Blood-borne pathogen exposure (BBPE) represents a significant safety and resource burden, with more than 380,000 events reported annually across hospitals in the United States” Gurria et al (2019).

Abstract:

BACKGROUND: Blood-borne pathogen exposure (BBPE) represents a significant safety and resource burden, with more than 380,000 events reported annually across hospitals in the United States. The perioperative environment is a high-risk area for BBPE, and efforts to reduce exposures are not well defined. A multidisciplinary group of nurses, surgical technologists, surgeons, and employee health specialists created a BBPE prevention bundle to reduce Occupational Safety and Health Administration (OSHA) recordable cases.

METHODS: Mandatory double gloving, a safety zone, engineered-sharps injury prevention devices, and clear communication when passing sharps were implemented in an evidence-based fashion at one institution. Days between exposures and total number of exposures were monitored. Analysis by specialty, role, location, type of injury, and timing was performed.

RESULTS: During fiscal year (FY) 2015, 45 cases were reported. During the first year of implementation, cases decreased to 38 (a 15.6% decrease; p < 0.65). In the postimplementation period (FY 2017), only 21 cases were reported (an additional 44.7%
decrease; \( p < 0.12 \), for a total decrease of 53.3\% (\( p < 0.01 \)). The mean number of days between injuries significantly increased (2.5 to 16.3) over the study period. For FY 2017, the main cause of BBPE was needlestick while suturing (47.6\%); fellows and attendings combined had the most injuries (52.4\%); among divisions, pediatric surgery (19.0\%), operating room staff (19.0\%), and orthopedics (19.0\%) had the most events. CONCLUSION: A comprehensive and multidisciplinary approach to employee safety, focused on reduction of BBPE resulted in a significant progressive annual decrease of injuries among perioperative staff.

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