2014 Gage Awards

Reference #	7492559
Status	Complete
Name of hospital or health system	New York City Health and Hospitals Corporation
Name of project	Reducing Hospital Acquired Central Line Infections Across a Public Hospital System
CEO name	Alan Aviles, CEO
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.)	BACKGROUND: The use of central venous catheters (CVCs) is an integral part of modern health care throughout the world. Serious blood stream infections can occur with the placement of CVC's during a patients hospital stay. These conditions termed hospital acquired central line–associated bloodstream infections, or CLABSI's are associated with increased morbidity, mortality, length of stay and excessive health care costs. OBJECTIVE: Fifteen percent (15%) reduction in the incidence rate and the total number of hospital acquired central line associated blood stream infections within a twelve month timeframe (FY12 - FY13) in all NYCHHC acute care facilities' intensive and non-intensive care units. DATA SOURCE: Center for Disease Control National Healthcare Safety Network (CDC/NHSN). CDC's National Healthcare Safety Network is the nation's most widely used healthcare associated infection (HAI) tracking system. NHSN provides the ability to benchmark progress of infection prevention efforts. STUDY DESIGN: Facility based teams lead by a physician champion and comprised of medical directors, chief nurse executives, physicians, nurses, infection preventionists and executive directors agreed to work together to reduce the rate and number of hospital acquired central line infections based on system wide data driven outcomes. They implemented evidence-based system-wide standardized processes, evidenced based procedures/protocols, data sharing, transparency and culture change. FINDINGS: System-wide goal of a 15% reduction in the rate of CLABSI infection was achieved and surpassed. The total rate decrease was 29.87%. The CLABSI's rate decreased from 2.37 to 1.67 per 1000 central line days. The total number of CLABSI infections system-wide decreased from 154 in FY12 to 109 FY13, 45 less infections. CONCLUSIONS: Consistent adherence to the combination use of the central line insertion bundle guidelines and the central line maintenance checklist yielded a marked decrease in central line infections. Nursing staff voiced being pleased with the change in the culture and the relationship between themselves and physicians. Nurses reported feeling empowered to ask questions and speak up concerning insertion of a central line and the length of time the line was in place. Leadership participation in the project was instrumental and demonstrated a top down team effort between the medical and nursing staff. The standardization of products and processes, data transparency and measurements through information technology created solidarity between facilities as the reduction of CLABSI's became a system wide goal opposed to a single facility goal. No specific intervention by itself appears to be responsible for this overall reduction. Rather, the sequential introduction of improved procedures standardization of products and

	utilizations of technology and data sharing resulted in a decrease in the rate of CLABSI's in acute care settings system-wide. NYCHHC CLABSI rate reduction project demonstrates how a large-scale quality improvement initiative can have a lasting impact on the delivery of care.
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)	Attachment-GageAward.xlsx (17k)

2. Describe the methods use in this project. Include where, why, and how the project was accomplished.	WHERE: The New York City Health and Hospitals Corporation (NYCHHC) acute care facilities intensive and non-intensive care units. The NYCHHC is a $6.7 billion integrated healthcare delivery system with its own 420,000 member health plan, MetroPlus, and is the largest municipal healthcare organization in the country. HHC serves 1.4 million New Yorkers every year and more than 475,000 are uninsured. HHC provides medical, mental health and substance abuse services through its 11 acute care hospitals, four skilled nursing facilities, six large diagnostic and treatment centers and more than 70 community based clinics. HHC Health and Home Care also provide in-home services for New Yorkers. HHC was the 2008 recipient of the National Quality Forum and The Joint Commission's John M. Eisenberg Award for Innovation in Patient Safety and Quality. HOW: The formation of CLABSI reduction project teams at each acute care facilities consisting of a physician champion, medical director, nurse executive, physician, ICU/critical care nurse, an infection preventionist and executive director. The teams were encouraged to include other staff as appropriate such as pharmacists. Each facility identified an infection preventionist who participated in the project and was responsible for the identification and reporting of all hospital acquired central line associated blood stream infections into the CDC/NHSN database. Development a CDC/NHSN data reporting group comprised of facility infection preventionists lead by a corporate super-user/administrator to facilitate data transparency and reduce the time the preventionist spends conducting non-clinical activities. Monthly CLABSI reports were distributed to facility and corporate C-Suite leadership responsible for monitoring of their facility's number of central line infections and the rate of incidence of hospital acquired CLABS infections. Collaboration with New York City Health and Hospitals Corporation Office of Procurement/supply chain, for the development a standardized central line insertion bundle kit to be used system-wide. WHY: The project was accomplished due to a combination of the following efforts: •Baseline measurement and practice observations •Enhanced education and simulation training of physicians regarding proper catheter insertion and addition of 2% chlorhexidine to the central line insertion kit for skin preparation prior to central line insertion. •Enhanced training for nurses on intravenous line site care and maintenance •Customized central catheter insertion kits used system-wide at all acute care facilities. •Evidenced based prevention and maintenance bundles, transparency in quality reporting, team building between nurses and physicians •Training refreshes for the infection preventionists on CDC/NHSN CLABSI surveillance definitions and data entry processes prior to the start of the project

	•Executive leadership buy-in and participation
3. Describe the results of the project. What data was used to support improvement results?	The goal of a 15% reduction over one (1) fiscal year timeframe was achieved. Data submitted by the infection preventionist into CDC/NHSN database was used to support the improvement.
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?	The New York City Health and Hospitals Corporation executive leadership is pleased with the project results and has agreed that the incorporation of facility based physician champion lead teams, the implementation of system-wide standardized processes and evidenced based procedures/protocols, data sharing and transparency exhibits a change in care culture, a reduction in the rate and number of hospital acquired central line infections based on system wide data driven outcomes. Partnerships between the medical, nursing, administrative and executive staff were strengthened as each discipline worked dependently towards the patient goal of a decrease in the rate in which a patient may acquire a CLABSI and the organizational goal of zero CLABSI's system-wide. The positive results of this project demonstrates that the reduction of CLABSI's in ICU and Non-ICU settings can be successfully implemented in a large urban hospital system.
5. Describe how patients, families, and if appropriate, community was included in the work.	As part of ongoing hospital wide patient safety measures, patients and family members were instructed to become safety advocates for themselves. They were encouraged to speak up and remind care givers, visitors and to wash their hands, to voice concerns to their primary physician or nurse regarding the CVA.
Last Update	2013-12-16 08:08:59
Start Time	2013-12-16 07:57:07
Finish Time	2013-12-16 08:08:59