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## INTRODUCTION

Catheter-associated urinary tract infections (CAUTI) are very common healthcare-associated infections in the United States (1). This burden results in hundreds of millions of dollars of excess healthcare costs, with significant associated morbidity and mortality (2).

The majority of CAUTIs are preventable through infection prevention interventions (3). National guidelines recommend cleaning the periurethral area with antiseptic solutions but do not recommend routine use of antiseptics for catheter maintenance (3). However, the lack of recommendation for antiseptic use for catheter maintenance is due to the lack of available evidence to make an evidence-based decision and is not a contraindication.

The objective of this quality improvement project was to evaluate the impact of Theraworx, a novel skin antiseptic, for urinary catheter insertion and maintenance for the prevention of CAUTI in hospitalized patients.

## METHODS

### Study Design and Population

This was a quality improvement project undertaken from June through August 2014 at Euclid Hospital, a Cleveland Clinic Hospital. Ten units participated in the study. The Theraworx Silver First protocol was used for urinary catheter insertion and maintenance (Figure 1).

### Study Definitions

A CAUTI was defined according to current Centers for Disease Control and Prevention National Healthcare Safety Network definitions.

### Statistical Analysis

To evaluate the impact of Theraworx on CAUTI prevention, a statistical process control u-chart (rates over time from a Poisson distribution) was used. Montgomery rules were used to determine special-cause variation on the charts (4). June 2014 was considered a washout period in which training was being conducted and therefore those data were not included in the analysis.

## RESULTS

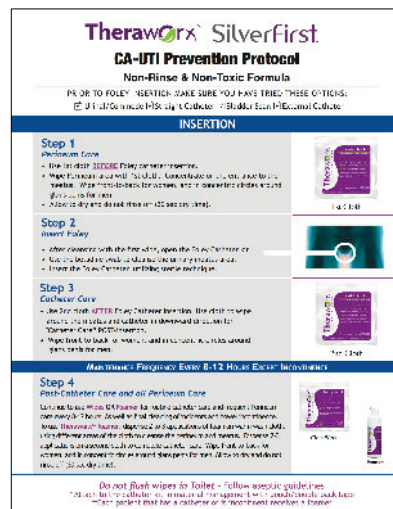


Figure 1: Theraworx Silver First Protocol

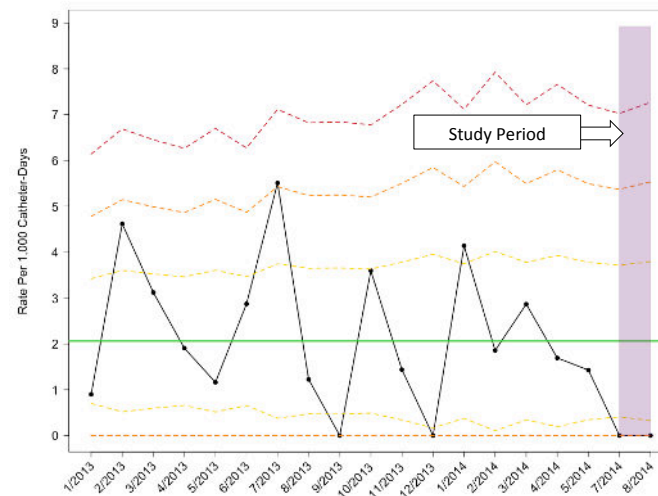


Figure 2: Catheter-associated Urinary Tract Infection (CAUTI) Rate January 2013 – August 2014

## CONCLUSIONS

- ❑ Although no special cause variation was identified on the statistical process control chart, we were able to reach and maintain zero CAUTI after implementation of the Theraworx Silver First Protocol.
- ❑ Theraworx provides many benefits over many other antiseptics including a broad spectrum of activity, pH maintenance, and it is safe to use in the peri-rectal area/mucus membranes.
- ❑ The Theraworx Silver First Protocol may be an effective CAUTI prevention intervention.

## REFERENCES

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