

# Cap the Connector: Save the Patient

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## Purpose

- Intraluminal central line (CL) contamination is likely the biggest remaining barrier to getting to zero central line associated blood stream infection (CLABSI) rate
- Performing proper asepsis on needleless connectors (NC) is very difficult
- Compliance with “Scrub the Hub” falls far short of the 15 second pre-access recommendation despite significant efforts at education
- This study evaluated the effect of a passively engineered solution to keep NC sterile between accesses

## Methods

- Retrospective, multicenter study
- Study Period 6/09 through 5/11
- 12 diverse hospitals with full range of floor and ICU care
- Looked at before and after CLABSI rates following disinfection cap introduction
- Data collected by hospital Infection Control team – Standard CRF



## Statistical Analysis

The Wilcoxon test was used for comparisons pre and post IPAC use within hospital. To test the equality of pre and post hospital total rates, the difference between the rates was computed and tested using the median test to see if the median was different from zero. Significance was defined as a two-sided p value < 0.05.

## Results

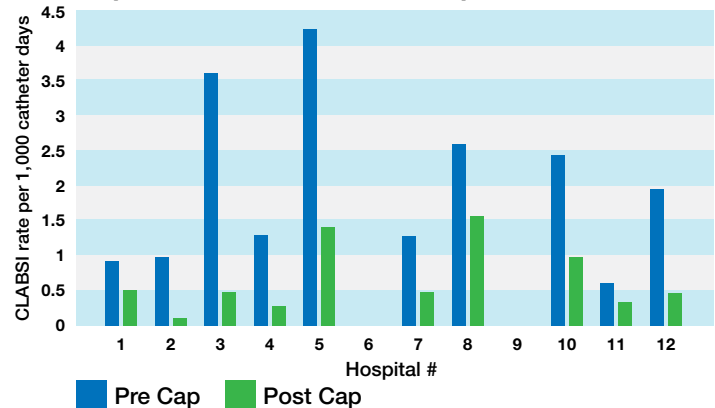
- Hospital type:
  - 5 Community
  - 4 Tertiary Academic
  - 3 Long Term Acute Care
- Hospital – 340 bed average (40–681 range)
- 5-hospitals all units, 7-ICU focus

### Needleless Connector Types:

3 Flo Link	1 Q site
3 Clave	1 Posiflow
2 Max Plus	1 Clear Link
1 Ultrasite	1 CLC Swabable

- Average of 7.8 months pre and 7.8 months post cap data collection
- 45,537 pre-cap days and 47,957 post-cap central line days
- 6 hospitals stable bundles, 4 had enhanced education with cap, 1 changed NC, 2 introduced CHG
- CLABSI rates 1.682 pre-cap and 0.6461 post-cap per 1000 catheter days
- 61.6% reduction of CLABSI (p<0.0020)

## Impact of Disinfection Cap



## Limitations

- Retrospective
- Possible other changes not recognized
- Cap compliance

## Conclusions

- Largest study to date using disinfection caps
- Significant reduction in CLABSI rates in the setting of stable best practice catheter protocols
- Disinfection cap should be considered as part of best practice protocols when trying to reach “Zero” CLABSI

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