

Annual Quality and Patient Safety Report University of Illinois Board of Trustees Meeting January, 2017

The Quality and Patient Safety program at the University of Illinois Hospital & Health Sciences System (“UI Health”) supports quality and safety improvement for UI Health’s entire scope of clinical operations including our hospital, clinics, and Mile Square Health Centers.

We also continue to partner and collaborate with UIC health sciences colleges and to pursue opportunities to align and integrate key quality and safety endeavors with other organizational priorities. Key 2016 highlights are briefly outlined below.

Quality & Patient Safety Division

Directed by the Associate Vice Chancellor for Quality & Patient Safety, UI Health’s Quality & Patient Safety division includes four teams: Accreditation & Clinical Compliance, Infection Prevention & Control, Quality Performance & Improvement, and Patient Safety & Risk Management.

Quality & Safety Strategy & Leadership Steering Committee

Established in early 2013, the Quality & Safety Strategy & Leadership Steering Committee (“QSSL”) continues to provide leadership, direction, and oversight to UI Health’s enterprise-wide quality and patient safety priorities, performance, and action plan. Its membership includes key clinical and operational leaders from across the clinical enterprise, the Office of the Vice Chancellor for Health Affairs, and UIC health sciences colleges.

FY17 Quality & Patient Safety Goals

In June 2016, QSSL finalized its FY17 Quality & Patient Safety priorities and targets, including expansion of our Zero Harm initiative aimed at the eventual elimination of all patient- and employee-related harm at UI Health. Our FY17 goals are as follows:

1. Patient-Related Harm:

Decrease the overall incidence of the following types of harm by 10 to 20%:

- Central Line-Associated Blood Stream Infections
- Catheter-Associated Urinary Tract Infections
- Surgical Site Infections
- Post-Operative Deep Venous Thromboses and Pulmonary Emboli
- Inpatient Falls Resulting in Injury
- Hospital-Acquired Pressure Injuries
- Medication Errors Resulting in Harm
- Sentinel Events

2. Employee-Related Harm:

Decrease the overall incidence of the following types of harm by 10 to 20%:

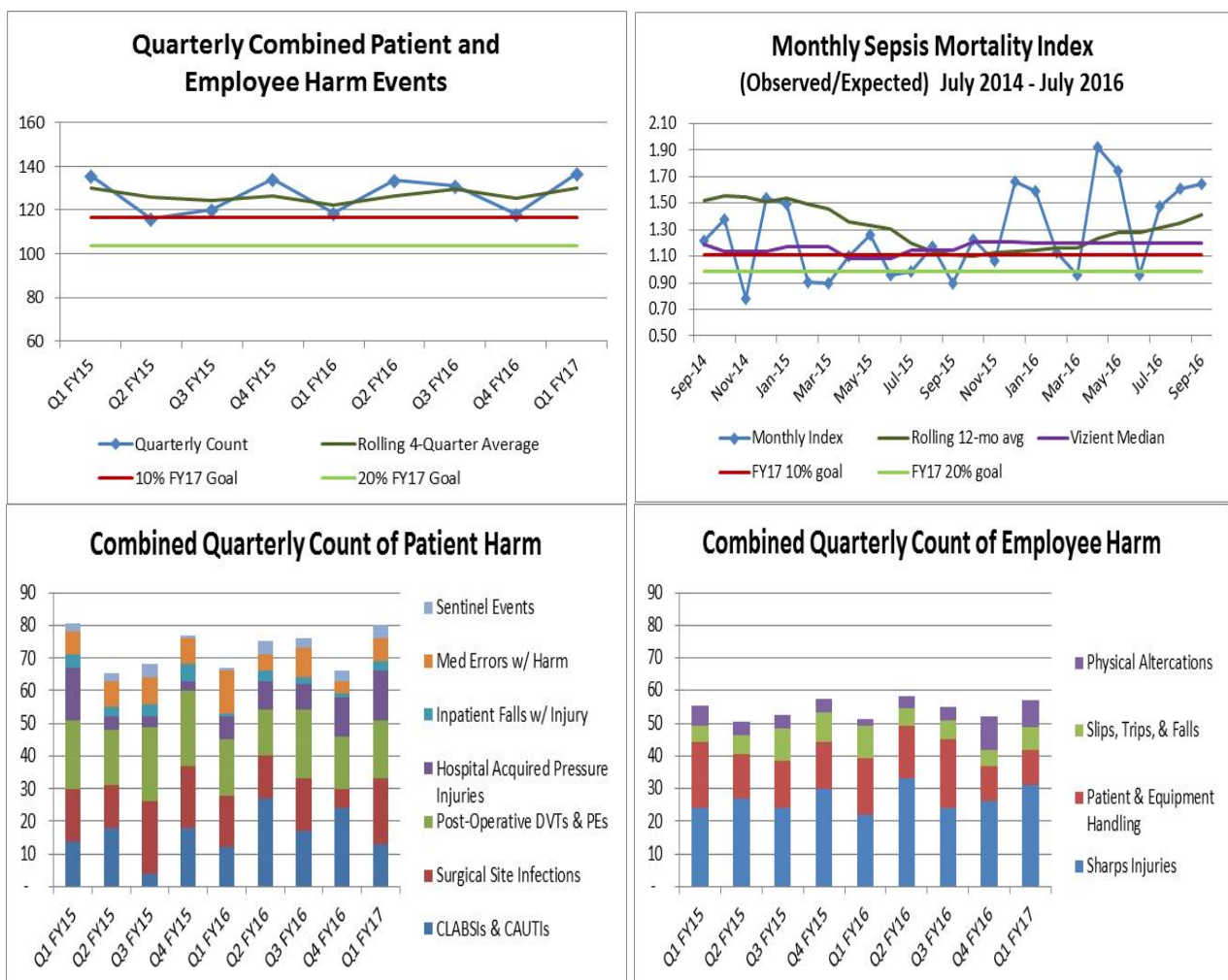
- Sharps Injuries
- Injuries from Patient and Equipment Handling
- Slips, Trips, and Falls
- Injuries from Physical Altercations

