**Champions Changing Practice, Changing Culture: Cultivating Use of the CAUTI Prevention Bundle at Yale New Haven Hospital**

**Aim**
Describe strategies used by Yale New Haven Hospital (YNHH) inpatient unit-based catheter-associated urinary tract infection (CAUTI) champions to establish improvement in CAUTI prevention performance metrics; supporting a culture of quality and safety.

**Methods**
- The CAUTI Performance Improvement Team, through the ongoing use of the “Plan Do Study Act” framework enhanced the CAUTI Prevention Bundle with changes driven by our champions.
- The following timeline of implemented key elements have been sustained (April 2017 - August 2018), reflecting the success of the CAUTI Prevention Bundle across all YNHH service lines.
- Monitoring and tracking is comprehensive through champion observational audits, collaboration with infection prevention in the capacity coordination center, quarterly surveillance audits ( Foley Friday), Epic reports and case reviews. Key elements are tracked by champions as well as the following (Figure 1):

<table>
<thead>
<tr>
<th>Bundle Elements</th>
<th>Tracking</th>
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<tbody>
<tr>
<td>Catheter Insertion</td>
<td>Coordination Center</td>
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<tr>
<td>• Avoid unnecessary catheterization – focused on alternatives to catheterization and concurrence to CDC indications only; added available appropriate alternative products for use</td>
<td>• Unit based champion review of necessity and indications of Indwelling Urinary Catheter</td>
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<tr>
<td>• 2 person crosscheck checklist-automated documentation on EPIC to support practice</td>
<td>• Foley Friday audit</td>
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**Catheter Maintenance:**
- Reducing urinary reflux and catheter migration: Proper positioning, use of securement device; emptying bag prior to ambulation or transfer to procedures
- Perineal and indwelling catheter care practice
- Added elements of CAUTI Prevention Bundle EPIC documentation to support practice
- Conscious culturing-implemented the YNHHS Urine Culturing Algorithm (Figure 2) for appropriate, necessary urine culturing

<table>
<thead>
<tr>
<th>Catheter Removal:</th>
<th>Foley Friday audit</th>
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<tr>
<td>Revised Yale New Haven Health Indwelling Catheter Removal Protocols (Adult and Pediatric) - simplified the protocol based on champion feedback (Figure 2)</td>
<td>Foley Friday audit</td>
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**Results**
Champions support and sustain a culture of quality and safety (see Figure 3):
- With the enhancement of the CAUTI Prevention Bundle, the mean number of catheter days decreased from 4556/month in fiscal year 2017 quarters 3 and 4 to 4286/month in fiscal year 2018 quarters 1, 2 & 3.
- The mean number of CAUTIs per month decreased from 7.2 per month for 2018 quarters 3 and 4 to 4.8 per month for 2018 quarters 1, 2 & 3.
- Urine cultures ordered in catheterized patients decreased by 27% from 78 average monthly urine cultures pre-algorithm implementation to 57 average monthly urine cultures post algorithm implementation.

**Discussion**
- With a focus on changing the culture of quality and safety in the inpatient areas, we noticed improved trends in performance with metrics: indwelling urinary catheter days, number of CAUTIs and number of urine cultures from April 2017-August 2018. This is a result of our comprehensive approach in support of the CAUTI prevention bundle.
- Although we re-educated all staff on the enhanced bundle, we do not feel that education alone created the change. From champion feedback however, we learned that real-life case study reviews in addition to review of the revised bundle was impactful. Champions support physicians in appropriate culturing by reinforcing the culturing algorithm.
- Culture has started to change due to efforts from an interdisciplinary CAUTI Performance Improvement Team using a multifaceted targeted approach including:
  - Engaged CAUTI champions from each unit
  - Administrative support, shared vision (i.e. CAUTI reduction is a visible priority)
  - Standardized process solutions, and timely data feedback

**Implications for Yale New Haven Health**
Changes, efforts, lessons learned and results are shared with Yale New Haven Health CAUTI Prevention Performance Improvement Team which resulted in a revised system policy and practice with ongoing evaluation of CAUTI Prevention Bundle performance outcomes.

**Reference**
Youngerman, Brett E. MD; et al; Reducing indwelling urinary catheter use through staged introduction of electronic clinical decision support in a multicenter hospital system; Infection Control & Hospital Epidemiology (2018), 39, 902–908

**Acknowledgements**
We want to recognize contributors from the YNHHS CAUTI Performance Improvement Team including all CAUTI Champions