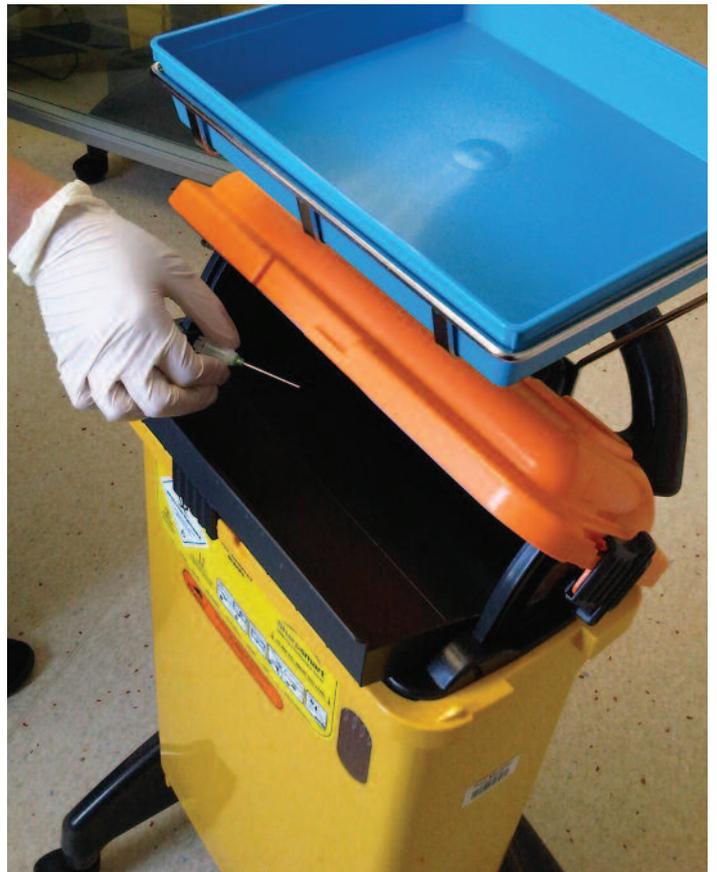


# SHARP PRACTICE

Dramatic CO<sub>2</sub> savings,  
a reduction in cost, point-of-use  
sharps safety, no injuries,  
and international recognition for  
**The Rotherham NHS  
Foundation Trust**  
following its implementation  
of Sharpsmart's reusable  
sharps container system



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**Sharpsmart**  
Making Healthcare Safer

# APPLE OF THEIR EYE

Dramatic CO<sub>2</sub> savings, a reduction in cost, point-of-use sharps safety, no injuries, and international recognition for **The Rotherham NHS Foundation Trust** following its implementation of Sharpsmart's reusable sharps container system

It's celebration time at The Rotherham NHS Foundation Trust. The environmental benefits created by the trust's implementation of Sharpsmart's reusable sharps container system have been recognised with a prestigious Green Apple Environment Award - to be presented at a glittering ceremony in the House of Commons and highlighted as a best practice example across Europe.

The system is delivering measurable benefits for clinical areas, wards, facilities and estates, while reducing costs and making a dramatic impact on the trust's carbon reduction programme.

The trust-wide enthusiasm for the system was evident when Catherine Jacques, waste and environmental services officer, and key colleagues involved in both the trial and implementation programme spoke to *Hospital Bulletin*.

Catherine explained: "Sharpsmart has a multi-role within the organisation. It assists with sharps disposal at point-of-use for staff and patient safety. In turn we can confirm



**Trust team:** (left to right) Lindsay Ollivant, sister - critical care, Bev Nicholas, matron, critical care and central treatment room, Anne Kerrane, matron for infection prevention and control, Donna Jones, facilities manager, Catherine Jacques, environmental services officer and Andrew Jackson, consultant nurse - vascular access nurse intravenous therapy and care

**“Introducing Sharpsmart has brought all aspects of point-of-use, sharps safety and sustainability together.”**

the introduction of the Sharpsmart container has resulted in no reported injuries pertaining to the disposal of sharps. It assists our sustainability protocol - reducing our CO<sub>2</sub> impact on the environment. And, thanks to the reusable plastic container it reduces plastic usage.

