

A Clinical Nurse Specialist Approach to Decreasing Hospital-Acquired Infections

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Purpose and Aims

Utilize a structured process to determine probable causes and contributing factors of hospital-acquired infections

Aims:

- Prevent HAIs
- Reduce costs of care
- Shorten length of stay
- Reduce mortality

Background

Hospital-acquired infections (HAIs) affect 1 in 25 patients.

Catheter associated urinary tract infections (CAUTIs) and central line associated blood stream infections (CLABSIs) are two of the most common types of HAIs with the following estimated rates:

- 1.4 to 1.7 cases per 1,000 urinary catheter days
- 0.8 cases per 1000 central line days

These rates may be reduced through preventative efforts.

The Clinical Nurse Specialist (CNS) can play a crucial role in designing and implementing programs to reduce CLABSIs and CAUTIs.

Significance

HAIs affect organizational and patients outcomes, increasing cost per event, length of stay, and mortality rates.

HAI	Average Increased Cost per event	Average Increase in Length of Stay	Average Mortality Rate
CAUTI	\$4,100	1.5 days	10%*
CLABSI	\$45,250	13 days	18%

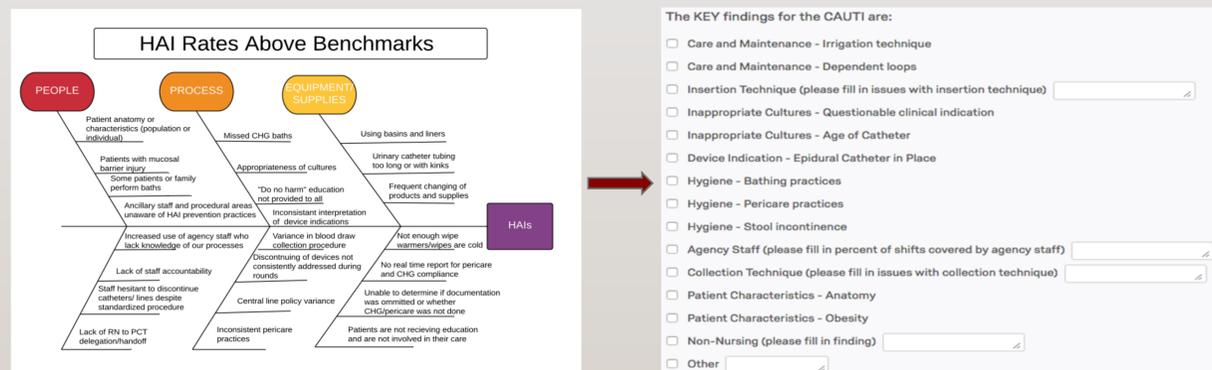
*From hospital acquired bacteremias associated with a urinary source

Evaluation Methods

Previously, there were meetings to discuss HAI events; however, there was no clear process to identify key findings and there was minimal data compilation for review of trends.

Steps in restructuring included:

- Evaluating previous HAI committee structure and recommending improvements
- Appointing CNS chairs to lead restructured HAI committee
- Optimizing drilldown forms used for case reviews to ensure prompts were relevant
- Developing a collaborative unit-based drilldown process, encouraging frontline staff's input in ascertaining possible causation
- Determining key and secondary findings through CNS-led drilldown analyses
- Utilizing HAI committee meeting to discuss and agree upon findings and aligned action plan(s)
- Collecting findings and inputting into a database for the identification of trends

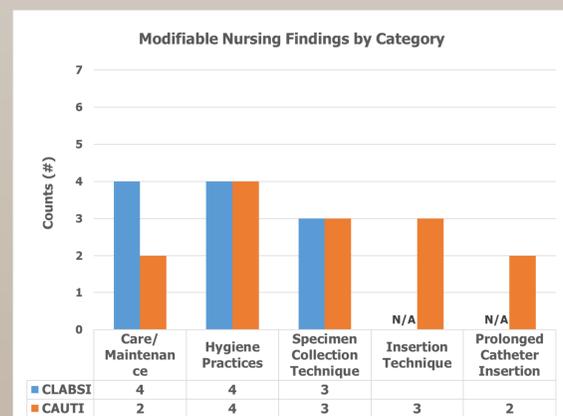
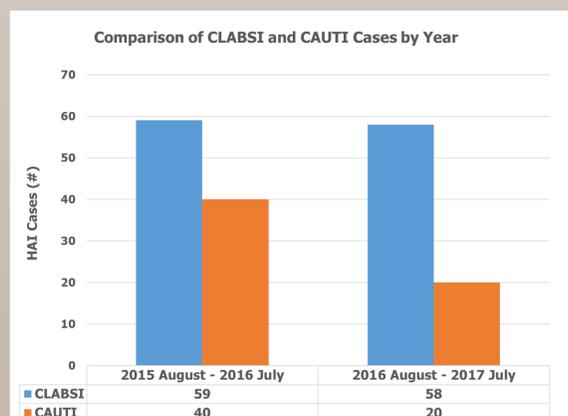


Information obtained from the previous HAI committee was used to develop a database where findings are categorized.

Outcomes

The restructured HAI review process was implemented August 2016. After one year, there was an overall reduction in HAIs by 21%.

- Likely sources of HAIs were identified in 94% of cases.
 - 21% of the CLABSIs preventable with nursing interventions.
 - 69% of the CAUTIs preventable with nursing intervention.



HAI Review



Implications

Nursing Education:

- Evaluate HAIs systematically and collaboratively to include insight from different perspectives
- Incorporate HAI prevention bundle components in drilldown process

Nursing Practice:

- Guide implementation of appropriate interventions for HAI prevention
- Involve staff in identification of key findings

References

