



Not in Our House: PIVIE Prevention in a Just Culture

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Background

C.S. Mott Children's Hospital (Mott), a 303-bed pediatric hospital within an academic-based medical center, prioritizes patient and employee safety.



Despite unit-based efforts to prevent peripheral IV infiltrations and extravasations (PIVIE), patients continued to experience serious harm related to peripheral IV infusions.

Clinical Question

Compared to the current state, does the formation of a system-level nursing-led task force aimed at reducing serious preventable harm related to the use of peripheral IVs, increase the number of reported PIVIE events?

Literature Review

Many healthcare providers view the placement of peripheral IV catheters (PIVs) as routine and without risk; however, it is estimated that 78% of pediatric patients with PIVs suffer complications.

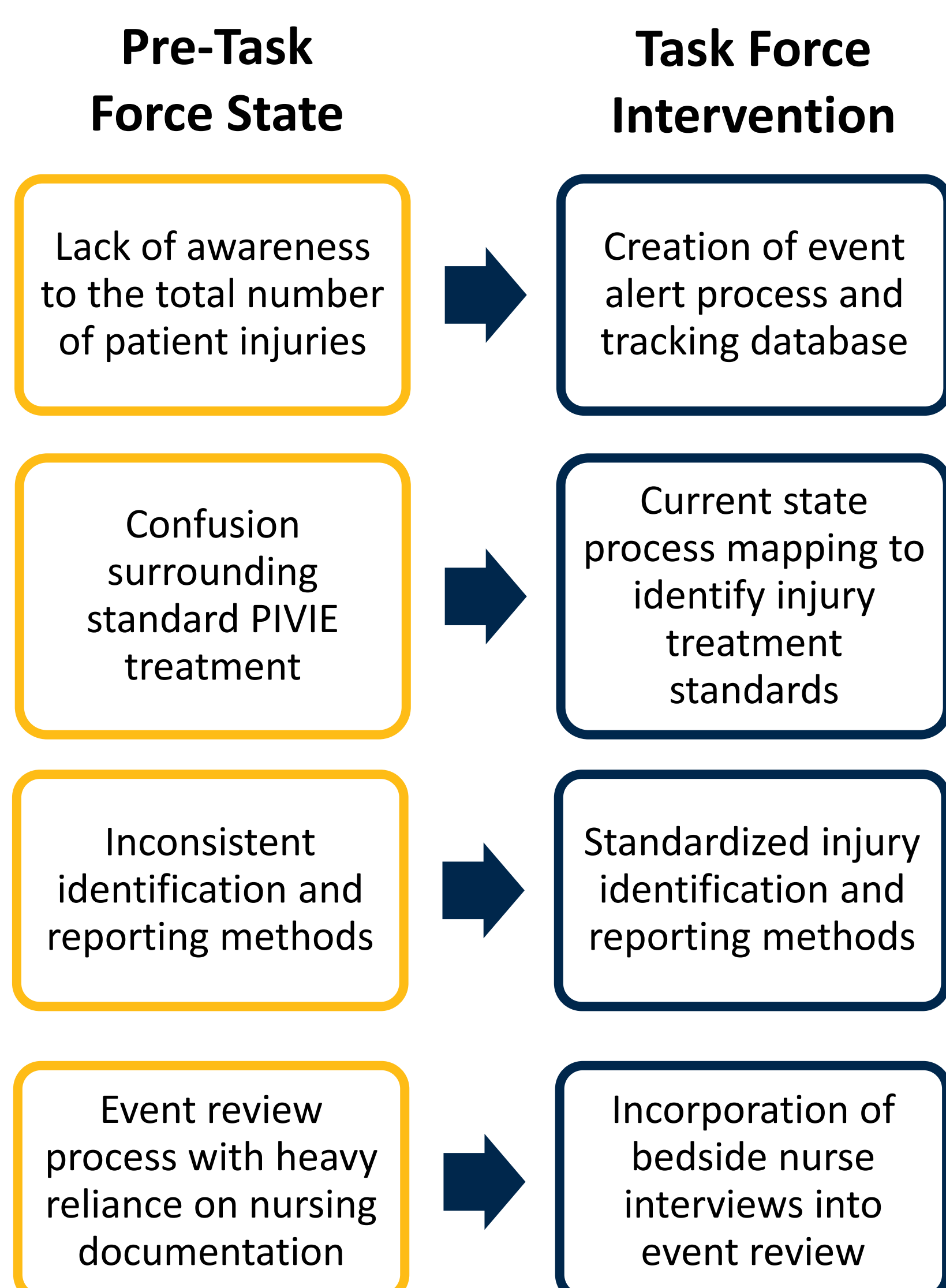
Children are at a greater risk for PIVIEs due to smaller vein size and fragility, communication skills, and difficulty in providing catheter stabilization.

In 2010, the American Nurses Association officially endorsed 'Just Culture' as a conceptual strategy to reduce errors and promote patient safety in health care.

