



“A 350-bed Sydney hospital noted excessive container-associated sharps injuries (CASI) using small sharps containers and compared the effect from 2004 to 2010 of using a larger container engineered to reduce CASI.” Grimmond and Naisoro (2014).

Reference:

Grimmond, T. and Naisoro, W. (2014) Sharps injury reduction: a six-year, three-phase study comparing use of a small patient-room sharps disposal container with a larger engineered container. *Journal of Infection Prevention*. 15(5), p.170-174.

Sharps injury reduction achieved by changing the size of sharps container  
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Abstract:

A 350-bed Sydney hospital noted excessive container-associated sharps injuries (CASI) using small sharps containers and compared the effect from 2004 to 2010 of using a larger container engineered to reduce CASI. In Phase 1 (Ph1), disposable 1.4L containers (BD Australia) were carried to/from patients’ rooms. In Phase 2 (Ph2), this stopped and a safety-engineered 32L reusable container (the Device; Sharpsmart, SteriHealth) was mounted in medication stations only and sharps were carried to and from patient rooms using kidney dishes. In Phase 3 (Ph3), the Device was wall-mounted in patient rooms. Sharps injuries were

categorised as 'during-procedure', 'after-procedure but before disposal', 'CASI', and 'improper disposal SI'. Disposal-related SI comprised CASI plus improper-disposal SI. Injuries per 100 full-time-equivalent staff were analysed using Chi2;  $p \leq 0.05$ ; and relative risk and 95% confidence limits were calculated. In Ph1 (small containers) 19.4% of SI were CASI and transport injuries were zero. In Ph2 (Device in medication station) CASI fell 94.9% ( $p < 0.001$ ); Disposal-related SI fell 71.1% ( $p = 0.002$ ) but transport injuries rose significantly. In Ph3 (Device in patient room) zero CASI occurred ( $p < 0.001$ ); Disposal-related SI fell 83.1% ( $p = 0.001$ ). Recapping SI fell 85.1% ( $p = 0.01$ ) with the Device. The Device's volume, large aperture, passive overflow-protection and close-at-hand siting are postulated as SI reduction factors.

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