

GOT STUCK? SHARPEN FOCUS ON NEEDLESTICK INJURIES IN THE OPERATING ROOM

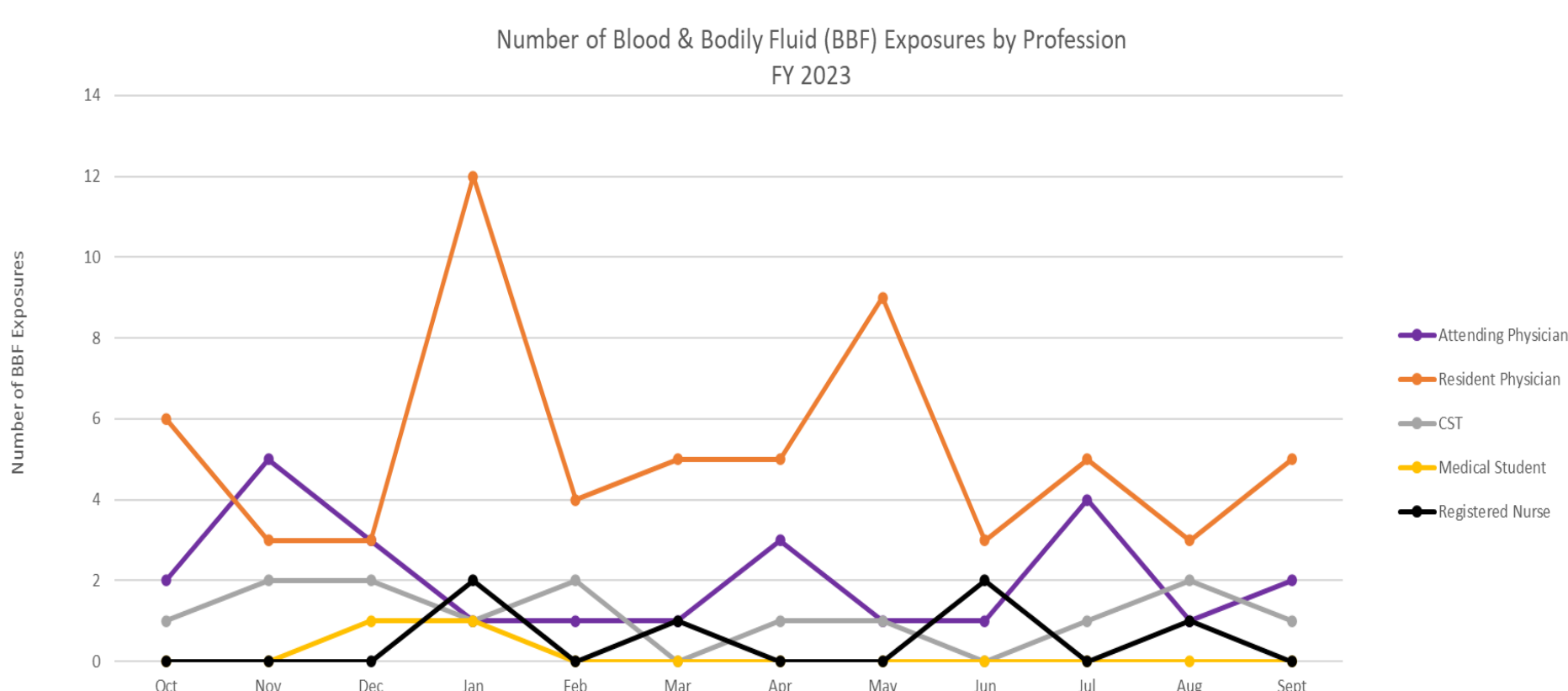


Kristen Cummings, BS, BSN, RN, RNC-OB, C-EFM, C-ONQS; Jennifer Stegall, BSN, RN; Meenu John, MSN, RN

Background

In 2022, hospital safety reports at Parkland Hospital showed a rise in needlestick injuries among OR staff, mainly surgical residents. Baseline data averaged five physician injuries per month, with Orthopedics (1) and Plastic Surgery (2) most affected. An estimated 385,000 needlestick injuries occur annually among hospital workers, nearly half unreported (Centers for Disease Control, 2024).

