Central line-associated bloodstream infections (CLABSI) are a major source of hospital-acquired infection (HAI) in the pediatric intensive care unit (PICU). They are associated with increased morbidity, mortality, and healthcare costs. In Fiscal Year (FY) 2019, the PICU/pediatric cardiac intensive care unit (PCICU) had a CLABSI count of 6 and Standardized Infection Ratio (SIR) of 1.3.

**Objective**
- Reduce the CLABSI rate in the PICU/PCICU at UC Davis Children’s Hospital.
- AIM: Reduce the PICU/PCICU CLABSI count to ≤ 4 and SIR to ≤ 0.5 in FY 2020.

**Data Collection & Analysis**
- **Daily audits** of dressings from July 2019 - June 2020: Approximately 200 per month, for 12 months, totaling approximately 2,400 audits in one year.
- Data collected on audits (included but not limited to):
  - Is dressing intact?
  - Is dressing up to date?
  - Is dressing applied appropriately?
  - Does dressing need to be changed?
  - Any concerns regarding dressing?
- Monthly analysis of data collected from audits to guide QI process.
- Compare PICU/PCICU CLABSI count and SIR, before and after intervention.

**Results**
Prior to intervention, the PICU/PCICU had a CLABSI count of 6 and SIR of 1.3 in FY 2019. After intervention, the PICU/PCICU had a CLABSI count of 2 and SIR of 0.458 in FY 2020.

**Design & Methods**
Setting: 24-bed combined PICU/PCICU at UC Davis Children’s hospital.

Method: Implementation of evidence-based practice for maintaining central line dressings. Evidence-based practice was discovered through a recent literature search and “deep dive” with similar institutions.

Nurse-driven team implemented 3 interventions that led to CLABSI reduction in the PICU/PCICU:
1. Daily central line dressing audits
2. Standardization of dressing supplies in the PICU/PCICU
3. Designation and training of “dressing change champions” to perform all dressing changes.

**Conclusions**
- Teamwork and vigilance amongst our nurse-driven, multidisciplinary team in following the interventions led to a reduced CLABSI rate and SIR in FY 2020.
- Findings of this project suggest that implementing this project in your own unit may help to decrease CLABSI rate.

**Limitations**
- Short time frame
- Single patient setting
- Other coinciding interventions limit ability to isolate effect of dressing change interventions alone
- Unpublished UCDH data may indicate improved staff hand hygiene compliance during the Covid-19 pandemic, coinciding with data for FY 2020 Q4

**Further Study**
- Expand to other units
- Can the interventions be replicated?
- Would it result in a reduction in CLABSI rate?
- Are the interventions sustainable and result in continued lowered CLABSI rates?
- Will the alteration of the frequency of central line dressing audits affect the result?
- Will covert audits reflect a unit’s culture change?

**References**

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