

## 2014 Gage Awards

Reference #	7491060
Status	Complete
Name of hospital or health system	Grady Health System
Name of project	Decreasing Central Line Associated Blood Stream Infections (CLABSI) in Adult ICUs through Teamwork and Ownership
CEO name	John M. Hauptert
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.)

#### Abstract

Title: Decreasing Central Line Associated Blood Stream Infections (CLABSI) in Adult ICUs through Teamwork and Ownership

Objective: While the long term objective is to reach zero CLABSIs in the Medical ICU (MICU) and Surgical ICU (SICU), the initial objective was to reach and sustain National Health Safety Network (NHSN) benchmarks for both units. Once success was achieved in the original units, the goal was to implement this program in other patient care areas of the organization.

Study design: Many activities have been conducted over the past two years, such as, the implementing central line carts, applying the insertion bundle, appointing Central Line Nurse Champions, providing focused MD education, participating in the Comprehensive Unit Based Safety Program (CUSP), and utilizing alcohol port protectors for the IV tubing. Overall, the culture change, which empowered each caregiver to recognize their role in preventing an infection, appears to be the most influential component of the process. This required participation and commitment from the most Senior Executives to the bedside staff.

Conclusions: In the MICU, there has been a reduction of 100% from the 2010 baseline of 14.6 CLABSI/1000 central line days to 0.0 CLABSI/1000 central line days as of October 2013. The SICU has experienced an 81.3% decrease from the 2010 benchmark of 12.8 CLABSI/1000 central line days to 2.4 CLABSI/1000 central line days as of October 2013.

The Leadership, staff, physicians and all involved are pleased with the results and motivated to keep working until we attain and sustain zero CLABSIs. The increased staff engagement and culture change has proven to have a positive effect on patient outcomes.

**2. Describe the methods use in this project. Include where, why, and how the project was accomplished.**

In 2009 the basic components of the central line insertion bundle were implemented, as were the placement of a standardized central line cart on each unit and the use of the chlorohexidine impregnated discs with dressing changes. The primary focus areas for improving the CLABSI rate were the Surgical ICU and the Medical ICU. In 2010, the CLABSI rate in the SICU was 12.8 and the rate in MICU was 14.6. These rates reflected that our bundle compliance was obviously not consistent, our residents (who rotate on a monthly basis) were not well educated on the insertion bundle, and our culture was not focused on patient safety.

After attending a Patient Safety Conference where the Comprehensive Unit Based Safety Program (CUSP) was described, the idea was shared with our organization. A partnership was formed between the Director of Infection Prevention, the Patient Safety and Accreditation Officer and the Director of Critical Care and the team officially joined CUSP in April 2011. Multiple activities have been put in place to support education, practice and compliance. The primary objective has been to engage staff, physicians and leaders through ownership and education, to utilize technology and supplies appropriately and to provide feedback to bedside care providers. A team of nurse representatives from each unit became champions for CLABSI prevention. These nurses perform audits, receive education and are empowered to teach their colleagues on their home units. Compliance with utilization of the CHG impregnated disc and the CHG baths is monitored by the champions. Educational initiatives also target physicians as the process for credentialing and supervision of residents who insert central lines is streamlined within our organization. Policy changes were made to restrict the use of guide wire exchanges. Other departments, such as the laboratory, have stepped up to offer support in this organization-wide goal. The lab phlebotomists now draw all the blood cultures in the ICU, which has decreased the rate of contamination. Ongoing education for nurses, who assist with the central line insertion, is offered quarterly. The charge nurse monitors compliance with central line maintenance and provides real time feedback and corrective action with the bedside nurse. New products are evaluated for added effectiveness in reaching the goal. Alcohol port protectors for IV tubing have been added and further enhanced positives results. These interventions have helped each care giver recognize their role in preventing infection through teamwork and ownership.

