

# Beating the Benchmark: Sustained Success in CLABSI Rate Reduction In a Surgical Trauma Burn ICU



Kristi Wilkins, MSN, RN, CCRN, CCNS; Olivia Lezanski, BSN, RN, CCRN



## Purpose

Describe the core strategies in creating a culture of safety within a Surgical Trauma Burn ICU (STBICU) to improve central line associated blood stream infections (CLABSI) rates that were 6 times above the national benchmark in 2009 to sustaining rates below benchmark in 2012.

## Significance

CLABSIs continue to challenge health care systems across the nation with approximately 41,000 infections occurring each year<sup>1</sup>. Prevention is imperative to decrease hospital length of stay, healthcare costs and risk of mortality.

## Strategies

- Transparent information sharing
- Hardwiring—Review of central line (CL) necessity
- Prompt removal of central lines
- Central line care maintenance audits

## Implementation

### Transparent Information Sharing

- Data discussion at each monthly staff meeting and unit multi-disciplinary Collaborative Practice meeting
- Visible posting of infection-free days and benchmarked rates

### Hardwiring of CL necessity

- Paper version of interdisciplinary daily checklist (3/2009) transitioned to integrated prompts in electronic medical record (2/2011)
- Nursing & Licensed Independent Practitioner (LIP) collaborative discussion in daily patient rounds

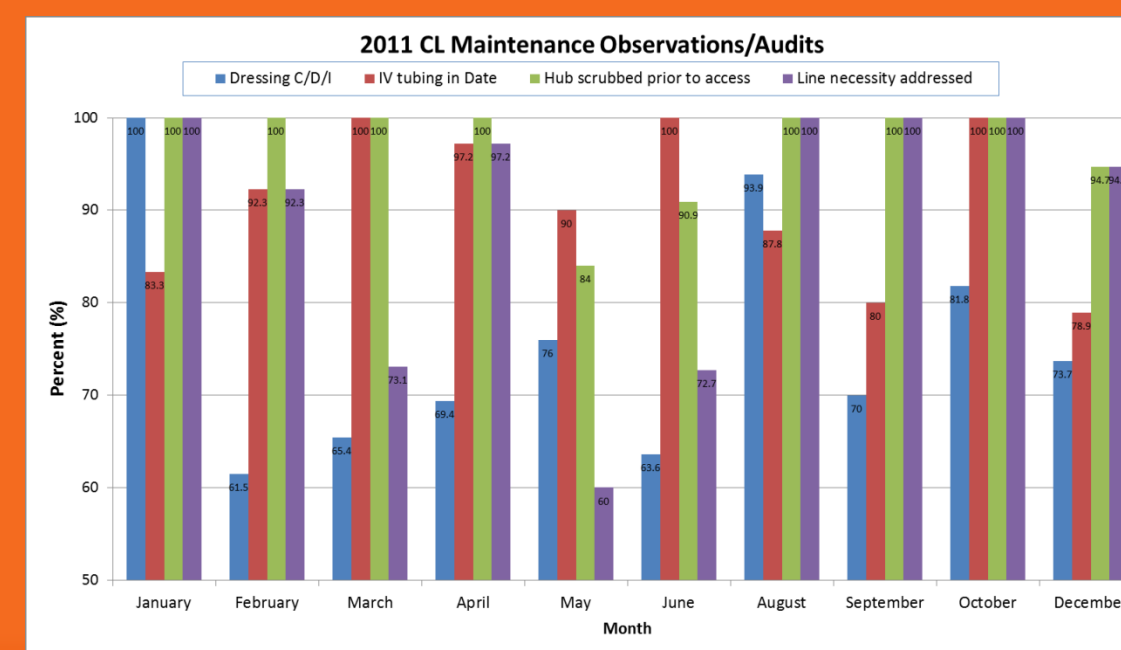
Central Line Maintenance Observations	
Date: _____	Place Patient Sticker Here
Day of Week: Sun Mon Tue Wed Thu Fri Sat	
Shift: Day Night Other _____	
Unit: _____	
<b>SECTION 1</b>	
<p>Was a central line dressing change performed during your shift?</p> <p>If YES, check the most appropriate reason:</p> <ul style="list-style-type: none"> <li>It has been at least 72 hours since the last dressing change</li> <li>The dressing was soiled</li> <li>The dressing was loose</li> <li>The dressing was damp</li> <li>Other (list reason): _____</li> </ul>	<p>If NO, check the most appropriate reason:</p> <ul style="list-style-type: none"> <li>The dressing is fewer than 7 days old and is not loose, damp, or soiled</li> <li>Dressing change should be done but could not be accomplished during this shift because:                             <ul style="list-style-type: none"> <li>Patient off unit</li> <li>The Nurse Forgot</li> <li>Patient too unstable</li> </ul> </li> <li>Other: _____</li> </ul>
<p>Was the tubing (including add-on devices) for a central line changed during your shift today?</p> <p>If YES, check the most appropriate reason:</p> <ul style="list-style-type: none"> <li>It has been at least 72 hours since the last tubing change</li> <li>The patient completed an infusion of blood, blood products, or lipid-containing solutions during this shift</li> <li>Medication long-time expiration occurred</li> <li>Other: _____</li> </ul>	<p>If NO, check the appropriate reason:</p> <ul style="list-style-type: none"> <li>It has been &lt;72 hours since the last tubing change, and the patient was not receiving blood, blood products, or lipid-containing solutions?</li> <li>The patient completed an infusion of blood, blood products, or lipid-containing solutions, and the last tubing change was done less than 24 hours ago</li> <li>Tubing change should have been done, but could not be accomplished during this shift because:                             <ul style="list-style-type: none"> <li>Patient off unit</li> <li>The Nurse Forgot</li> <li>Patient too unstable</li> </ul> </li> <li>Other: _____</li> </ul>
<p>If the tubing was changed on your shift:</p> <p>Were the caps changed with the tubing? Yes No</p>	
<p>Was the central line accessed during your shift?</p> <p>Were caps scrubbed properly prior to access (separately with alcohol swabs)? Yes No N/A (Line not accessed)</p>	
<p>SWAB CAPS:</p> <p>Were caps scrubbed for all appropriate ports? Yes No</p> <p>**Tubing caps used on any port that may be accessed for infusions or blood withdrawal: CL ports, IV tubing/port pump ports (NOT ON PIVs OR ARTERIAL LINES)</p>	
<b>SECTION 2</b>	
<p>Was the necessity to continue the central line addressed during daily rounds? (Document Patient Care Huddle chart)</p>	Yes No

