

## INTRODUCTION

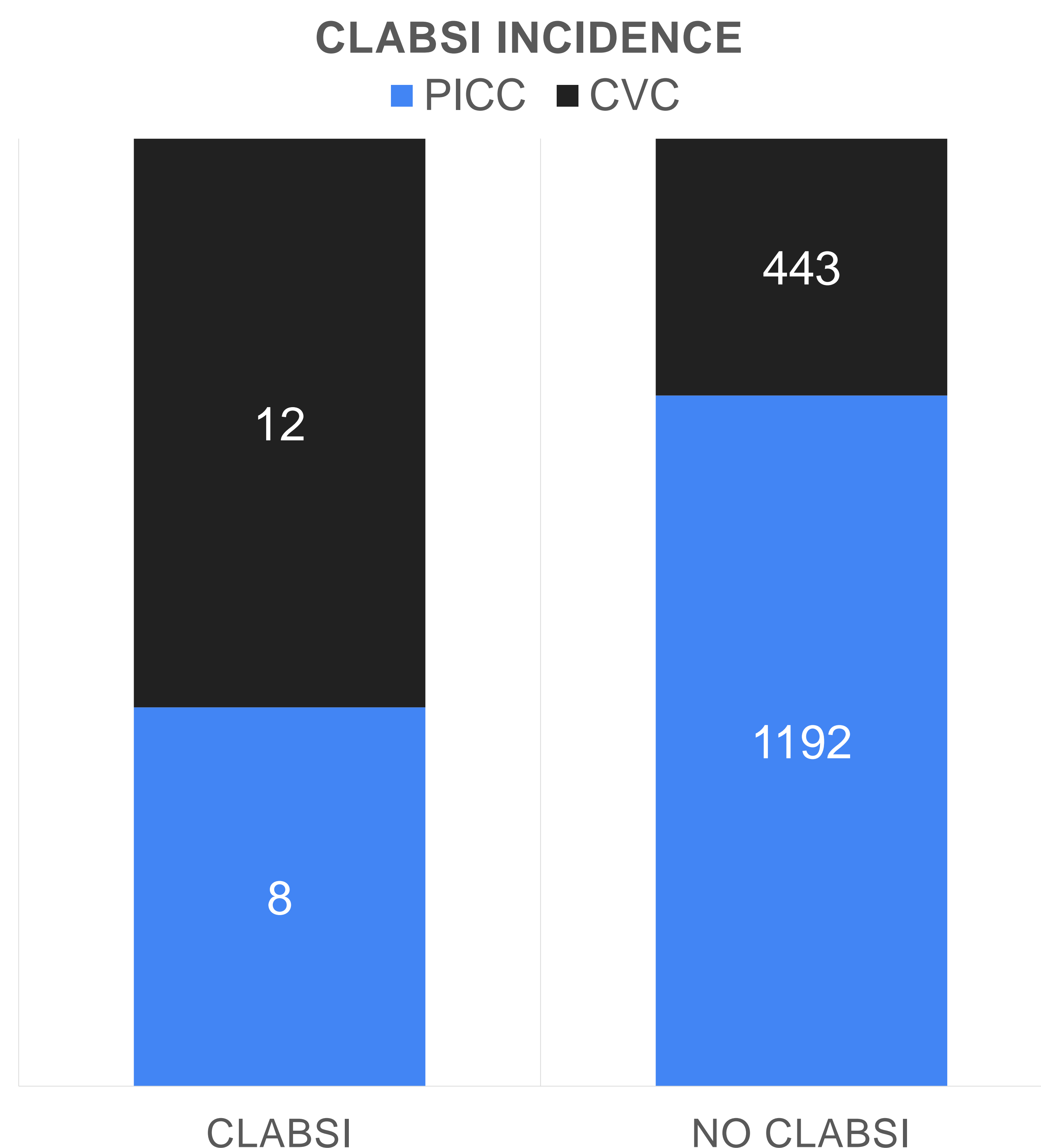
Central line associated bloodstream infections (CLABSI) are serious but preventable infections which can put strain on a healthcare system and, more importantly, affect patient outcomes. In our rural community teaching hospital, we aimed to decrease CLABSIs by implementing a quality improvement (QI) and surveillance program. The QI team hypothesized that standardizing central line placement and emphasizing peripherally inserted central catheters (PICC) utilization over central venous catheters (CVC) would decrease CLABSIs. PICCs were placed by trained vascular access nurses and CVCs were placed by physicians or nurse practitioners. The type of line was selected based on clinician judgment and urgency of patient need.

## AIM STATEMENT

The aim of this quality improvement study is to compare the rate of CLABSIs in patients with PICC lines and other CVCs.

## RESULTS

1200 patients with a PICC and 455 with a CVC were identified. Among these, 8 patients with a PICC and 12 patients with a CVC developed a CLABSI. The relative risk reduction was 0.253 (95% CI 0.104-0.614). Absolute risk reduction 1.97% and number needed to treat 50.7.



## METHODS

In this, and number needed to treat were calculated. Patients with more than one central line were excluded from the study single-center retrospective cohort study, we examined the CLABSI incidence in hospitalized patients requiring central venous access between September 2020 and September 2023. The electronic medical record was parsed for total central venous lines placed and reported CLABSIs during the study period. The relative risk reduction, absolute risk reduction.

## DISCUSSION

While we saw a statistically significant decrease in CLABSIs with PICC placement over CVCs, the number needed to treat was substantially high. Therefore clinically, the magnitude of benefit is questionable. While providing support for placing a PICC, this information alone does not sway the decision. Further study in cost reduction, resource utilization, and patient outcomes are needed to make a definitive hospital policy change.

## CONCLUSION

During our study, patients with a PICC line in place experienced fewer CLABSIs than patients that had other CVCs in place.