

Report on the Quality of Healthcare Provided at the
University of Illinois Medical Center
to the
University of Illinois Board of Trustees: January 20, 2011

The University of Illinois Medical Center (UIMC) engages in numerous dynamic programs to improve the quality and safety of care across the organization. This report briefly describes the overall framework employed to evaluate and improve patient care outcomes across the medical center. It highlights in more detail the success of selected interdisciplinary medical center teams involved with national “pay for performance” measures established by the Joint Commission and the Center for Medicare and Medicaid Services (CMS).

General Scope and Background:

Key quality initiatives broadly engage physicians, nurses, administrators, other clinicians, as well as safety, quality, and computer information experts. Some salient features include:

- The Medical Staff consists of 20 Clinical Services while Hospital and Ambulatory Operations have an additional 23 units. Each unit has developed its own Quality Improvement (QI) plans, indicators, and reporting requirements within the overall scope of our program.
- These Medical Staff & Hospital Committees report up through the Hospital Executive Staff on its way through the CEO to the Board of Trustees. This report to the Board of Trustees is required by our accrediting bodies.
- A few of the initiatives include:
 - Intensive Care Unit (ICU) Quality Improvement Teams focused on infection reduction.
 - Managed Care programs focused on quality/incentive measures established by health care payers.
 - Core Measure Quality Improvement Teams function across the departmental structures to assure that we address National Quality Alliance goals. There are financial incentives for participation in such programs.
 - National Patient Safety Goal Teams work across departments and units to meet regulatory requirements established by federal agencies and accrediting bodies.
 - Tracer Teams and Safety Walk-Arounds tools used to identify current practice and policy issues with front line care providers

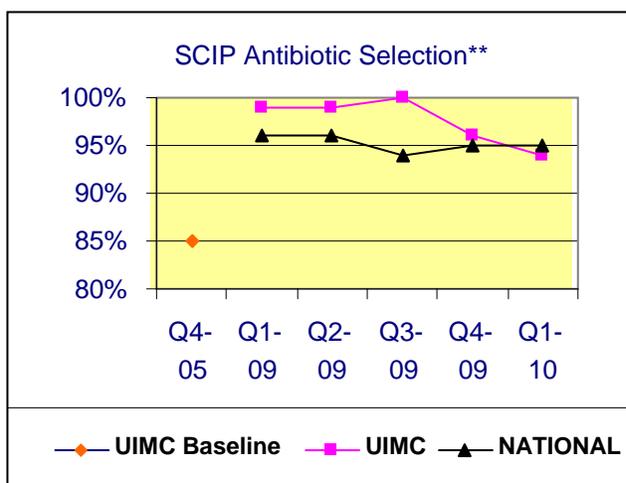
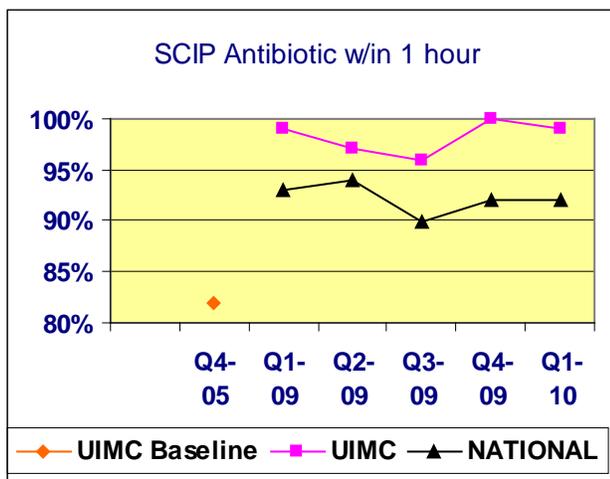
The remainder of this report will highlight the work of the Joint Commission Core Measure Teams, which have implemented significant redesign of patient care delivery processes to meet and exceed national benchmarks:

Surgical Care Improvement (SCIP) Team:

