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Use and activation of safety engineered sharps devices in a sample of 5 Florida healthcare facilities

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ABSTRACT

Introduction. The incidence of sharps injuries (SI) in U.S. fell significantly with mandatory use of safety engineered devices (SED) in 2001 but has remained static since. More than half of SI from SED are due to non-activation of devices and monitoring of activation is recommended. This paper outlines the findings of a sharps container (SC) contents audit conducted in Florida in September 2013.

Methods. Reusable, 22 liter sharps containers (Sharpsmart, Daniels Sharpsmart Inc, Chicago IL) were randomly selected from 5 healthcare facilities (HCF) in central Florida. Wearing protective apparel the operator opened, decanted and enumerated all hollow bore needles and sorted them into: conventional vs SED; capped vs uncapped; and activated vs non- activated SED.

Results. 261L of sharps (40.3kg) from 18 sharps containers from 4 hospitals and one large family clinic were enumerated. 54.4% of the 1,987 devices were non-SED and 45.6% were SED. Of the SED, 21.6% (196/907) were not activated. Of all devices 32.6% were “naked” conventional needles or needle-syringes and 21.7% were capped needles or needle-syringes. Overall, 42.5% of devices were discarded “sharp”.

Discussion. It is disturbing that 39.9% of conventional needles were capped prior to discard and 42.5% of all devices were discarded as a ‘naked’ sharp. In this small sampling it is of concern that 12 years after U.S. SED legislation, 64.3% of healthcare professionals (HCP) placed themselves at risk by recapping or discarding naked needles. Many non-activated phlebotomy devices were visibly blood-contaminated. The reasons for non-activation of SED (ease of use, device preference, perception of patient adverse event, training) need be addressed.

Conclusion. The high proportion of devices being capped or discarded with an unprotected sharp may be a possible reason for the continued high SI incidence in the United States. A new vigor encompassing competency training, safety ownership and adoption of passive SED wherever possible is needed to protect HCP.