

main facilitator identified was a good perception by the housekeeping team regarding the project. We identified several sets of barriers: (1) human resources, such as supervisor executing the cleaning, inadequate sizing of human resources in shifts, reduced scale on Sunday and holiday shifts, and lack of professional replacement for sick leave and vacation; (2) supplies and equipment, such as torn bed linen, insufficient mops, centralized and inadequate dilution of sanitizers causing delays and impacting quality of hygiene; (3) education, such as lack of training program perceived by supervisors (management) and housekeeping cleaners (basic procedures for cleaning) and knowledge regarding who cleans what; (4) motivation and relationships, such as supervisor perceptions that housekeeping cleaners are unmotivated, and this causes absenteeism. The team feels that they are disregarded by doctors, and they have relationship problems with nursing and hospital engineering staff. Also, they are afraid of being physically assaulted by coworkers. Finally, professionals reported the perception that the hospital is not clean enough and that this is related to the short time goals imposed on the staff. **Conclusions:** The main barriers identified were related to education strategies and management of human and material resources. The results will support the intervention phase.

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#### Presentation Type:

Poster Presentation

#### Beyond Bundles in Prevention of CAUTI and UTI's

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**Background:** Urinary tract infections (UTIs) are common health-care-associated infections. Evidenced-based practice (EBP) successes of catheter associated urinary tract infection (CAUTI) bundles has resulted in rates decreasing >50% in community-based nursing homes. The South Texas Community Living Center (CLC SA), our 42-bed long-term care and rehabilitation center, conducts routine infection prevention surveillance. During routine surveillance, the infection prevention team noticed an increase in UTI percentages and CAUTI rates. Thus, we sought to increase compliance with standard CAUTI bundles, and we implemented an intervention called the "bladder bundle." **Methods:** A multidisciplinary team (ie, infection preventionist, clinical nurse leader, simulation director, educator, leadership and frontline staff champions) identified and evaluated practices through documentation of audits and safety rounds during April and May of 2017 (FY19 QTR 3). The comprehensive bladder bundle was initiated in June 2017, based on EBP interventions and included education for staff with audit and feedback. The team reviewed the literature and expanded the bladder bundle to include a comprehensive urinary note and oral hydration program for the veterans in addition to the standard CAUTI bundles (ie, minimize catheter use, use with appropriate indications, consider alternatives to catheters, proper insertion and securement). In May 2018, a facility-wide, hospital-wide initiative focused on a new urinary catheter insertion kit, insertion competencies and perineal care to improve outcomes. This initiative was

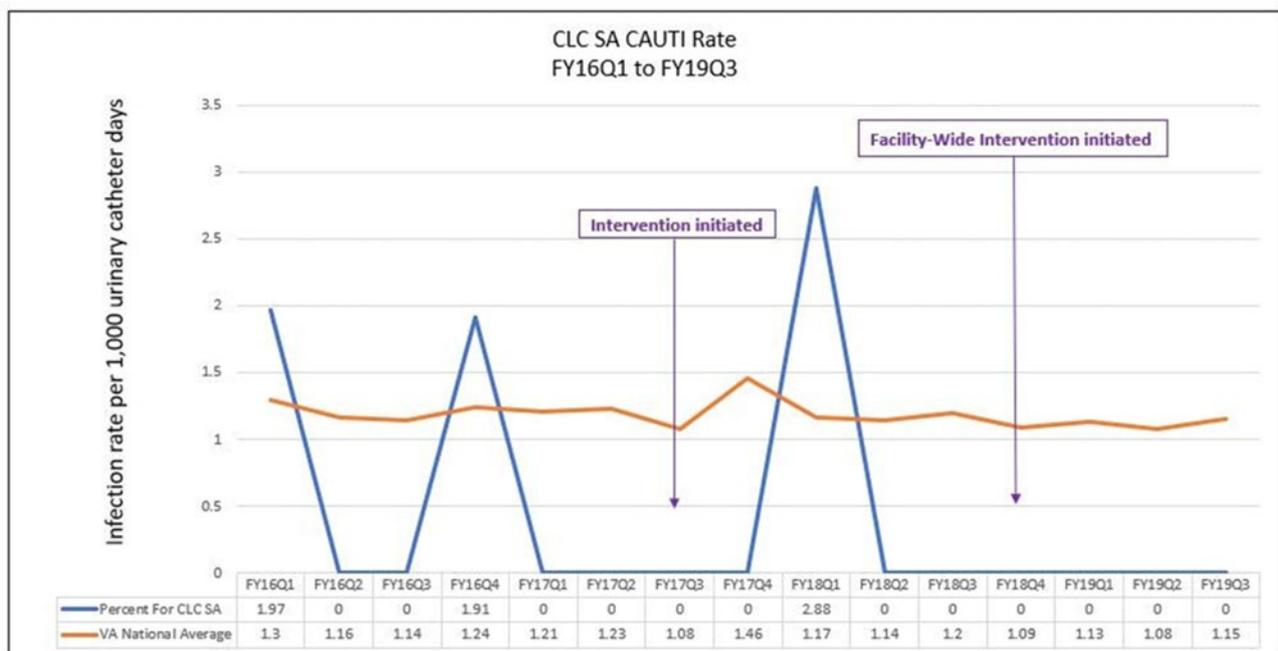


Fig. 1.