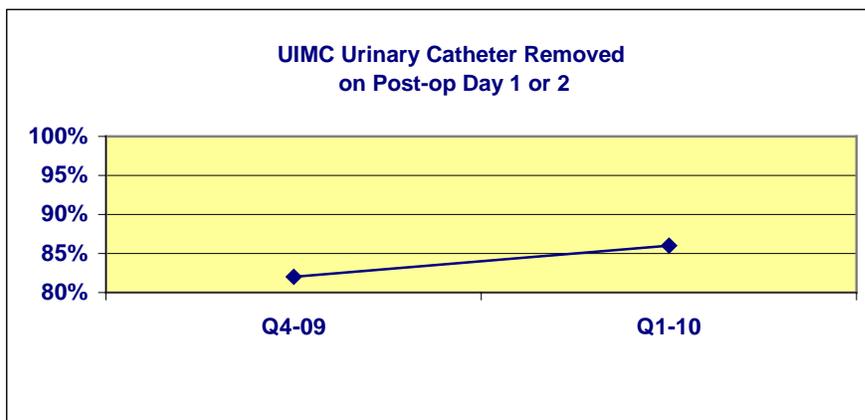
This team works on issues arising in the perioperative period, and is currently focused on reduction of hospital associated infections in surgical patients. This team has done extremely well with multiple initiatives proven to prevent infections and complications with surgical procedures. Timely administration of antibiotics improved from 82% to 99%, and optimal selection of antibiotics improved from 85% to 94%. Compliance rates for these measures during the past 12 months meet or exceed national benchmarks. A new measure, compliance with urinary catheter removal on post-op day 1 or 2, is at 86%.

Strategies the team initiated include:

- Strong leadership communication from Anesthesia, Infection Control, & Chief of Safety to all Surgical Services and the Operating Room Committee
- Standardization of practice via guidelines, order sets, operating room medical record forms, education, and daily clinical operations
- Feedback to individual surgeons on outliers- any case not following protocol
- Standardized pre-operative skin preparation using chloraprep, a highly effective antiseptic solution
- Patient instructions on preoperative showers with chlorhexadine, a wash which has been demonstrated to reduce subsequent infection rates.



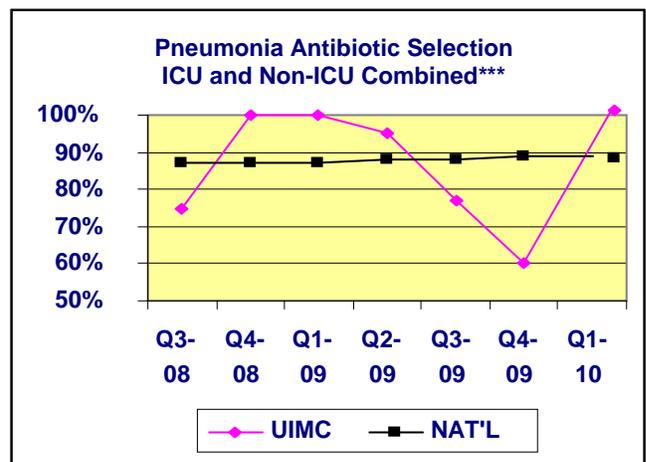
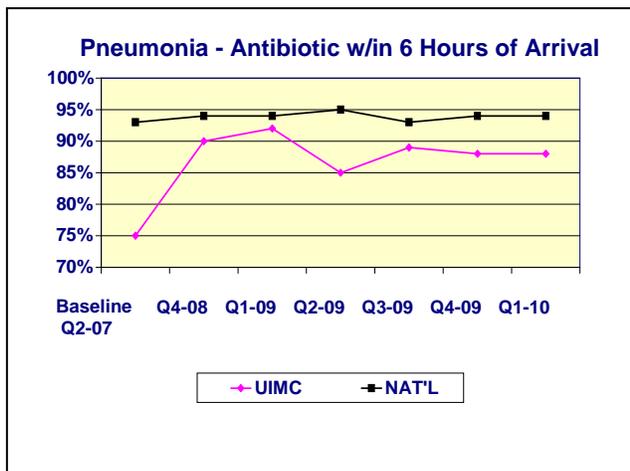
**SCIP antibiotic selection requirements changed effective Q4 of 2009; though compliance dipped in Q1 of 2010, subsequent education of staff has resulted in a return to 98% compliance in Q2.