“Sharpsmart assists with compliance of HTM 07-01 Safe management of healthcare waste.

The system's AuditSmart process has enabled us to identify areas of non

conformance, flagging-up potential training needs and assisting with our waste management policy outcomes.”

With a brief to reduce waste and cut the trust's environmental impact, Catherine liaised with the members of the Environmental Management Group, Sharps Safety Group and Facilities Management to undertake a trial of the Sharpsmart system with seven wards across the trust.

Ann Kerrane, matron for infection prevention and control, explained: “I needed to have confidence in the decontamination process at the Sharpsmart facility at Spennymoor and be able to give assurance of the process to the trust and staff who use the system.”

“The safety tray system means that sharps containers cannot be overfilled so reduces the risk of injury and leaves no

open access for little fingers.”

A member of the Sharps Safety Group, Andrew Jackson, IV consultant nurse, said: “One of my priorities is combining safe sharps disposal with completing clinical procedures.

I didn't just want to use Sharpsmart only from the sharps safety perspective. It also supports our aseptic technique to protect patients as the sharps container and the procedure tray are combined.

“As a practicing clinician, concerned with policy matters and education, I was very keen to get these things together. We were doing point-of-use but the bins we did have were being carried or were not safe where they were located.

“So not only did Sharpsmart facilitate safe sharps disposal but it did this at the point-of-use. When you see the trolley combined with the sharps container it sends a powerful message. It reinforces the training that you need the two items.”

Describing the outcome of the trial, Catherine said: “We received excellent feedback. “To evaluate the trial we sent out 100 questionnaires with 77 returned. Over 95% said they thought other areas of the trust would benefit from using the system. We also looked for positives and negatives of the system which has allowed the trust to understand issues that could have arisen at full roll out to the trust.

Catherine took the results of the trial to the Environmental Management Group, Sharps Safety Steering Group, Health and Safety Committee and the



Infection, Prevention and Control Committee to gain commitment and feedback before sending the business case for approval.

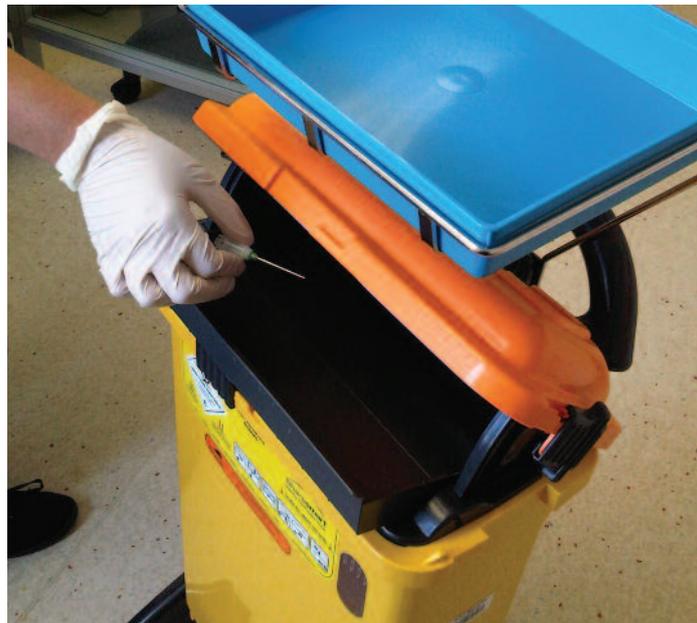
Backing the system for its sustainability and the benefits it would bring to the trust, John Cartwright, director of estates and facilities, submitted a proposal for the implementation of Sharpsmart to the trust's Corporate Business Planning and Investment Committee which was approved, with the system rolled-out trust-wide, mid-April.

Catherine said: "We kept all staff abreast of the changes to be made at least a month before the change over of the sharps container system. We kept in communication with them on a weekly basis to allow ward staff to run down their current container stocks.

**"The safety tray system means that sharps bins cannot be overfilled - so reduces the risk of injury and leaves no open access for little fingers."**

"Sharpsmart were very honest and informed us of problems that we could expect to face from previous experience throughout implementation in other hospitals. And those problems certainly did arise, but within the space of a few weeks we'd overcome them.