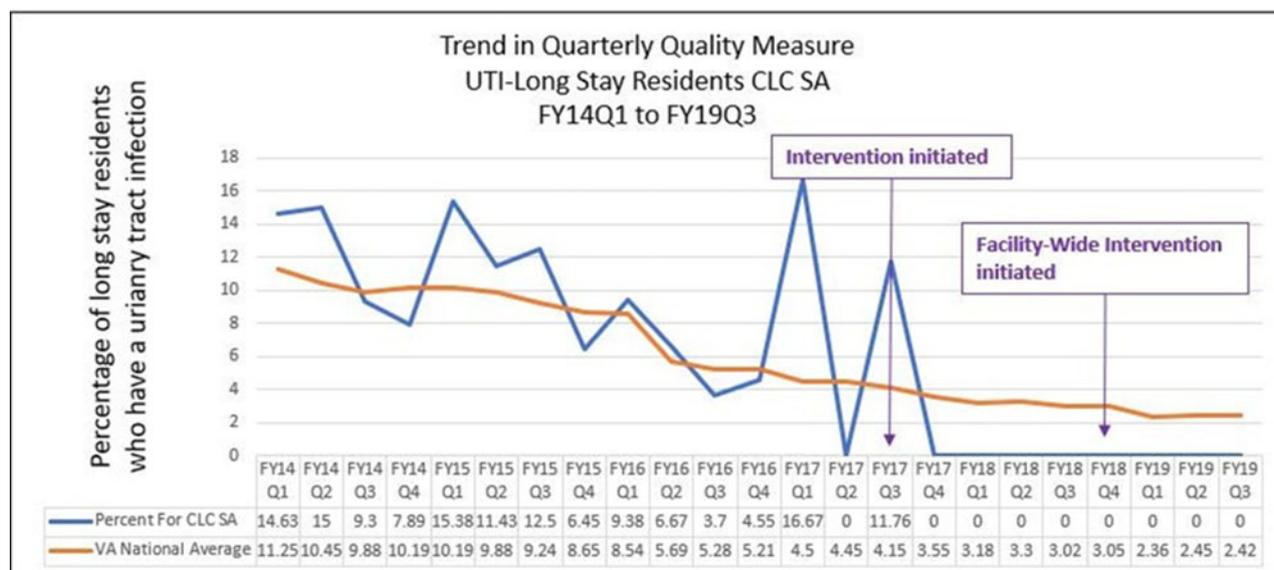


Fig. 2.

added to our bladder bundle for CLC SA. **Results:** Before the intervention (FY16 Q3 to FY17 Q2), percentages of veterans with a UTI had increased to 4.65%, in FY17 Q3, this rate had increased to 11.76%. After the intervention (FY17 Q4 to FY19 Q3) the percentage dropped significantly to 0%, and this rate has now been sustained for 8 quarters. Our CLC SA has remained at zero harm and has no NHSN CAUTI has occurred since October 2017 (FY18Q1). The catheterization in bladder days has decreased from 162 days in FY14 to 49 in FY18, and for the first 2 quarters of FY19, there were only 25 days. For the last 8 quarters, documentation compliance has increased, as has use of BB interventions. **Conclusions:** The continuous improvement project targeted within the CLC SA, with education to staff, audit and feedback tools, and a comprehensive urinary note with the oral hydration program in combination with the standard CAUTI bundles, have improved veteran health outcomes and have expanded provider and nursing practices. The interprofessional team approach enhanced the success of this project.

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#### Blackwater Event: Water Management and Remediation at a Major Medical Center

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**Background:** The CMS and the CDC recommend that all healthcare facilities have an effective water management program (WMP). Our WMP has been in place since 2010; it includes members from facilities operations, infection prevention and control, environmental services, and industrial hygiene. The team meets regularly to discuss current water issues, reviews validation data

and water testing reports. **Description of event:** In April 2018, we suddenly experienced discolored water and sediment at multiple water fixtures throughout the 3.3 million square-foot hospital campus. The hospital incident command structure (HICS) was activated to assist in investigating and managing the situation. **Immediate response:** Water was deemed unsafe while the cause was being investigated. Bottled water was distributed to 950 hospital patients, and >8,000 staff and visitors. The impact included alternative methods for hand hygiene, the use of bottled water for food preparation and drinking, and the elimination of showers for patients and staff. The dialysis unit used an independent water supply that was not affected. **Investigation and remediation:** The hospital had 2 sources of domestic cold water: municipal water and a private well that had been in use since 1912. An investigation revealed that the well pump had malfunctioned, drawing gravel into the potable water supply. This overwhelmed the plumbing, blocked toilets and likely dislodged biofilm from the pipes. Early testing showed high levels of corrosion byproducts (ie, iron, copper, and lead) and bacterial contamination in the water, including presence of *Legionella*. Remediation involved isolating the well, switching to municipal water as the sole source of potable water, flushing the system, and retesting. Overall, 105 technicians flushed the water system including 6,000 water fixtures, 125 drinking fountains, and 95 emergency showers and eyewashes; they sanitized and cleaned 130 ice machines and tested 240 backflow preventers. We retested 437 water samples after remediation; all parameters had returned to the normal range. The existing water process flow diagrams were used to guide sampling for water testing. **Conclusions:** The hospital's water system was brought back on line in 78 hours after the first report of "black water." An active, mature WMP with multiple facilities technicians trained in water sampling enabled a quick response. Coordination through the HICS structure streamlined the response and enabled clear communication throughout the process.

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