated way?
- Could readmissions be impacted with this strategy?

The transition phone call strategy launched in May 2014 with the stroke population and then phased in for AMI, COPD, HF, Pneumonia, Orthopedics and Trauma. EHR templates were developed to capture data points so that varying aspects of patient participation could be reported.

Results as of January 31, 2015:
- Patients enrolled in calls = 1,524
Patients participating in calls = 1,260 (83% of enrolled)

- Engaged patients (participated in at least 50% of calls) = 725 (58% of participating)
- Patients with red-flag issues requiring RN coach follow-up = 896 (71% of participating) such as no follow-up appointment, lack of transportation, medication issues, daily weight non-compliance, symptoms of depression or health decline.

Another indicator being monitored is appropriate patient referral to the calls. Currently 33% of patients being discharged to home with a call-related diagnosis are being referred for the calls.

The last call in the series includes a survey of patient perception of the call. Patients told us the calls:
- Provided new/helpful information = 87%
- Helped the patient feel more comfortable calling the provider = 88%
- Prepared them to better manage their health = 94%
- Improved their opinion of the provider = 92%

One challenge being addressed is appropriate referral to the program at discharge, currently at 33%. Recent process improvements have been implemented to assist in identifying appropriate patients. The presentation will include these improvement strategies and their impact.

A report to look at readmission comparisons between the participating and non-participating populations is currently being addressed and will be presented at the conference.

In the current healthcare arena it is important to be creative in utilizing technology to support clinical professionals, especially as they become more and more responsible for care delivery and patient outcomes outside the four walls of the hospital and clinic. This presentation will focus on methodology, challenges, barriers and outcomes related to the blend of technology and clinicians in care transitions.
The Office of Interprofessional Simulation (OIPS) is a joint venture between the UAB Health System and the University and its Health Schools including the Schools of Medicine, Nursing, Health Professions, Optometry, Dentistry, and Public Health and the College of Arts and Sciences. The mission of OIPS is to embed simulation-based techniques and tools in education and training for the UAB community with the goal of improving both patient care outcomes and efficiency in providing care.

OIPS provides facilitator development, consulting support aimed at strengthening simulation activities and course development, and facilitation of simulation experiences with technical expertise. OIPS direction manages the Center for Patient Safety and Advanced Simulation in Quarterback Tower and the Volker Hall Simulation Sandbox.

The vision of the Office is to dramatically improve learning, patient outcomes and efficiency at UAB and be an international leader in applying simulation to education, training, patient care delivery and research. UAB Health System focused activities in 2014 included developing and providing training for UAB Medicine’s Ebola care team, on-site simulations including mock resuscitation and mock code stroke and course development and support.

OIPS has supported a 4 hour simulation session for the UAB Quality Academy during each of its semesters. Other courses for the health system which have received support include training for Anesthesia, Emergency Medicine, Internal Medicine and other residents. Hospital employees have had exposure to simulation as part of the BSN residency, Geriatric Scholar program, Critical Care & Surgical Division Orientation and Competencies, Critical Care Transport, Dietetics program, the Fundamentals of

Using simulation as a tool for quality and safety means that practitioners simulate first so that patients receive safe, effective and efficient care from a practitioner and/or team that has practiced until perfect. Simulation puts patients first.

Dr. Marjorie L. White, UAB Health System, Vice President of Clinical Simulation
Critical Care Support course, the Continuous Renal Replacement Therapy (Academy) and many others.

OIPS was asked by the UAB Ebola Task Force to develop training for the Ebola Care Team to provide optimum patient care and patient care team member safety. Our simulation team developed a detailed training program which included collaborative development of resources, training of trainers and implementation of a training program. The training program includes: Personal Protective Equipment (PPE) 101, Ebola Care Floor Training, Ebola Care Emergency Department in-situ Training, Open Lab Sessions, and special training sessions to include Intubation and Vascath/Central Venous Line Placement Training, Doffing Expert training and others.

On-site simulation is an experience that is integrated into the actual clinical environment and involves participants are on-duty clinical providers during their actual workday. They allow teams to review and reinforce their skills and to problem-solve in the clinical environment. Simulation modalities employed may include manikins, standardized patients, task trainers or hybrid simulations and may be scheduled or performed impromptu.