A culture of psychological safety:

- Encourages the open sharing of mistakes
- Fostering valuable dialogue within healthcare teams
- Encourages transparency
- Fosters trust
- Promotes a learning mindset
- Views mistakes as opportunities for improvement rather than failures

Design and Methods



The following quality improvement methods were utilized to improve practices and optimize task force formation:

- Key Stakeholder Review
- Current State Analysis
- Gemba Walk
- Key Driver Diagram
- Process Mapping
- Root Cause Analysis
- PDCA Cycles

The standard PIVIE injury reporting methods now include initiation via:

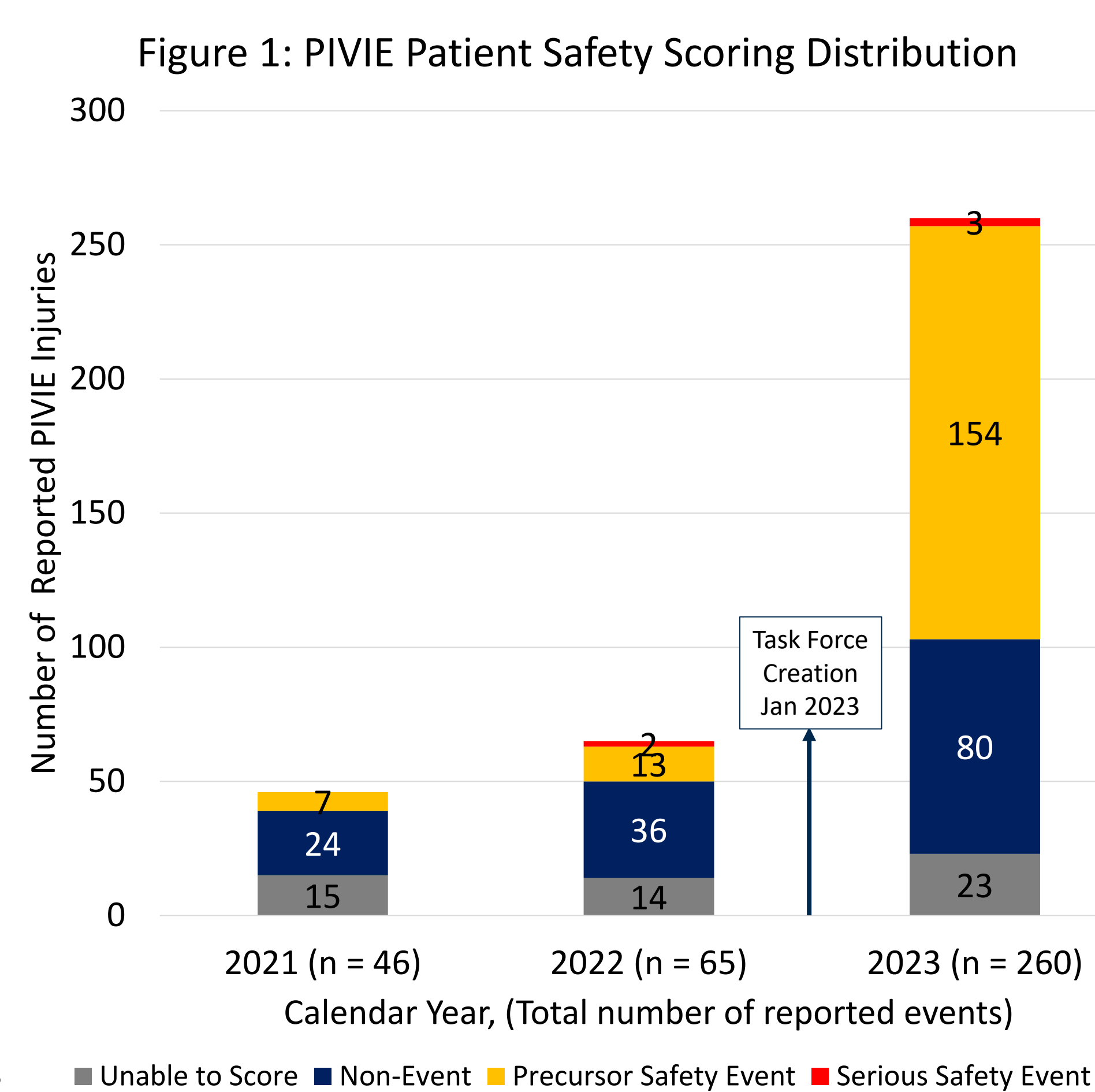
1. Bedside Nurse
2. Clinical Nursing Leader
3. Chart Review
4. Antidote Reconciliation

Primary Outcome

The creation of a segment-led PIVIE task force responsible for the oversight of all PIVIE-related injuries has demonstrated a

468% increase in the entry of reported PIVIE injuries into our internal risk reporting system.

