

PUBLISHED ABSTRACT

A Multidisciplinary Approach to Reduce Catheter Associated Urinary Tract Infection Rate at Richmond University Medical Center between 2016 and 2018

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Background

Catheter Associated Urinary tract infections (CAUTIs) are one of the most common healthcare-associated infections resulting in increased morbidity, mortality, length of hospital-stay and healthcare costs. The most important risk factor for developing a CAUTI is prolonged use of indwelling urinary catheter. The best way to prevent a CAUTI is to avoid placing an indwelling urinary catheter whenever possible.

Methods

We implemented evidence-based practices in accordance with CDC guidelines to reduce the incidence of CAUTIs. Our strategies included:

1. Educating health care providers with the CDC Guidelines about urinary catheter indications, insertion techniques, maintenance, proper specimen collection and criteria for ordering urine cultures.
2. Nurse driven protocol was instituted to discontinue catheters when no longer indicated. When appropriate external catheters and intermittent catheterization were utilized as alternatives.
3. A Plan-Do-Check-Act (PDCA) model to investigate CAUTI's and factors that may have contributed to them was taken by starting an interdisciplinary CAUTI task force comprising of physicians, nurses and infection control specialists. The task force participated in hospital-wide foley rounds and monthly meetings to review each identified CAUTI to identify any gaps in current practices and discuss ways that we could improve.

Results

1. Reduction of Catheter days from 16211 in 2016 to 11211 in 2017 and to 8867 in 2018.
2. Reduction of CAUTIs from 49 in 2016 to 14 in 2017 and 11 in 2018.
3. Standardized Utilization Ratio was reduced from 1.285 in 2016 to 0.955 in 2017 and 0.794 in 2018.
4. Standardized Infection Ratio (SIR) was reduced from 2.044 in 2016 to 0.92 in 2017 and 0.911 in 2018.

Conclusion

To reduce CAUTI rate at RUMC, we adopted a multidisciplinary approach utilizing PDCA model and CDC Guidelines. As a result of the corrective actions undertaken, we reduced our catheter use by 45.3% and CAUTI rate by 77.55% which resulted in our SIR to drop from 2.084 in 2016 to below 1.0 (National Average) in 2017 and 2018. We will continue to implement new practices to move our institution closer to its goal of "zero" CAUTIs.

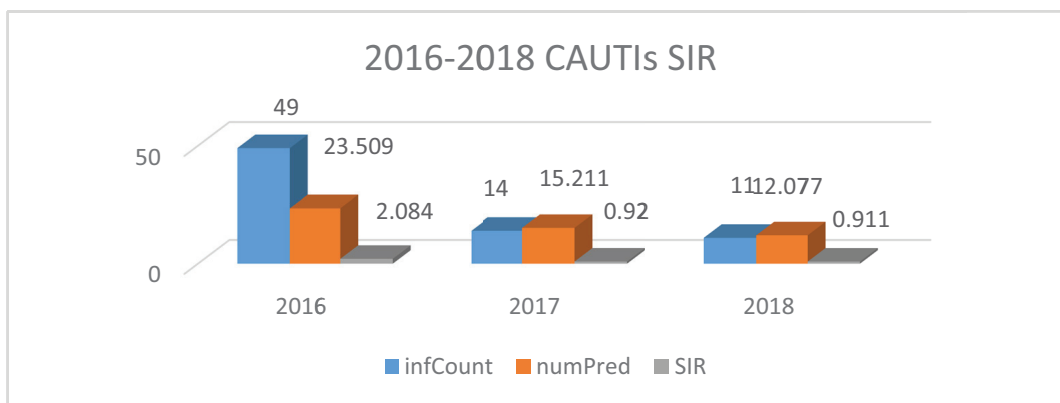


Figure 1.

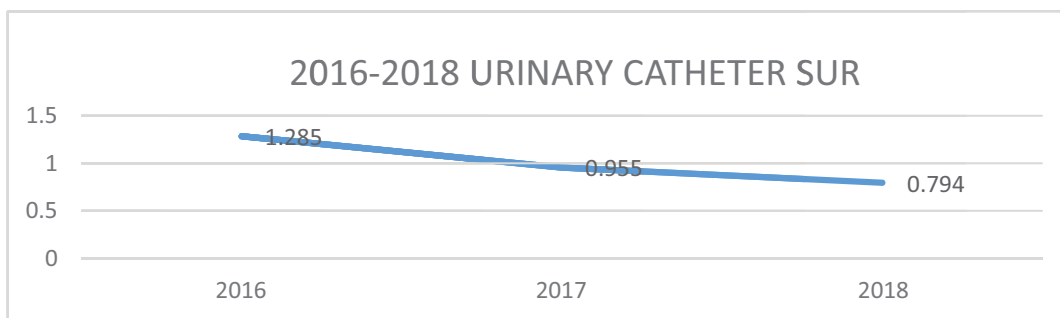


Figure 2.

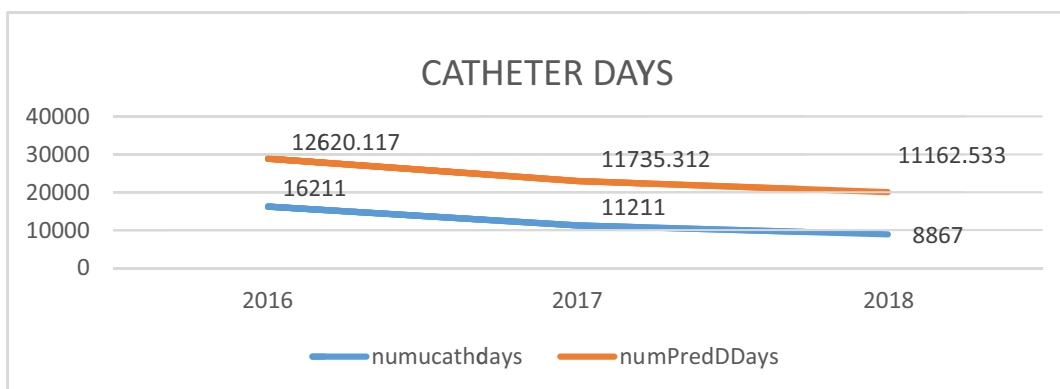


Figure 3.

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