3. Sepsis Mortality:

Reduce Sepsis Mortality Index (observed to expected) by 10% to 20%

All improvement targets are relative to UI Health’s baseline performance as of June 30, 2016. For each of these priority areas, multidisciplinary project teams and detailed project plans have been formed and implementation of those plans is continuing.

Performance is being tracked monthly by QSSL, and progress is shared broadly each month throughout UI Health. Our most recent performance is as follows:



Continuing Improvements and Quality & Safety Performance

Many of our FY17 priorities were areas of focus in previous years. Wide-spread involvement and support from leaders and staff across our organization are resulting in continued measureable improvements in these areas, as summarized here:

Priority	Improvement since 1/2016	Improvement since 1/2013
Central Line-Associated Blood Stream Infections (CLABSIs)	2% ▼	58% ▼
Catheter-Associated Urinary Tract Infections (CAUTIs)	No change	43% ▼
Post-Operative Deep Venous Thrombosis (DVT) and Pulmonary Embolism (PE)	5% ▼	39% ▼
Sepsis Mortality Index (Observed / Expected)	11% ▲	16% ▼
Total Inpatient Mortality Index (Observed / Expected)	7% ▼	12% ▼
Hand Hygiene Compliance	2% ▲	34% ▲

Patient Safety & Risk Management

Our Patient Safety & Risk Management team is continuing its work to provide risk identification, assessment, consultation, education, and support to further elevate the safety of UIH care processes and systems.

Risk Identification

Implementation of an updated electronic patient safety reporting system will be completed in December 2016. The enhanced system provides improved data analytics and will allow UI Health to access data from other academic medical centers for comparison benchmarking. Membership in a Patient Safety Organization (PSO) was also completed this year. In addition to being a required element of an Accountable Care Organization, participation in a PSO provides a safe table environment for discussing safety events as well as access to process improvements implemented by other academic medical centers.

Risk Management Consultation and Education

The Patient Safety & Risk Management team provides 24/7 coverage for consultation with clinical and operational leaders and staff. Additionally, senior risk managers are assigned to clinical service lines and attend quality assessments, mortality and morbidity reviews, and staff meetings at both the enterprise- and unit/service level to address risk issues and provide risk-focused education. In May of this year, the Patient Safety & Risk Management internal website was launched. This site provides information to all staff and clinicians on safety and risk topics pertinent to UI Health.

It Really Happens Here, a quarterly risk management grand rounds program aimed at bringing risk event awareness and solutions to staff, was conducted four times this year. Topics included wrong site surgery, sharps injuries, catastrophic medical malpractice cases, and challenges in obstetrics care. In addition, a one-page *Safety Huddle* is distributed to all leaders each month. Each Safety Huddle contains a safety case study, written to facilitate discussions about safety concerns and to communicate lessons learned from and improvements made in response to recent patient safety events.

Risk Management Assessment

During 2016, a comprehensive risk assessment report for Medical Staff Services was reviewed with leadership. Positive accomplishments as well as opportunities for improvement were identified. Executive leadership prioritized improvement opportunities and engaged consultative staff; implementation of these improvements is now underway. In November 2016, an Obstetrics Task Force was convened by executive leadership with the charge of strengthening the Obstetrics patient safety program through prioritization and implementation of recommendations from the 2015 Labor and Delivery risk assessment.