We began our Mock Code Stroke program with a pilot simulation in September 2014. Working closely with the UAB Stroke Coordinators and other partners, OIPS developed a set of data points to test the stroke response system and collected these outcome data at each of our planned simulations. These will continue in 2015 in preparation for the Joint Commission stroke survey in March 2015. In addition to mock code strokes, we have also started a program of regularly scheduled mock Code Blue in situ resuscitations and plan to expand this program in 2015 so as to be a part of improving resuscitation outcomes for UAB’s sickest patients.

Future plans include the continued expansion of facilitator development training with biannual hosting of the weeklong Institute for Medical Simulation courses, development of purpose-built simulation space and working with surgical colleagues to expand surgical skills training capacity.

We look forward to developing our role in future quality improvement processes, particularly those which focus on procedural training and systems integration. We will continue to expand our team in order to continue in situ simulation aimed at testing our system’s response to patient care challenges and identifying latent errors. We will continue to support the Ebola Care team with maintenance training. We hope to do this by partnering with faculty, staff and trainees who are interested in the use of simulation as a tool for improving quality and safety.
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THANK YOU NOTES
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ROUNDING
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EVIDENCE-BASED MANAGEMENT
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HARDWIRING
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ACHIEVEMENTS & DISTINCTIONS

AWARDS | HONORS | ADVANCEMENTS | MILESTONES

GENOMIC MEDICINE

Established the UAB-HudsonAlpha Center for Genomic Medicine. This joint program makes Alabama a major force in genomics internationally.

FREESTANDING E.D.

We broke ground for a Freestanding Emergency Department in Alabama which opened in May 2015. The UAB Medical West Freestanding Emergency Department is the first facility of its kind in Alabama.

INCREASED CAPACITY

We provided several new ways to access care at UAB Medicine. We launched UAB eMedicine, UAB’s innovative new online clinic providing convenient care for common conditions.

UAB Medicine Urgent Care opened in downtown Birmingham offering walk-in care to an area underserved with urgent care services.

We opened a newly renovated ICU at UAB Hospital–Highlands, adding 12 beds.

NIH FUNDING INCREASE

Research funding from the National Institutes of Health increased from $188 million in 2013 to $225 million in 2014.

AWARDS

UAB Hospital earned its first top-five spot on the University HealthSystem Consortium’s (UHC) quarterly Quality Summary Report Card, which tracks the quality of data submitted to its Operational Data Base (ODB) by the nation’s leading academic medical centers. UAB’s score of 94% in third-quarter 2013 is up from 88% in the previous quarter.

UAB Hospital won the National Research Corporation (NRC) Consumer Choice Award based on consumer perceptions of quality and image. UAB has won this award 14 years in a row.

UAB Hospital was named one of Becker’s Hospital Review’s “100 Great Hospitals” and “100 Top Hospitals for Women’s Services.”

UAB Medicine received the Patient Access Innovation Award of Excellence for its access initiatives at the 2014 Patient Access Symposium.

UAB Hospital has received the Get With The Guidelines®—Resuscitation Silver Quality Achievement Award from the American Heart Association (AHA). The recognition signifies that UAB Hospital has reached an aggressive goal in using guidelines-based care to improve patient outcomes from in-hospital cardiac arrest.

The Birmingham Business Journal named UAB Medicine “Most Admired in Healthcare.”
We achieved major efficiencies in our North Pavilion Operating Rooms. O.R. efficiencies improved as follows:

- **Med-Surg diversion** improved from 63% to 1.4%, resulting in a 97.7% decrease.
- **Critical Care diversion** improved from 44% to 0%, resulting in a 100% decrease.
- **Emergency diversion** improved from 45% to 36%, resulting in a 25% decrease.

**Programs Nationally Ranked**

- **By U.S. News & World Report 2014:** Endocrinology, ENT, Gynecology, Neurology/Neurosurgery, Orthopedics, Urology, Nephrology, and Rheumatology

**Daily Census**

- Highest census ever for UAB Hospital, with a daily average of more than 1,000 patients for 2014.

**O.R. Efficiencies**

We achieved major efficiencies in our North Pavilion Operating Rooms.

- **3.2% Increase in OR Hours**
- **4.6% Increase in Case Volume**

**Nationally Ranked**

Programs ranked by *US News & World Report*

- **3** Programs ranked in 2013
- **8** Programs ranked in 2014

This document will be updated quarterly and distributed electronically to UAB Medicine employees, faculty, and staff. It will also be available on the ONE intranet.