

# Sharpsmart:

## Reduce Greenhouse Gas Emissions

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**“The 84% reduction of CO<sub>2</sub>eq emissions with the Daniels Sharpsmart system exceeds the 2020 reduction target for US federal hospitals and the 2050 target for UK NHS hospitals. If Daniels Sharpsmart reusable containers were used nationally in the US, we estimate annual US hospital GWP would fall by 64,000 MTCO<sub>2</sub>eq.” - Authors**

### What was the study?

The 2 year study, **‘Impact on Carbon Footprint: An LCA of Disposable vs Reusable Sharps Containers in a large US Hospital’** was conducted in an 850 bed acute care facility.

The study used a life cycle inventory and a life cycle analysis tool to examine the impact on greenhouse gas emissions (GHG) generated from the supply chain for goods and services, when the hospital replaced disposable sharps containers with Daniels Sharpsmart reusable sharps collectors.

### What were the results?

The greenhouse gas emissions associated with manufacture, transport, washing, treatment and disposal were assessed over 12 months in both systems. GHG were expressed as metric tonnes of carbon dioxide equivalent emissions (MTCO<sub>2</sub>eq).

Results showed that in converting to the Daniels Sharpsmart reusable system, the facility had per annum:

- 84% reduction in GHG associated with sharps container usage
- 127 metric tonne reduction in GHG
- 93% reduction in the manufacture of containers
- 99.9% reduction in the number of plastic sharps containers landfilled

- 31% reduction in the number of containers exchanged by staff
- 99.6% reduction in mass of plastic landfilled
- 98% reduction in weight of cardboard used
- 57% reduction in disposal-related sharps injuries

In addition, the cost of sharps container usage and disposal fell by 19%.

### What does this mean for you?

This study demonstrates that converting from disposable sharps containers to the Daniels Sharpsmart Reusable system delivers greater sustainability via significant carbon emission reduction, increases safety and provides cost reduction opportunities.



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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.



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