### Prompt Removal of CLs

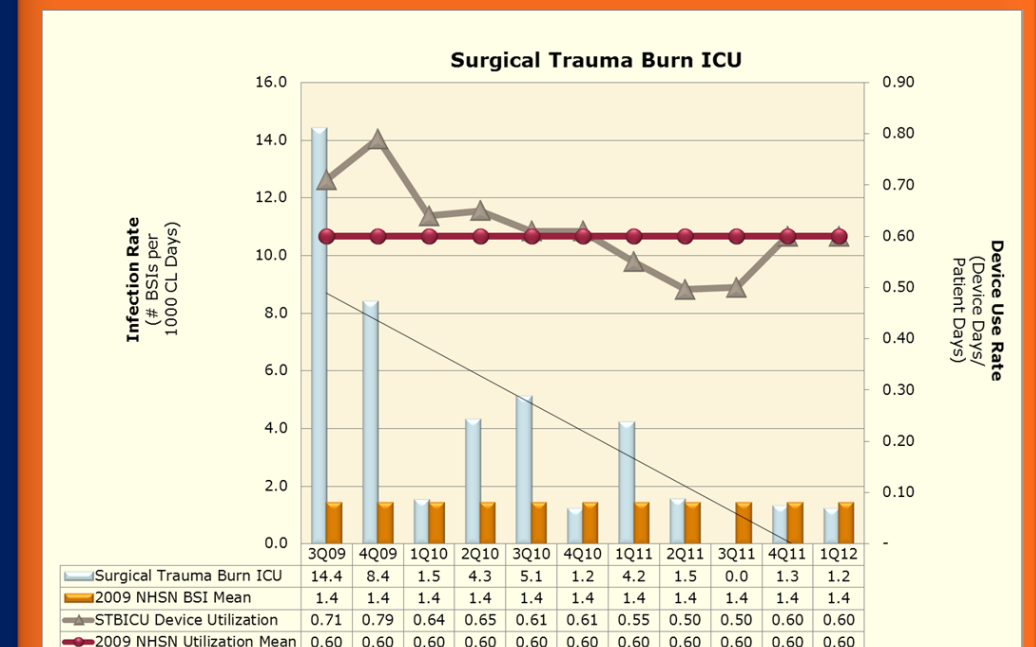
- Removal of emergently placed CLs & OSH lines within 24hrs (hospital protocol -within 48hrs<sup>2</sup>)
- Cognizant effort to utilize PIVs as first-line & proactive placement to facilitate CL removal
- RN competency for CL removal
- “Remove a line a day” philosophy; creative engagement of staff-visual reward program (poker chips representing CLs removed-monetary donation to unit retention funds)

### Monthly Maintenance Audits

- Initiated February 2010-performed by fellow bedside clinician
- Provide in-the-moment education & feedback
- Monthly data posted



## Evaluation



## Implications for Practice

The key strategies implemented within the STBICU are practical and replicable within other surgical-trauma ICUs. Commitment to a culture of safety enables an ICU to successfully reach CLABSI rates below benchmark. In addition to ongoing diligence and constant awareness, considering the learning needs of new staff is an important aspect of hardwired excellence.

## References

- 1CDC Vital Signs. Making healthcare safer: reducing bloodstream infections. March 2011. Available at: <http://www.cdc.gov/VitalSigns/HAI/index.html>
- 2CDC Guidelines for the Prevention of Intravascular Catheter-Related Infections, 2011. Available at: <http://www.cdc.gov/hicpac/pdf/guidelines/bsi-guidelines-2011.pdf>

Much appreciation to the staff of the STBICU for their diligence and patient advocacy!