"Each service area has a different, specific need. We don't operate a one size fits all policy. We liaise with the service areas to ensure the sharps disposal best suits their



**Sharp thinking:** the style of container used for the disposal of sharps in public access areas has a safety tray mechanism which prevents access to deposited sharps and indicates when full as shown above. The window aligns with the fill level

needs. And Sharpsmart liaised with wards to ensure they were happy with the system.

Catherine and David Bradon, Sharpsmart's business development manager, undertook the training, which also saw posters displayed in sluice areas and on the trolleys and carts. Catherine said: "If there was an issue or if the Sharpsmart system didn't work, it would be my problem as I was the instigator of the introduction of the system, but with backing from the estates and facilities director I was allowed to devote time to ensuring it was integrated into the trust fairly smoothly."

So how is the system being accepted in practice? Bev Nichols, matron - critical care and central treatment room ICU/HDU, said: "We use a lot of sharps and it's a far safer clinical system. I think they're

great."

Mary Garner, ward sister, agreed, adding: "I think they're really good as the ward is a frequent user of sharps containers. They integrated well within the service, as they assisted with the disposal of large items using the S32 containers." Mary added that the containers can be taken to the bedside which allows point-of-use disposal of the sharps.

The sharps containers are delivered ready assembled and specified for use in a pre-audit. Those in public access areas have a flip-top safety mechanism which limits access. The mechanism will not allow extra sharps to be added once the fill level is reached. Non public areas use AccessPlus, an open access container for the disposal of items such as IV bags, giving sets and large instruments - theatres are a user

of such containers.

The design of Sharpsmart containers ensures waste is filled in the bins horizontally, enabling one to two thirds more waste to be disposed of than with the previous system

With the moving stock rotation programme of the Sharpsmart system there are less containers sitting around taking up valuable space than the previous staff-assembled system. Although the bins for all areas are collected and replaced in a real-time delivery schedule the trust does hold a contingency stock of Sharpsmart bins to cover any emergency.

"Introducing Sharpsmart has brought all aspects of point-of-use, sharps safety and sustainability together," said Donna Jones, the trust's facilities manager. "As part of



**Busy ward:** Mary Garner (left), ward sister, and Bev Nicholas, matron, critical care and central treatment room

the Carbon Commitment Programme the trust as a whole and facilities are always looking at ways of improving practice and saving money. There's a

**The tough, high quality ABS plastic containers are collected and replenished on a weekly basis. Sharpsmart currently has two decontamination centres, one at Spennymoor near Durham and one at Reading, with a third, at Stoke-on-Trent, about to be commissioned once the waste management licence application**



## Validated decontamination

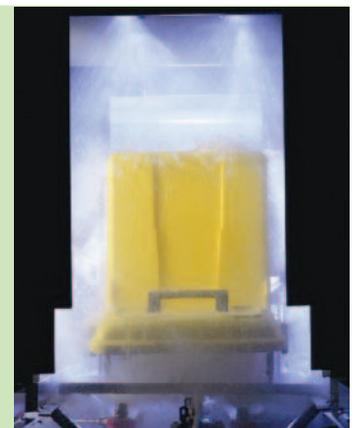


has been approved by the Environment Agency.

On arrival at the Sharpsmart processing facility, the sharps waste is automatically decanted and segregated into the appropriate waste streams. The compliance of the waste is regularly audited and

photographed. A detailed AuditSmart report is sent to the hospital detailing all areas of non compliance.

The Sharpsmart containers are designed to withstand up to 500 treatment cycles. Each container is individually bar coded to facilitate traceability of cleaning. The robotic opening and waste decanting is followed by a validated cycle which is proven to achieve 6 log reduction in microorganisms. The cleaning cycle consists of a prewash, wash (using water and Ecolab detergent) and heated final rinse before being



subjected to a thorough QA acceptance programme.

financial benefit with Sharpsmart.

“From an operational point of view we’d already identified a porter for the collection and delivery programme. So we set up a schedule of different areas on different days. We’ve now gone to a real-time, like-for-like replacement programme, taking a record of the containers, so there’s more involvement from the porter’s point of view but we’ve now managed to reduce the amount of time in delivery and collection, partly due to using bigger bins.”

