Retrospective review of 3,297 percutaneous injuries from hollow bore safety-engineered devices

Abstract:

BACKGROUND: Despite their overwhelming efficacy, safety-engineered sharp devices (SESDs) cause a residual fraction of injuries. Although the fraction of injuries from SESDs is less than that reported for nonsafety devices, it remains a “preventable fraction” and is a sizable target for further advances.

METHODS: A retrospective review of 3,297 percutaneous injuries from hollow bore safety-engineered devices occurring between 2001 and 2009 was conducted examining the Exposure Prevention Information Network (EPINet) needlestick surveillance data.

RESULTS: Nurses sustain 64.6% of all SESD injuries. 42.9% Of SESD injuries occur after device use and are likely preventable through consistent and effective use of safety-engineered technology. Excluding injuries that occurred during device use or between procedural steps, 71.8% (n/N = 28/39) of physician injuries, 58.2% (n/N = 645/1,109) of injuries to nurses, and 45.8% (n/N = 88/192) of injuries to phlebotomists occurred when an available SESD was not fully activated.

CONCLUSION: Passive devices that do not require action on the part of the end user to engage a safety feature currently represent a small portion of the SESD market. Wider
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...dissemination of a broader array of passive SESDs coupled with continual education of end users is essential to an effective sharps injury prevention program.