Increased reporting has allowed teams a direct line of sight to system and unit-level barriers experienced by nurses.



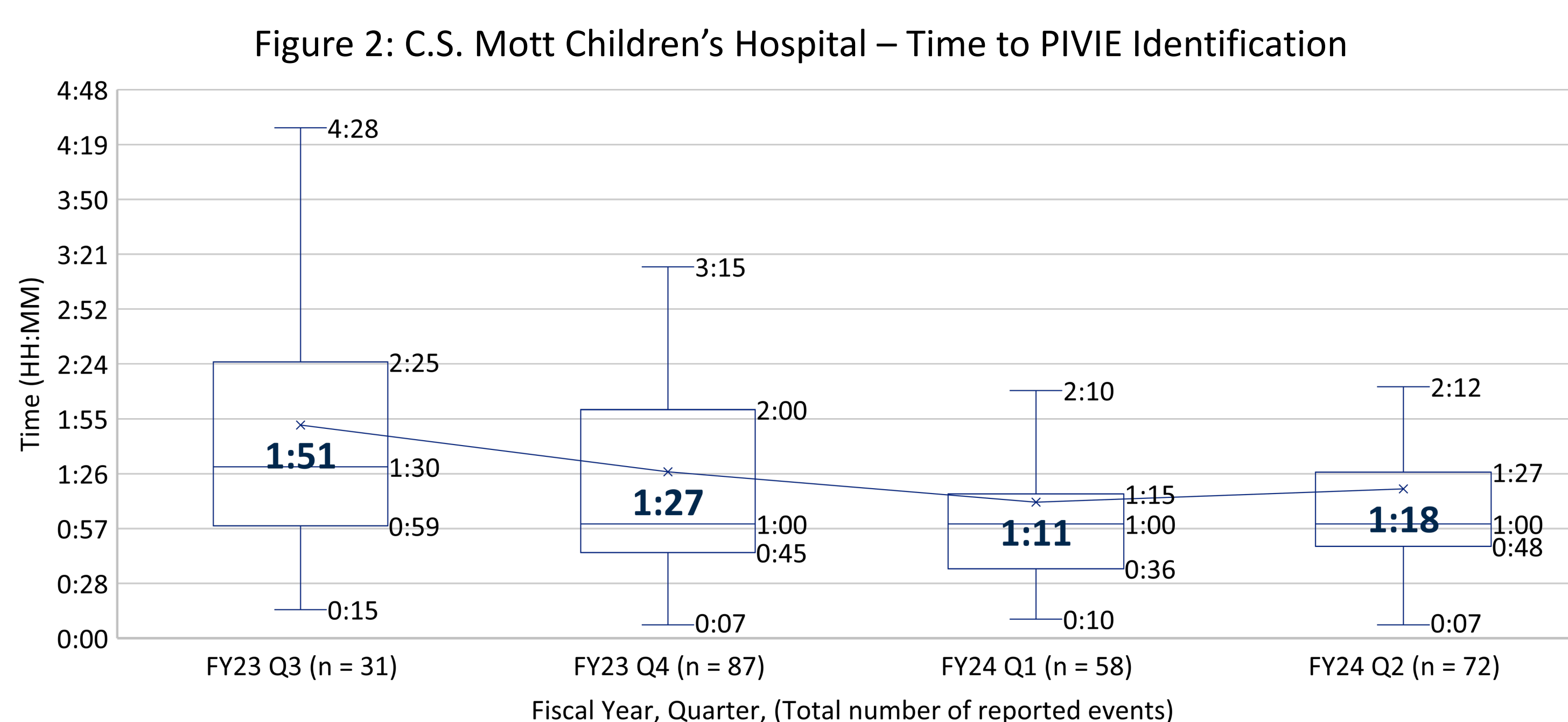
Secondary Outcomes

An overall, **24% reduction in the number of injuries that were unable to be reviewed or scored.**

Percentage of injuries unable to be reviewed and/or scored due to a lack of documentation, event information, and bedside nurse follow-up.



A **33-minute reduction** in the average time to PIVIE identification (Figure 2).



Implications for Practice

A system-level task force grounded in just culture principles has yielded standardized processes to discover and review patient injuries while incorporating the nursing voice into practice improvements.

By including open-ended questions in the standard of care event review process, the task force has identified the following barriers to compliance with PIVIE prevention best practices:

- Nursing knowledge deficit related to PIV maintenance and PIVIE identification
- Difficulty in performing assessments due to PIV stabilization and securement practices
- Patient and family frustration with frequent assessments

Conclusion

The creation of a nursing-led injury prevention task force that utilizes a non-punitive approach to safety event reviews and ensures all staff have the psychological safety necessary to speak up after a safety event, has:

- Increased safety event reporting
- Serves as a conduit for swift escalation and removal of system-level practice barriers
- Provided a platform to conduct in-depth event reviews
- Reinforced organizational dedication and promotion of a just culture



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