

# Strength in Numbers: Utilization of an Innovative Electronic Audit to Enhance the Completion of Central Line Maintenance Audits



**DukeHealth**

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## Background

- Central Line-Associated Bloodstream Infections (CLABSIs) are the leading cause of patient harm in the Solutions for Patient Safety (SPS) network
- Evidence-Based Practice (EBP) bundles drive prevention of Healthcare Acquired Conditions (HACs) through high-reliability interventions
- Audits measure compliance with EBP bundles
- Feedback on audit performance leads to practice changes

↑ # of audits & compliance    ↓ patient harm

## Problem

- Pediatric CLABSI rates increased in 2019
- In response, an evaluation of the audit process for CLABSI prevention revealed:
  - Poor staff engagement
  - Inconsistent interpretation of audit questions
  - Direct observations were limited
  - Lack of available trend data
  - Inadequate feedback to staff
  - Inability to identify improvement interventions

## Intervention

**Population: All Pediatric Inpatient Units**

### Electronic Audit Device

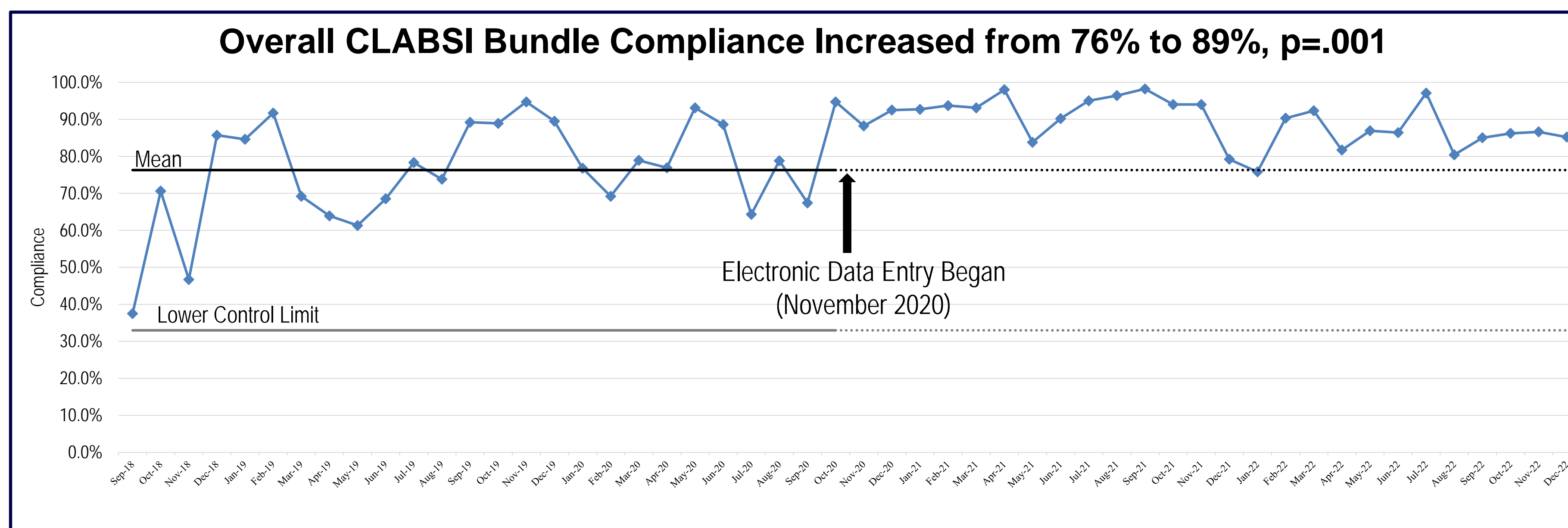
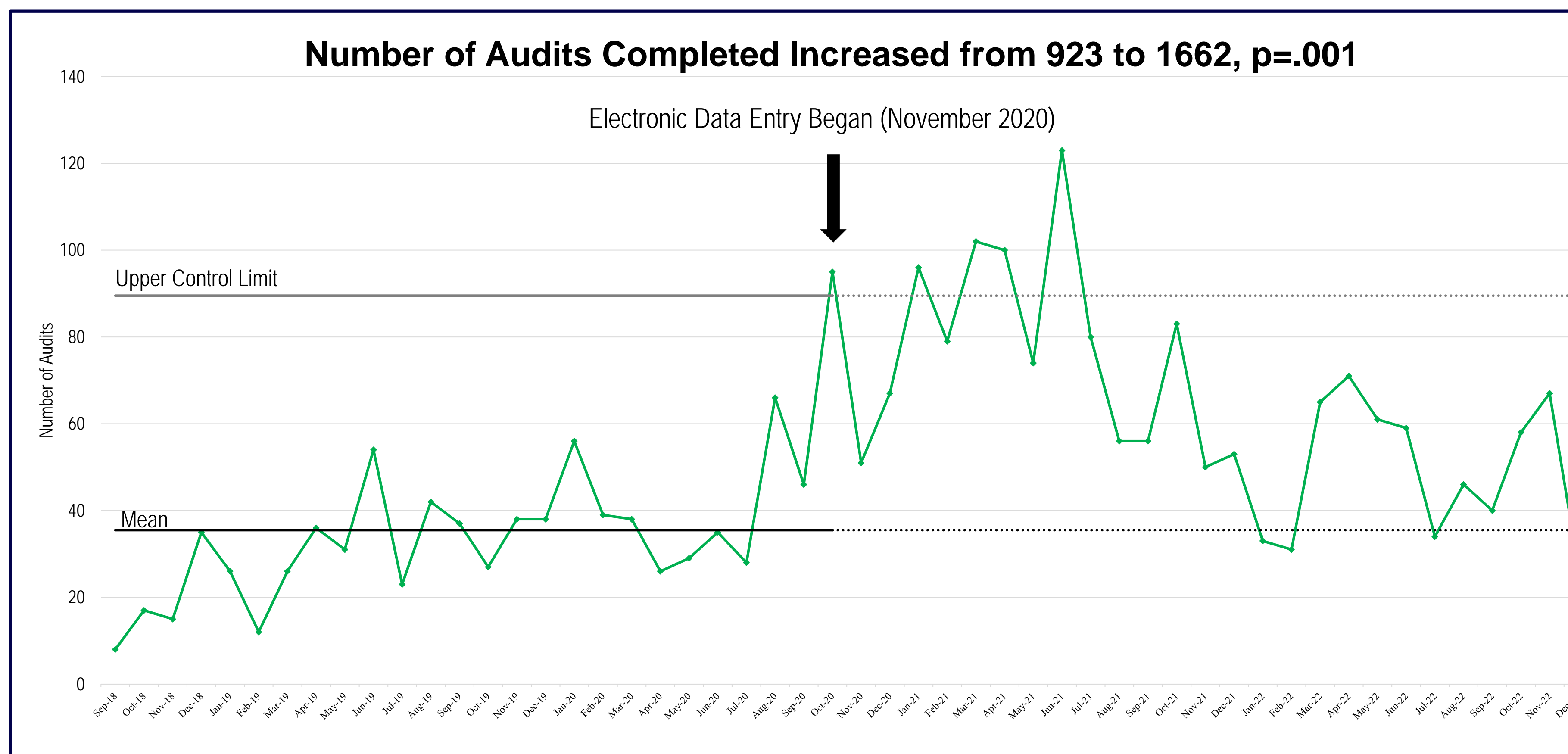
- REDCap platform
- QR code access
- Unit-owned devices

### Education

- Monthly meetings with CLABSI nurse champions
- Device user guide
- Audit user guide



## Results



## Conclusions

- The electronic audit tool and transformation of the CLABSI nurse champion process resulted in statistically significant increases in number of audits completed and bundle compliance
- The electronic audit tool improved accessibility, efficiency, and end-user experience for CLABSI nurse champions
- Increased ability to identify noncompliance measures and trend data
- Transition to direct observation audits promoted immediate, real-time feedback and education to staff

## Expansion

- The electronic audit tool was implemented in all adult inpatient units, at all 3 hospitals in the health system
- Device now utilized for additional HACs (catheter associated urinary tract infections, hospital acquired pressure injuries)

## Next Steps

- Ongoing evaluation of CLABSI data and prevention bundle compliance

## Acknowledgements

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- Beverly Murphy, Duke Medical Center Library & Archives
- References available upon request

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