Addressing this issue is critical due to the risks of bloodborne pathogen transmission, impacts on worker safety, mental health, and financial burdens from treatment and liability.



Objectives

This project was divided into three tracks, each with a distinct aim.

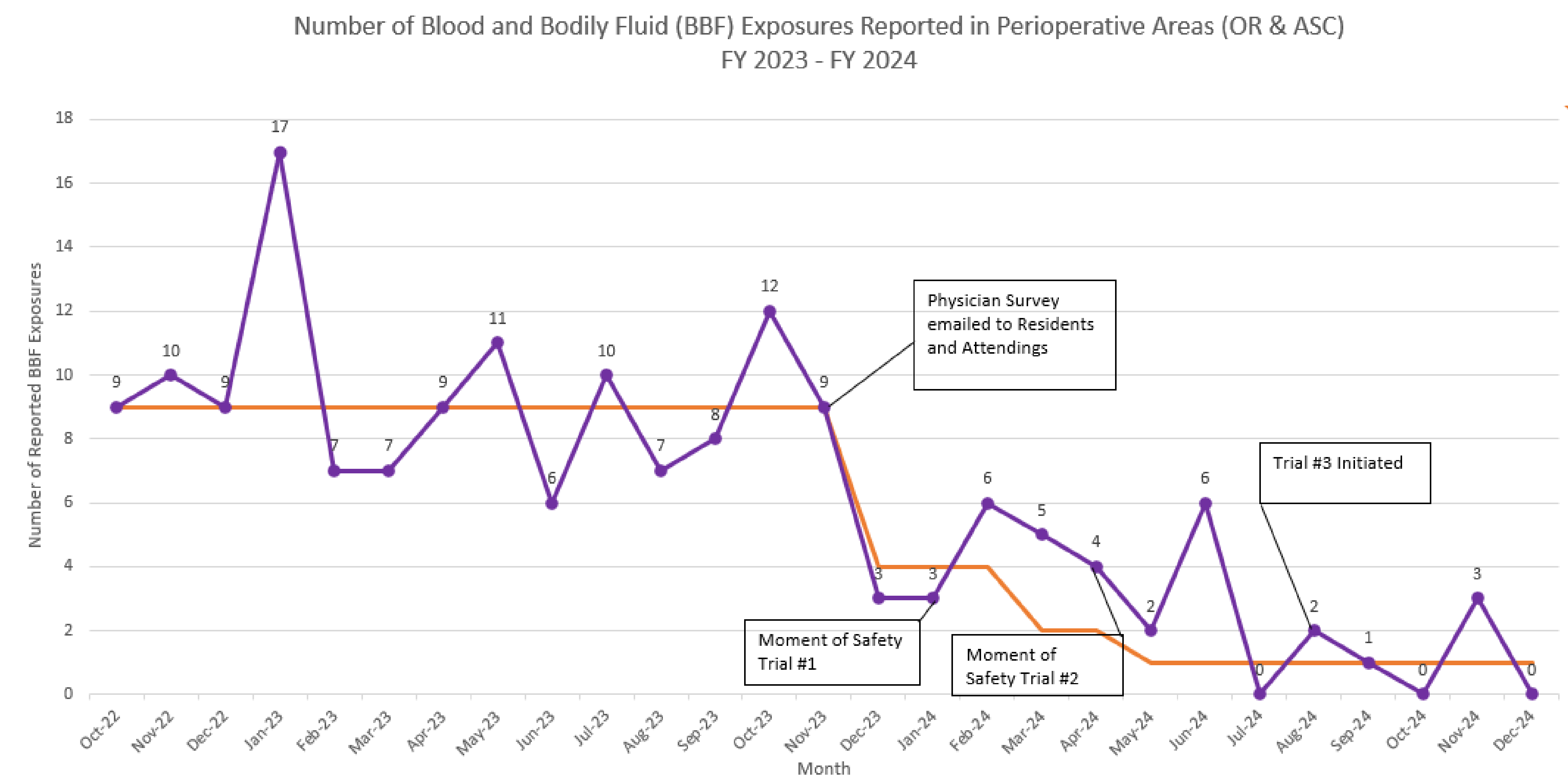
- Track 1: Increase sharps injury reporting by 10% in the Plastic Surgery OR and Ambulatory Surgery Center (ASC) setting by February 28, 2024.
- Track 2: Increase sharps injury reporting in the operating room by 10% for physicians and residents within the Plastic Surgery service line by June 30, 2024.
- Track 3: Evaluate the long-term sustainability of the "moment of safety" intervention by comparing median monthly needlestick injuries from August-December 2024 to January - July 2024, ensuring rates remain stable or decrease without paper audits.