<p><b>3. Describe the results of the project. What data was used to support improvement results?</b></p>	<p>The Infection Prevention and Control staff conducts blood stream infection surveillance utilizing CDC NHSN definitions. In the MICU, there has been a reduction of 100% from the 2010 baseline of 14.6 CLABSI/1000 central line days to 0.0 CLABSI/1000 central line days as of October 2013. The SICU has experienced an 81.3% decrease from the 2010 benchmark of 12.8 CLABSI/1000 central line days to 2.4 CLABSI/1000 central line days as of October 2013.</p> <p>RCAs are compiled and reviewed in the monthly CUSP meeting. Each harmed patient is discussed by the team and any defects are identified. This personalization of the data has promoted the change in culture.</p> <p>The data is shared monthly with the clinical areas, Infection Control Committee, and Medical Executive Committee. This data is also presented to the Executive Leadership during the Quarterly Goals Review and the Board of Trustees.</p> <p>Several barriers were encountered throughout this improvement process. Competing priorities could have distracted the team, but the structure of the monthly CUSP meetings and the Senior Executive involvement helped to maintain the focus. Empowering the nursing staff to stop procedures when the bundle was not met was difficult, but over time the nursing staff has grown to trust the support of the Chief Medical Officer and Unit Medical Directors. Lastly, the team needed to alleviate the fear of making the data transparent. The CUSP team worked closely with Public Relations to develop the method of posting results. Positive results have proven to be a motivating factor in sharing this data.</p>
<p><b>3A. Attachment, if applicable (Only graphically displayed data such as charts will be accepted. Data should include baseline and improvement data)</b></p>	<p><a href="#">GAGECLABSIData4.pptx (134k)</a></p>

<p><b>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?</b></p>	<p>Part of the effectiveness of the CUSP team is that each person on the team is on equal standing, despite the position they hold in the organization. Early in the development of the team, leaders stood back, not wanting to assume the lead. The meeting was more of a free flow discussion. Action items were not clearly defined and follow up was not delineated. Soon it became obvious that the discussion required the elements and structure of an effective meeting, such as an agenda, a leader and a recorder. The Unit Director assumed the position of the leader, in that she developed the agenda and assured follow up on action items. The staff nurse assumed an active role in reviewing the root cause analysis on any patient with an infection and became much more vocal in general. The organization leaders who are members of the team, assumed a supportive role. The gradual transfer of leading the meetings from the unit leaders to the front-line nurse reinforced the empowerment and ownership of the unit staff and has further enhanced the culture change. Visible participation and support from the top down to the bedside resulted in the organization understanding that this initiative was a top priority. The structure of the CUSP teams brought the right skill mix of individuals together to implement change. Having key people with the authority to make decisions allowed the teams to progress without delays. The ultimate change in these units as a result of these activities has been a true adoption of a culture of safety. All are more aware of how their day to day activities affect patients' lives. The focus in each meeting is all about the patient and improving outcomes. When an issue is identified, it is viewed as an opportunity for improvement, not punitive to the staff. CUSP teams have now been spread to other units in this organization such as Neuro ICU, Burn ICU, and Intermediate Care. As challenges are identified and resolved, new assessments are conducted to identify future projects. This program is easily duplicable in other units as well as other organizations because the emphasis is to identify what the culture of safety is and how it can be improved in each area. Because all healthcare organizations strive to improve patient care and quality, a culture of safety should and can be a goal for all to possess.</p>
<p><b>5. Describe how patients, families, and if appropriate, community was included in the work.</b></p>	<p>Patients and families are very much involved in the efforts to reduce central line infections. They are taught at the time of insertion to observe all staff for proper hand hygiene and to remind them when an opportunity has been missed. Patients and family are also educated to not touch the line and to notify the staff if signs of infection are observed. Another initiative that was learned through the CUSP program was to post a sign in the unit that displays how many weeks it has been since the last CLABSI. This transparent display of data reinforces the intent to share information so that all involved appreciate their ownership and empowerment.</p>
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