ABSTRACT

The Agency for Healthcare Research and Quality (AHRQ) Central Line Bundle was added to central line care over a six year period to decrease Central Line Associated Bloodstream Infection (CLABSI) rates in the facility. Changes included hand hygiene, maximal sterile barrier precautions upon insertion, chlorhexidine skin asepsis, optimal site selection and daily review of catheter necessity. The bundle decreased infection rates; however the rate did not approach zero after these interventions.

RESULTS

Use of the PICC Team and positive displacement, swabable, clear cap is associated with decreased thrombolytics administration, from 787 doses in 2008 to 342 in 2009, representing a 56.5% reduction in alteplase use and a cost savings of $93,340 per year. CLABSI rates also decreased from 1.955 per 1,000 catheter days to 0.781 per 1,000 catheter days, representing an 81.1% decrease, improved patient outcomes and annual savings of approximately $511,240 - $693,340.

Infection Rates-Both Facilities

- 2008: 8184 line days, 16 confirmed CLABSI
- 2009: 6843 line days, 342 doses of Alteplase distributed to patient care areas

Safety and Cost Savings

- 2008: 15,059 line days, 787 doses of Alteplase distributed to patient care areas
- 2009: 12,064 line days, 342 doses of Alteplase distributed to patient care areas

CONCLUSION

The clear, positive displacement cap coupled with utilization of a nurse driven PICC team is associated with decreased CLABSI and catheter occlusions. A clear cap with an easily disinfected access port provides visible cues to trigger effective flushing and disinfection practices.