Patient Safety Services

Evaluating the safety of our care processes and systems includes the investigation of patient safety events and sentinel events – patient safety events that result in death, permanent harm, or severe temporary harm. Using an evaluation process aimed at determining the root causes of patient safety events, the Patient Safety & Risk Management team formally investigated 17 patient events in 2016, 13 of which were deemed sentinel events. The most commonly occurring contributing factor identified as part of the root cause analysis (identified in 12 of the 17 investigations) was lack of standardized workflows or variations in practice. The following patient safety events occurred and were evaluated in 2016 (sentinel events are asterisked):

- Event not primarily related to the natural course of the patient’s illness or underlying condition that reaches the patient and results in death or serious permanent harm*
- Fall resulting in harm*
- Medication error with severe temporary harm (2)*
- Microorganism exposure from a medical device
- Pediatric injury
- Physical altercation involving a patient
- Severe maternal morbidity (2)*
- Transfer from Operating Room to Intensive Care Unit
- Unanticipated death of a term infant*
- Unintended retained foreign object following an invasive procedure (6)*

The retained objects included vaginal packing, sutures, guide wires, and a detached portion of a surgical clip. Fortunately, none of these events resulted in permanent harm and most were recognized prior to hospital discharge. Completed process improvements in response to these events include implementation of a team “debrief” immediately following each surgery, and staff

and resident education regarding inspection of objects used during surgery. Expansion of the debrief to UIH's procedural areas will occur in early 2017.

Evaluation of the remaining patient safety events has led to identification and implementation of additional process improvements. These include standardized work flows, definition of standard work to reduce process variation, policy and procedure development and revision, equipment standardization, and staff education.

The Patient Safety & Risk Management team facilitates full disclosure to our patients and families when harm occurs. Team members provide coaching to clinicians preparing for communications with patients and families; they also attend and facilitate patient and family meetings involving communication of adverse events as requested. In addition, the team activates peer-to-peer support for clinicians who have been involved in or affected by patient harm events.

Safety Committee

The Safety Committee is a multi-disciplinary committee whose charge includes improving patient safety through implementing The Joint Commission's National Patient Safety Goals (NPSGs). With assistance from executive leadership, during 2016 the membership of the subcommittees formed to address each NPSG was strengthened by naming executive sponsors and process owners for each goal, formalizing subcommittee members, developing charters and goals, and implementing a plan for ongoing reporting to executive leadership. The focus of the NPSGs includes: clinical alarm management; medication reconciliation; preventing surgical errors; preventing patient identification errors; improving anti-coagulation management; communicating critical test results; improving medication labeling in surgery and procedures; infectious disease prevention; and suicide screening and prevention.

Participation in National Programs

The Director of Patient Safety & Risk Management was appointed to the Advocacy Task Force of the American Society of Healthcare Risk Management this year. The focus of the task force is to review federal legislation and regulatory matters relating to healthcare risk management and to develop advocacy strategies for members. The Director was also selected to serve for the next three years as Vice-Chair of the Academic Medical Centers Risk Network for Vizient, a healthcare member organization comprised largely of academic medical centers whose goals include improving patient safety. In addition, she presented at two national meetings on the topics of healthcare error disclosure and implementing a patient safety organization.

Culture of Safety Survey and Action Plan

We re-administered the Culture of Safety Survey in September 2016, with results demonstrating broad improvements from our last survey in Spring 2015. Each UI Health department, unit, or clinic team will have developed a new Culture of Safety Action Plan based on their team-specific scores by December 31, 2016; our Patient Safety & Risk Management team is leading an organization-wide workgroup to refine UIH's organizational Action Plan by the same date.

UIH Culture of Safety Survey Results 2011 through 2016

HOSPITAL SURVEY	UIH 2011	UIH 2013	UIH 2015	UIH 2016	AHRQ 10th %ile	AHRQ Median	Current UIH %ile
Participants	863	1,124	1,101	1,522			
Teamwork within Units	58%	62%	70%	72%	75%	82%	<10th
Supervisor/manager expectations & actions promoting safety	58%	58%	63%	67%	71%	79%	<10th
Organizational learning - Continuous improvement	56%	60%	64%	68%	63%	73%	25th
Management Support for Patient Safety	53%	55%	55%	62%	60%	73%	10th
Feedback & Communication About Error	42%	44%	55%	60%	58%	68%	10th
Frequency of Events Reported	45%	47%	56%	60%	57%	67%	10th
Overall Perceptions of Patient Safety	45%	47%	49%	53%	55%	66%	<10th
Communication Openness	46%	48%	52%	56%	55%	64%	10th
Teamwork across Units	39%	39%	43%	46%	50%	61%	<10th
Staffing	33%	38%	38%	41%	42%	63%	<10th
Handoffs & Transitions	27%	27%	30%	38%	35%	46%	10th
Nonpunitive Response to Error	25%	29%	33%	36%	35%	44%	10th

