



### **ABSTRACT**



10145: Enhancing Surveillance of Sharps Injuries Among Hospital Workers: Collaboration of a Mandatory, State-Based Surveillance System and a Voluntary Surveillance System

#### **BACKGROUND:**

Exposure to potentially infectious blood and body fluids via sharps injuries (SIs) continues to be a hazard frequently faced by hospital workers. Unfortunately, no single national surveillance system for SI exists to provide a comprehensive picture of the incidence of SIs among hospital workers. The Massachusetts Sharps Injury Surveillance System (MSISS), a mandatory statewide system has provided information about the extent and nature of SIs among hospital workers within Massachusetts. The Exposure Prevention Information Network (EPINet), a voluntary system covering a broader geographic area, provides SI information from a convenience sample of hospitals. While there is a set of data elements common to both systems, each contains additional unique variables. Combining findings from both systems can provide a more complete picture of the problem.

#### **METHODS:**

Findings from the two surveillance systems from 2002-2016 were compared. Data collected by MSISS was limited to acute care hospitals to match the population covered by EPINet. Rates for each system were generated using average daily census (ADC) as the denominator. Joinpoint was used to evaluate trends over time. Frequency distributions by key characteristics were examined for each surveillance system.

**RESULTS:** Rates of SI from 2002 to 2009 followed a similar pattern in each of the surveillance systems, declining significantly. However, from 2009 to 2016 SI rates in both systems have either plateaued or increased. In both surveillance systems, SIs occurred most often among nurses (MSISS: 36%, EPINet: 38%) and physicians (MSISS: 37%, EPINet 29%), and in operating rooms (MSISS: 45%, EPINet: 44%) and inpatient units (MSISS: 21%, EPINet: 31%). SIs involving devices lacking sharps injury prevention features accounted for 54% of all SIs in both systems. EPINet reports that the sharps injury prevention mechanism was fully activated only 11% of the time. According to MSISS, 20% of devices were part of pre-packaged kits.

#### **CONCLUSIONS:**

While neither system provides nationally representative findings, the fact that descriptive data follow similar patterns in both surveillance systems suggests that what is seen in MSISS and EPINet may be similar to what is happening in acute care hospitals elsewhere and underscore need for continued efforts to prevent SIs. Core findings from both systems, augmented by information collected in the unique variables, can be useful for targeting interventions where local data may not be available.

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