What was the study?

The study ‘A microbiological study to investigate the carriage and transmission potential of Clostridium difficile spores on single-use and reusable sharps containers’ adopted a multifaceted epidemiologic, microbiologic, chain-of-infection, and test-of-evidence approach to determine if a relationship between Clostridium difficile infection (CDI) and sharps containers is scientifically feasible.

Stage 1: 197 Sharpsmart Reusable Sharps Containers (RSCs) were sampled for C. difficile at processing facilities

Stage 2: Sharpsmart RSCs were challenged with high C. difficile densities to evaluate efficacy of automated decontamination (Daniels Washsmart process)

Stage 3: 50 Sharpsmart RSCs and 50 Disposable Sharps Containers (DSCs) were sampled in CDI patient rooms in 7 hospitals for C. difficile carriage.

What were the results?

Stage 1: C. difficile spores were found on 9 of 197 (4.6%) RSCs prior to processing

Stage 2: Decontamination processing completely removed C. difficile

Stage 3: 4 of 50 RSCs (8%) and 8 of 50 DSCs (16%) had sub-infective counts of C. difficile.

- 2 links in the chain of infection were found to be broken
- 5 of 7 tests of evidence for environmental sources of infection were found to be unmet.

What does this mean for you?

The association of any sharps container with CDI is at odds with chain-of-infection principles, CDI transmission studies, CDI guidelines, the clinical practice of sharps containers being no-touch, and guidelines surrounding sharps container and glove use. In examining epidemiologic, microbiologic, chain-of-infection and test-of-evidence criteria, no scientific evidence or mechanism whereby sharps containers could be implicated in CDI transmission has been found.

The study concludes that neither disposable sharps containers nor reusable sharps containers play a role in C. difficile transmission to patients or staff, and that the assertion that sharps containers may be a fomite for C. difficile transmission is not scientifically feasible.

“Peer review is the critical assessment by experts, of manuscripts submitted to journals…unbiased, independent, critical assessment is an intrinsic part of all scholarly work.”

International committee of Medical Journal editors
The Daniels Difference

Healthcare Waste Management cost efficiencies are derived from the successful deployment of five key elements. At Daniels Health we work closely with our customers to ensure that all healthcare staff are protected, trained and equipped, that the facilities’ risk profile is managed, and waste management costs are minimised.

**Safety:** Our highest commitment is safety; through intelligent products, systemised solutions and bespoke training, we work with our customers to reduce needlestick injuries, minimise infection transfer and provide solutions that protect the safety and minimise risk for staff and patients.

**Sustainability:** Our reusable products and environmentally responsible treatment services are designed to maximise segregation, reduce CO2 burden and minimise waste going to landfill. Through waste mapping, auditing and environmentally graded solutions, we work with our customers to achieve the highest green ratings.

**Efficiency:** Daniels Health optimises the efficiencies of healthcare environments through smart products, process re-engineering and redefined waste handling methodologies. Significantly reducing the labour used in handling of waste through point-of-use bagless containment systems, an extensive range of mounting options and accessories and logistical solutions, our customised services guarantee optimised time and movement efficiencies.

**Compliance:** Experts in the regulatory complexities governing the healthcare sector, we position ourselves as an astute partner delivering expert guidance and compliant solutions to our customers. All Daniels solutions are vetted against state and federal regulations and executed through waste plans and training to achieve optimised safety and compliance.

**Education:** Our ongoing commitment to educate staff within healthcare ensures that together we achieve greater safety awareness and drive behavioral change in waste management, segregation, compliance and best practice management. Through a blended learning approach using onsite training, a range of educational material and module-based e-learning, we ensure all healthcare staff are trained and compliance certified.