CLINIC SURVEY	UIH 2011	UIH 2013	UIH 2015	UIH 2016	AHRQ 10th %ile	AHRQ Median	Current UIH %ile
Participants	183	142	498	584			
Teamwork	61%	61%	73%	71%	69%	90%	10th
Patient Care Tracking / Follow-Up		38%	65%	67%	69%	89%	10th
Overall Perceptions of Patient Safety & Quality		47%	60%	60%	60%	82%	10th
Organizational Learning		50%	61%	61%	57%	83%	10th
Staff Training		54%	61%	61%	51%	77%	10th
Communication about Error	40%	44%	55%	53%	49%	72%	10th
Communication Openness	42%	43%	53%	52%	44%	70%	10th
Office Processes and Standardization		39%	47%	46%	44%	70%	10th
Leadership Support for Patient Safety		44%	49%	46%	44%	69%	10th
Work Pressure and Pace		29%	33%	34%	22%	49%	25th

AHRQ: Agency for Healthcare Research & Quality. Green shading indicates improvement from prior period. Red font indicates decline from prior measurement period.

Quality Performance & Improvement

Our Quality Performance & Improvement team continues to support UI Health in three primary ways:

1. Planning, analytic support, and project management for quality priorities
2. Data collection, analysis, and reporting of required quality performance metrics to external regulatory bodies and managed care programs
3. Expansion of UI Health's "improvement capability and capacity" through clinician education, consultation with leaders and staff, and facilitation of improvement teams

During 2016, the Quality team:

- Has been providing guidance as well as analytic and reporting support for UI Health's participation in the **Great Lakes Practice Transformation Network**, a CMS-funded initiative aimed at assisting clinicians to prepare for effective participation in value-based payment systems.

- Is facilitating UI Health’s participation in Vizient’s ***Sepsis Management Improvement Collaborative***. UIH is one of 22 academic medical centers and one of 71 hospital teams sharing data and best practices with the stated goal of improving timeliness and effectiveness of sepsis identification and treatment. Participation in this initiative will help ensure UI Health’s compliance with Gabby’s Law, new legislation signed by Governor Rauner in August 2016 requiring all Illinois hospitals to meet minimum standards related to sepsis management.
- Collaborated with UI Health Information Services staff, as well as external subject matter experts, to build the appropriate interface, perform data validation, and ensure readiness for required electronic reporting of a subset of quality metrics (known as ***eCQMs***) to CMS and The Joint Commission beginning in early 2017.
- Provided continued project management for UI Health’s second year of participation in the ***Illinois Surgical Quality Improvement Collaborative***, funded in part by a Blue Cross Blue Shield of Illinois grant. The major 2016 project completed through this initiative was implementation of a post-surgical “debrief” to improve communication among team members in the operating room and to improve documentation for every procedure. As a result of this effort, the accuracy of documentation of surgical wound classification improved from 47% to 99%. Concurrently, the Culture of Safety Survey results for Perioperative Services increased by 16% for Teamwork within units, 14% for Feedback and communication about errors, and 8% for Communication openness.
- ***Broke new ground with the 6th Annual Quality & Safety Fair***, with participation levels almost triple those of the past two years. There were 64 poster submissions describing a wide variety of initiatives resulting in improvements in processes, systems, care, and outcomes. Teams from 4 of our health sciences schools - Medicine, Nursing, Pharmacy, and Public Health - joined dozens of UIH multidisciplinary teams in highlighting improvement work that ranged from clinical topics like antimicrobial stewardship and blood clot prevention to technology applications like biometric analysis to improve the quality of CPR administration and innovative use of low-cost digital resources to improve pharmaceutical safety and efficiency.

Accreditation & Clinical Compliance

The Accreditation & Clinical Compliance team facilitates ongoing readiness strategies to promote compliance with standards for accreditation by The Joint Commission (TJC), as well as other regulators including the Centers for Medicare and Medicaid Services (CMS) and the Illinois Department of Public Health (IDPH).

