

Sharpsmart:

Reducing Greenhouse Gas Emissions

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“The 84% reduction of CO₂eq emissions with the Sharpsmart system exceeds the 2020 reduction target for US federal hospitals and the 2050 target for UK NHS hospitals. If Sharpsmart reusable collectors were used nationally in the US, we estimate annual US hospital GWP would fall by 64,000 MTCO₂eq.”

- 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 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 (MTCO₂eq).

Results showed that in converting to the 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 Sharpsmart Reusable system delivers greater sustainability via significant carbon emission reduction, increases safety and provides cost reduction opportunities.

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