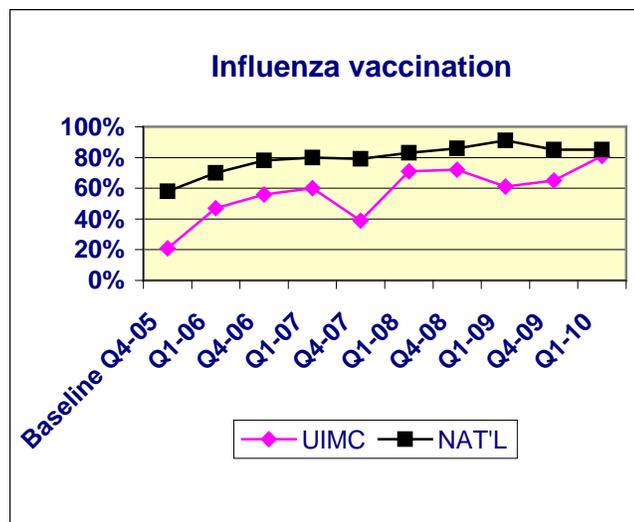
*National benchmarks are not set until a minimum of 4 quarters of data is available. The current state benchmark is 85%. Work is underway to create order sets for each surgical specialty to remove the catheter on day 1 or 2, an infection prevention strategy.

Pneumonia QI Team:

Pneumonia represents the 5th leading cause of death in the United States in patients 65 years and older. Rapid diagnosis and antibiotic treatment within six hours of patient arrival in the Emergency Department (ED) is a national goal designed to reduce mortality. The Joint Commission is in discussions with CMS to adjust the timeframe for this measure to within 24 hours of admission on the basis of recent scientific evidence. Note that 100% of our 2008-2009 pneumonia patients received antibiotic treatment within 20 hours, well below the proposed new timeframe. 88% of all doses were administered within six hours of arrival, with a 54% decrease in variation in 2009 from 2008. A patient with pneumonia who is admitted to the ICU should receive a different set of antibiotics from a non-ICU patient. Small numbers of pneumonia ICU patients skew the overall compliance rate. For 5 of the past 6 quarters, 100% of non-ICU patients have received the optimal antibiotics. Perhaps most challenging is the influenza vaccination: despite a rise in rates from 20% to 81%, we remain 8% below the national benchmark. Strategies to close the gap include increased pharmacy coverage, nursing education and revisiting the current physician policy to defer vaccinations while patients are in the intensive care unit.

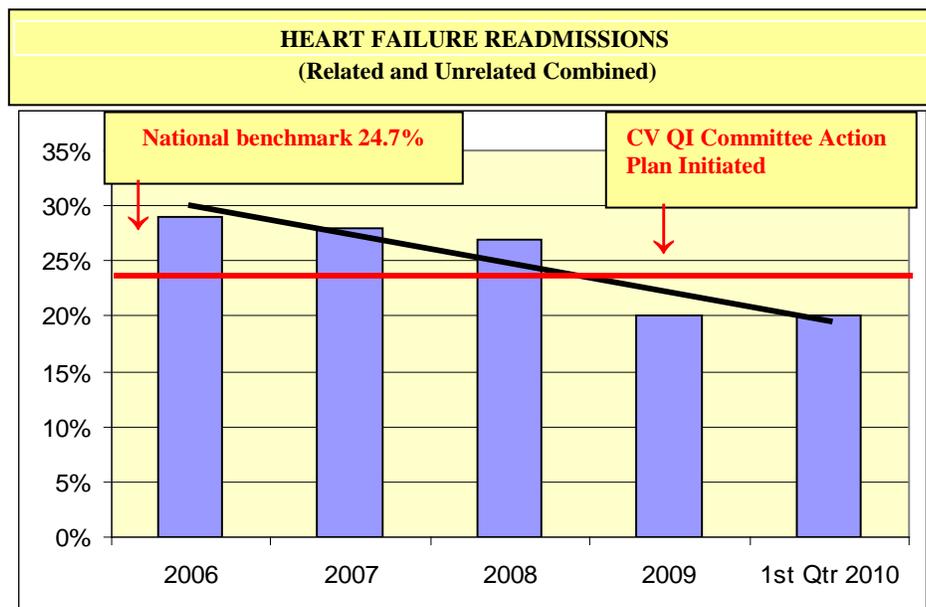
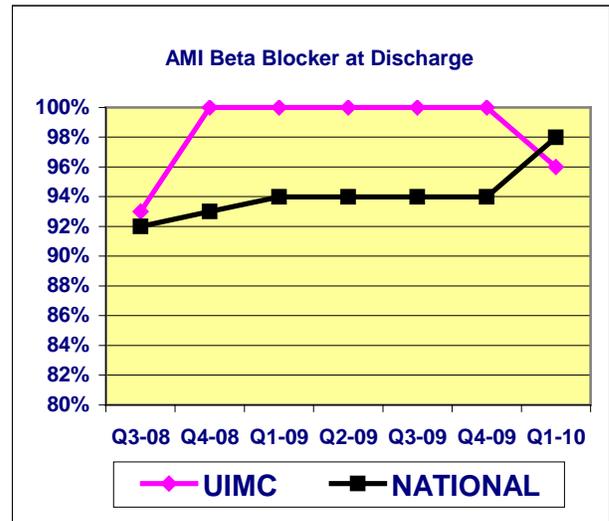
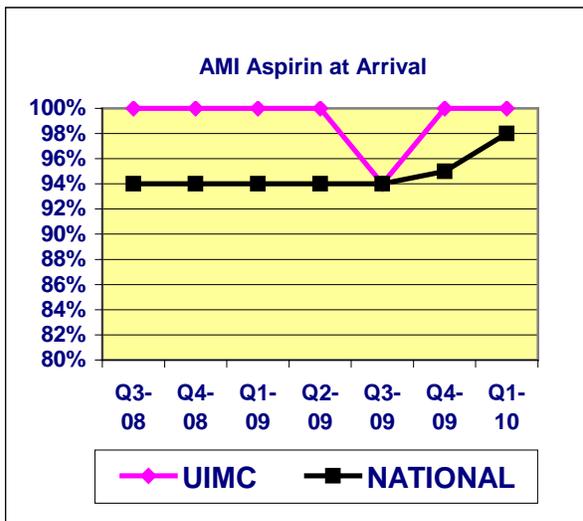


