

Sharpsmart Reusable Containers

Impact on Life-Cycle Carbon Footprint

Authors: T Grimmond, A Bright, J Cadman, J Dixon, S Ludditt, C Robinson, C Topping

Publication: British Medical Journal Open, <https://bmjopen.bmj.com/content/11/9/e046200.info>

The study found that “adopting reusable sharps containers is an example of a sustainable purchasing decision that can assist trusts meet NHS greenhouse gas reduction targets and can reduce global warming potential permanently with minimal staff behavioural change.” - Authors

WHAT WAS THE STUDY?

The study investigated the National Health Service England’s (NHS) 2020 commitment to being the world’s first ‘net zero’ NHS through, “...**reducing waste, unnecessary plastics, and single-use items**”.

The article compared the impact on greenhouse gas (GHG) emissions, plastic manufactured and cardboard used, of 40 acute NHS Trust hospitals converting from single-use sharps containers to reusable sharps containers.

WHAT WERE THE RESULTS?

In the 12 months following conversion to reusable sharps containers, the combined results for the 40 Trusts were:

- **GWP reduction of 3,267.4 tonnes of CO₂e (-83.9%).**
- **Elimination of incineration of 900.8 tonnes of plastic.**
- **Elimination of disposal/recycling of 132.5 tonnes of cardboard.**
- **Elimination of manufacture of 1.7 million single-use sharps containers**
- **A 61.1% reduction in labour** required for sharps container exchanges.

The study found that converting to the Sharpsmart reusable sharps containment system achieved significant and permanent GHG reduction with minimal behaviour change.

WHAT DOES THIS MEAN FOR YOU?

Annually for every 100 beds at your facility, you could:

- Reduce your carbon footprint by 11.2 tonnes of CO₂e.
- Eliminate incineration of 3.1 tonnes of plastic.
- Eliminate use of 0.5 tonnes of cardboard.
- Eliminate manufacture 5,837 single-use sharps containers.
- Save 153 hours in exchanging full sharps containers.

The conversion to Sharpsmart reusable sharps containers is a sustainable purchasing decision that would assist your facility achieve your sustainability goals and GHG reduction target.



“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