2014 Gage Awards

Reference #	7491226
Status	Complete
Name of hospital or health system	JACOBI MEDICAL CENTER
Name of project	The Drive Towards Zero Catheter Associated Urinary Tract Infections (CAUTIs) - Eliminating Harm
CEO name	William Walsh
CEO approval	Check here to confirm that your CEO approves of this project being submitted for a 2014 Gage Award
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Within which of the two categories does your application best align?	Quality

1. Provide a brief description of the project. (This section should resemble an abstract for a poster presentation or an abstract for a peer reviewed journal. Include an objective, data sources, study design, findings, and conclusions.)	Objective– Overall goal is to decrease the number of patients harmed by Catheter Associated Urinary Tract Infections (CAUTIs). The secondary goal is to improve interdisciplinary communication that results in eliminating risk and harm to patients. Background– There are an estimated 1.7 million healthcare associated infections in the United States each year. Urinary Tract Infections (UTIs) are the most common healthcare associated infections accounting for 30% of nosocomial infections. The majority of UTIs are caused by indwelling urinary catheters. CAUTIs are associated with increased risk of morbidity, mortality, increased length of stay and increased hospital cost. Importantly, they lead to unnecessary use of antimicrobials and subsequent resistant organisms. The removal of foley catheters is a SCIP indicator. Methods- A multidisciplinary workgroup met in August 2012 to examine our CAUTI data, identify gaps in practice and implement evidence based solutions. The goal was zero CAUTIs and progress was tracked and data displayed with the help of run and pareto charts. A list of appropriate urinary catheter indications was generated using evidence found in the literature. The emergency room, critical care units and medical floors updated their criteria for insertion of urinary catheters. Unit based nurse and physician champions (Dyad model) were identified to drive and sustain change with respect to appropriate indications and early removal. With the help of hospital leadership, education was imparted to healthcare providers regarding importance of CAUTI as a system wide problem, indications for foley insertion, time for removal, re-insertion, etc. Patients and families were educated on admission. Grand rounds on the perils of catheter associated urinary tract infections and the teamwork required to achieve zero CAUTIs were given. CAUTIs identified using the NHSN criteria. Every CAUTI was reviewed in real time with the clinical team to identify gaps and areas for improvement. An algorithm was developed for the bladder scanner and used as a tool to avoid unnecessary reinsertions. To encourage removal of urinary catheters on a daily basis in the ICUs and on the medical floors a daily review of necessity occurred with the team. In addition reminders for patients with indwelling catheters at 3 days were given to both the nurse and the physician to raise awareness. Bi-weekly meetings and plan – do – study – act (PDSA) cycles were held with the inter-disciplinary teams to review data and address issues that may need immediate attention. Results- There was over a 65% reduction in CAUTIs in the first 3 quarters of 2013. There was over a 20% reduction in indwelling catheter days in the first 3 quarters of 2013. There is an increased awareness of indwelling urinary catheters and CAUTIs in clinical areas, thus instilling a sense of ownership at the level of units.

1A. Attachment, if applicable (Applicable examples include a peer reviewed journal article, other content published in the literature, or a presentation at a national meeting)	GAGEAWARDPoster22.pptx (293k)
2. Describe the methods use in this project. Include where, why, and how the project was accomplished.	Methods Using the breakthrough technology, we conducted a hospital wide Rapid Improvement Event (RIE) in August 2012. This consisted of a cross functional interdisciplinary team, who set the goal of Zero CAUTIs. Very early on, standard work / clinical competencies for the 3 steps associated with catheter care were established – 1. Indication / Insertion (with patient involvement) 2. Maintenance (with patient involvement) 3. Post removal care (with patient involvement) Systemwide education including those of providers, patients and their families were done as that was identified as a key gap by the multidisciplinary team in CAUTI prevention. Grand rounds on CAUTI reduction were held. On admission to the hospital, patients and their families were educated about foley catheters and their care and early removal. A display board in their room indicated the number of catheter days. Videos were shown on the televisions in patient rooms about catheters,their care and early removal. The emergency room, critical care units and medical floors updated their criteria for insertion of catheters, resulting in less foleys being inserted. Unit based nurse and physician champions (Dyad model) were identified to drive and sustain change with respect to appropriate indications and early removal. TEAM STEPPS tools (CUS, huddle, brief and de-brief) were included into the interdisciplinary care of patients with Foleys. The SICU, MICU and Step Down Units began identifying patients that could have their catheters removed early. Interdisciplinary rounds were a platform to provide feedback about catheter appropriateness with an attempt to reduce catheter days. A bladder scanner protocol was developed and used as a tool during the trial of void to avoid unnecessary reinsertion. IP staff and the Patient Safety Officer reviewed every CAUTI. A root cause analysis was conducted for each infection reviewing the insertion and maintenance. The group worked with NYSPFP colleagues and identified best practices and areas for improvement and these findings were shared with all staff. The Medical Director of Infection and Patient Safety Officer met with the faculty to review monthly cases, discuss opportunities for prevention and education of staff in an effort to reach the goal of zero CAUTIs. Each unit had a poster that displayed the number of days since last CAUTI. CAUTI rates were calculated using device days and patient days as the denominator.