***Antibiotic selection for non-ICU patients averaged 97% for the past 4 quarters, well above the national benchmark of 91%. The only cases which fall below benchmark are ICU patients, (0-3 per quarter) for whom UIMC clinicians prescribe antibiotics based on individual patient history and co-morbidities, as the evidence for this CMS standard is equivocal.



Cardiovascular QI Team:

This team focuses on the treatment of heart attacks and heart failure. Due to improvements implemented by this team, all measures for these conditions except catheterization within 90 minutes of arrival to the hospital have achieved 92-100% compliance. The volume of patients who meet the requirements for inclusion in this measure is minimal, so that a single outlier can produce a compliance rate of 66-75%. The administration of aspirin at arrival and a beta blocker at discharge are two measures with proven clinical benefit. (See below.) Our 12-month average for these measures is 98% and 99% respectively. An outcome measure which has received increased attention is hospital readmissions. CMS looks at patients with heart failure who were readmitted to the hospital for heart failure or any other medical diagnosis within 30 days. Illustrated below are the effects of the improvement processes put into place by the Cardiovascular QI team to reduce the number of heart failure patients readmitted for any reason. Post-discharge follow-up strategies include phoning the patient 24-48 hours after discharge to check on well being, facilitating the patient having appropriate medications at the time of discharge, ensuring understanding of new medication protocols and early warning signs, and arranging a follow-up visit with their physician within 7 days (or sooner, if indicated.)



Imaging Efficiency QI Team:

The National Quality Forum (NQF) and Center for Medicare and Medicaid Services (CMS) have identified select imaging procedures with high utilization patterns suggestive of unnecessary and redundant services. There is concern that patients are exposed to radiation levels beyond what is necessary. Additionally, unnecessary and/or redundant testing contributes to high health care costs. Four measures have been identified: MRI of the lumbar spine for low back pain, mammography follow-up rates, use of contrast in the thorax CT and use of contrast in the abdomen CT. A review of UIMC’s utilization rates for these measures showed all were within acceptable range except the abdomen CT. The Imaging Efficiency QI Team drilled down to identify specific clinical services with high utilization rates. Physician leadership of these service lines was advised of patient risks, resulting in sustained practice change reducing patient exposure. In some cases, dual or redundant CT scans (with and without contrast) are appropriate, which is why the benchmark is not zero.