Methods utilized include risk assessments, improvement action plans, “tracers” (where patients and processes are followed through their normal course to analyze our systems of providing care, treatment, and services), team environmental rounds, staff huddles (brief regular meetings, for

example at the start of each shift, where key information is shared with the entire team), policy development, an accreditation website with resources, and various education programs.

In 2016, the Accreditation team supported the following successful site visits in which reaccreditation or recertification were obtained:

- The Joint Commission Hospital Accreditation (includes hospital-based clinics)
- The Joint Commission Laboratory Survey
- CMS Dialysis Recertification Visit
- CMS Reapproval Survey of Organ Transplant Program
- CMS/IDPH Inpatient Psychiatry site visits

The three-year Joint Commission reaccreditation of UIH Hospital & Clinics was achieved the week of November 15-18, 2016 with very successful outcomes and only minor improvement opportunities identified. The lead surveyor for the TJC survey team shared that, over the past 12 months, ours is the only hospital she has surveyed that did not have a “conditional” finding - requiring a follow-up site visit to verify compliance with CMS Conditions of Participation. In addition to validating our compliance with over 1,000 elements of performance, all five TJC surveyors were extremely complimentary of the compassionate care they observed at all levels, the competency of our clinicians, the engagement of UI Health in community outreach and population health, and that 100% of the patients they randomly interviewed enthusiastically praised their caregivers and the care they are receiving.

Infection Prevention & Control

The Infection Prevention & Control team’s 2016 priorities included:

- Maintaining our improvements in **hand hygiene, central-line-associated blood stream infections (CLABSIs), and catheter-associated urinary tract infections (CAUTIs)**
 - CLABSI reduction efforts focused on 8W Blood and Marrow Transplant unit
 - CAUTI reduction efforts focused on 6E Neurosurgical ICU and step-down unit
- Assisting the successful development and implementation of a **mandatory influenza vaccination program** for all UI Health employees that achieved 100% compliance (5,250 out of 5,250 employees) during the 2015-2016 influenza season (October 2015 through March 2016).
- Launch of a **Surgical Site Infection multidisciplinary workgroup** with focus on Orthopedic and C-Section infections, and completion of the following:
 - Major ventilation system renovation to ensure proper temperature and humidity of sterile processing areas
 - Renovation of sterile processing and scope storage area in central core of surgery
 - “Back to Basics” education on infection-related fundamentals for all OR personnel
 - Revision of pre-operative patient education materials and processes

- Detailed **analysis of each healthcare associated infection** to identify patterns, trends, and opportunities for improvement
- Improvement and standardization of **isolation signage** throughout UIH's inpatient and surgical areas
- Enhanced reporting and dissemination of **infection-related performance data**
- Collaboration with Bed Control to improve **proper patient placement** and throughput
- Launch of a **multi-disciplinary team to focus upon High Level Disinfection (HLD)** and sterilization of equipment to standardize practice in all areas using reusable equipment
- Continued **partnerships with leaders and staff** to improve infection control practices and to educate patients and our workforce on key infection prevention topics

Supporting our Education and Research Missions

Our Quality & Patient Safety teams continue to provide support, consultation, and facilitation for the important body of work that collectively comprises UI Health's performance improvement journey. Some examples include the following:

- We are partnering with the College of Medicine to ensure successful implementation of the new Association of American Medical Colleges (AAMC) Entrustable Professional Activities (EPAs), primarily EPA13: Identify system failures and contribute to a culture of safety and improvement.
- We redesigned and deliver all course content on Quality and Patient Safety for the School of Public Health's MHA and Clinician Executive MHA programs.
- Our leaders and staff also continue to provide frequent classroom training for undergraduate and graduate programs at most of our health sciences colleges.
- We contributed to a number of successful grant proposals in 2016, and are actively partnering with grant-funded initiatives including PaRTNER, CAPriCORN, the Great Lakes Practice Transformation Network, and a HRSA post-doctoral training grant with the College of Dentistry.
- We continue to offer training to leaders and staff throughout our hospital and clinics on Improvement Methodology and basic improvement tools and techniques.
- A Leadership Book Club established last year continues to serve as a forum for leaders across departments and disciplines to learn together and support each other through the challenges and successes of our efforts to improve care and outcomes at UI Health.

Improvement in US News & World Report (USN&WR) Rankings

In 2016, UIH improved in the US News & World Report "Best Hospitals" rankings to #8 in both the Chicago metropolitan area and in the state of Illinois. (There are 69 hospitals in Cook County and 210 in Illinois.) The biggest driver of our improved ranking is improved patient survival, especially as a result of the successes we have had in reducing sepsis mortality, post-operative blood clots, and hospital-acquired infections.