3. Describe the results of the project. What data was used to support improvement results?	Results We were successful in demonstrating decrease in number of catheter days and its impact on the number of CAUTIs (non ICUs / ICUs) and decreased harm and morbidity to our patients. Six out of 15 units (40%) have reached the goal of Zero CAUTIs in 2013. There is projected to be an approximate 15% decrease in the total number of catheter days (less catheters are being inserted and they are coming out in less days). Calendar Year To Date (CYTD) – Till September 2013, there have been 24 CAUTIs compared to 81 CAUTIs in all of 2012 As the device days began to drop across the organization the denominator became smaller, therefore the rates did not reflect the true impact of our success. Subsequently, we also looked at the rates differently to capture the decrease in CAUTIs throughout the institution taking into account our decreased catheter days. We used the standard definition using device days (# of infections / device days*1000), but we also adopted a definition using the number of patient days (#infection/patient days*10,000) to account for decreasing catheter days. This additional data underscored all the great work the team had been doing in reducing the number of CAUTIs and catheter days.
3A. Attachment, if applicable (Only graphically displayed data such as charts will be accepted. Data should include baseline and improvement data)	ResultgraphsforGAGEaward.docx (518k)

4. Describe what happened as a result of the project. Was the improvement related to the intervention? Can the project be duplicated by other organizations?	Conclusions Identifying interdisciplinary “dyads” of physician and nursing leadership to champion clinical changes at the unit level was critical to achieving and sustaining a consistent decrease in the number of Foley's inserted and how quickly they were removed. Establishing a goal (ZERO) that frontline, midlevel and senior leadership expected, helped sustain the change Interdepartmental partnerships (Patient Safety and Infection Prevention, Surgery, Nursing, Medicine) allowed us to achieve more together than we would have alone. Successful interdisciplinary communication where literature is used to define standard work, reinforces evidence based practice. Consistent publication and displaying of results has kept the entire team’s eye on the progress of the plan toward the goal (ZERO CAUTIs), thus instilling a sense of ownership at the level of the units. Our team continues collecting data to measure the success of “standard work” (Foley Catheter Removal Protocol) This Quality Improvement / Patient Safety partnership will continue to replicate this process as we work toward “ZERO” surgical site infections and central line blood stream associated infections. One of our physician champions has been invited to give grand rounds on our work at another institution. Our work has been recognized by the Health and Hospitals Corporation with a plan to distribute this standard work and foley catheter removal forms to other institutions in the corporation.

5. Describe how patients, families, and if appropriate, community was included in the work.	Patient and Family Involvement in CAUTI prevention Patient and family education about urinary catheters was a key gap identified by our multidisciplinary group when we met in august 2012. Frequently, patients and family members request for indwelling catheters as they express preference for catheters, citing convenience or fears of incontinence. We decided to have an inclusive strategy at CAUTI prevention which would consist of patient and family education on admission and a display board in their room letting them know the number of days the foley catheter had been inserted. Short videos educating about catheters, their care and about CAUTIs were played on the televisions in patient rooms. Patients were educated about care of private areas, importance of hand hygiene on the part of the patient as well as the providers, importance of not allowing the catheter to be kinked and regular emptying of urinary bags especially prior to transport. Patients and family members were educated on the signs of urinary tract infection and to alert the providers if they experienced any of those symptoms. It was important for patients to ask their provider about foley removal on a daily basis. Family members were encouraged to speak on behalf of their loved ones if they could not speak or express themselves due to their illness.
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