Results

- Track 1:** Zero needlestick injuries among the focus group. Four needlestick injuries in the OR among different service line (Jan-Feb 2024).
- Track 2:** Zero needlestick injuries among the focus group. Twelve needlestick injuries among other OR service line (April-June 2024).
- Track 3:** One needlestick injury among the focus group. Six needlestick injuries among other OR service line (Aug-Dec 2024). Team debriefed with OR Leadership, nursing and plastic surgery residents. Team distributed badge buddies to Physicians, OR and ASC Staff. Passive monitoring and collaboration from Occupational Health to crosscheck data correct and streamlined. Across all OR (Main OR and ASC), 52% reduction in needlestick injuries from 2023 (110) to 2024 (53). Among focus group, 91% reduction in injuries from 2023 (11) to 2024 (1).

Methods

- A workgroup of frontline OR staff, nursing/physician leadership, and nurses from Quality & Safety and Occupational Health was formed to assess the issue.
- Track 1:** From survey responses, team created a "Moment of Safety" at first count to pause and remind staff to limit distractions as most likely incidence rate of needlestick injuries. Audits completed during each case involving focus group from Jan-Feb 2024. There were 87 audits completed (Main OR: 72; ASC: 15).
- Track 2:** Team decided to continue "Moment of Safety" with focus group for three months to gather more substantive data (April-June 2024) and would conclude at completion of resident year. There were 149 audits completed (Main OR: 115; ASC: 34). Team decided to create badge buddies to streamline information and visual aid for reporting needlesticks.



- Track 3:** Team debriefed with all necessary stakeholders. Team distributed badge buddies to Physicians, OR and ASC Staff. Passive monitoring and collaboration from Occupational Health to crosscheck data correct and streamlined (Aug-Dec 2024). Needlestick injuries were consistently reported through safety reporting system.



INTERVENTION EXPENDITURES: \$225 FOR BADGE BUDDIES



65% REDUCTION IN NEEDLESTICK INJURIES ACROSS ALL SURGICAL SERVICE LINES IN THE LAST 9-MONTH PERIOD OF FISCAL YEAR 2024. THIS SAVED THE ORGANIZATION ROUGHLY \$550,224 (72 X \$7,642).

Conclusions

The "Moment of Safety" leveraged the Hawthorne Effect, where behavior changes when people know they're being observed, to promote mindfulness during a high-risk period for fatigue and distraction (case closure). The project was highly effective, reducing injuries in the focus group by 91%, from 11 in 2023 to just 1 in 2024.

References

- Richards, H. (2022, July 26). *Preventing perioperative sharps injuries - aorn journal - wiley*. AORN Journal. <https://aornjournal.onlinelibrary.wiley.com/doi/10.1002/aorn.13751>
- Snavey, J. E., Service, B. C., Miller, D., Langford, J. R., & Koval, K. J. (2019). Needlestick and sharps injuries in orthopedic surgery residents and fellows. *Infection control and hospital epidemiology*, 40(11), 1253–1257. <https://doi.org/10.1017/ice.2019.262>

Contact Information

- Kristen Cummings (Patient Safety Clinical Risk Management): kristen.cummings@phhs.org
- Jennifer Stegall (Infection Prevention): jennifer.stegall@phhs.org
- Meenu John (Infection Prevention): meenu.john@phhs.org