Donna added: “In other hospitals they push round a trolley but we’re four floors, long corridors and an internal ramp - so we needed something to attach to the electric tug we use. Sharpsmart worked closely with Catherine and Graham Royle, in health and safety, and the porter, to design a trolley system that fitted the bill.



**Minimises manual handling:** towing the specially modified Sharpsmart transporters



**Weekly collection and replenishing:** using purpose-built double deck trucks

“The route includes a private road around the site, so we wanted the trolleys to be covered, to make the contents discreet, and had lights and indicators fitted. In effect we needed it to act as a vehicle.”

Sharpsmart delivers sanitised, reusable containers once a week - a consignment to theatres, which have their own stores on a different level, and to a secure compound, and collects the used containers transporting them to its waste segregation and container decontamination facility.

Terry Sayles, the porter dedicated to the real-time delivery programme delivers

**Dedicated:** Terry Sayles, porter, is responsible for the delivery and collection of the Sharpsmart bins



new containers to the areas as he collects. Following the introduction of the larger containers, he visits the wards less infrequently as there now aren’t as many bins to collect.

Graham Royle, the trust’s health and safety coordinator for estates, said: “Sharpsmart is a completely sealed unit. Once the needle is in the container it is tamper-proof. They also fit within guidance for manual handling. We need less frequent collection and they’re fully leak proof.”

Describing the partnership approach which has been a key ingredient in the successful implementation, Catherine said: “Sharpsmart were a pleasure to work with as our needs could be construed as quite onerous at times. They donated a lot of staff time as I wanted to do it

right first time - to roll-out to the whole hospital at the same time.

“Sharpsmart has definitely assisted the trust with our waste identification and segregation methods. The AuditSmart system allows us to adjudicate that and makes me safe in the knowledge that my waste protocols are adhered to.

“AuditSmart opens an agreed number of sharps containers from the wards, under controlled conditions, taking a picture of the contents. The easy to understand report gives me information on fill optimisation and waste compliance. On receipt I identify any areas of concern and contact the service areas if necessary to assist them to rectify any non conformances.”

“With AuditSmart we can check on the fill levels of the bins. Also, the previous bins were not leak tight and if they fell over they could leak. The new Sharpsmart containers are 100% leak proof when closed. “We were going through too many small containers to start with and increased some to the larger ones where appropriate. There was an agreed period during which there was no change to the cost if we changed the size mix of the containers .”

Catherine added: “I am the first waste officer that the trust has employed and was tasked with targets to reduce waste and also introduce more sustainable processes throughout the trust. I do audits weekly within service

areas and through various observations wanted to assist sharps safety at the point-of-use. I also wanted to ease the operational element of collection and delivery and to eventually release time back to facilities staff, and importantly help with sustainability.”

Following the introduction of Sharpsmart, The Rotherham NHS Foundation Trust anticipated it would reduce its carbon footprint by 109.80 tonnes in the first year with a total of 1,183.77 tonnes of CO<sub>2</sub> saved by the end of year ten. This will result in a 91% total carbon reduction compared with the previous process of disposing of the trust’s sharps bins via incineration. The trust is also reducing 13 tonnes of plastic and the consumption of 1.3 tonnes of cardboard each year.

“Those figures and our anticipated financial savings are

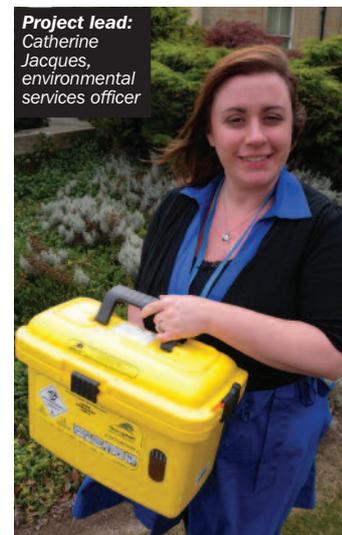
**“It assists our sustainability protocol - reducing our CO<sub>2</sub> impact on the environment. And, thanks to the reusable plastic container it reduces plastic usage.”**

proving to be correct,” said Catherine, who along with other members of the trust and Sharpsmart will be receiving the Green Apple Environmental Award at the House of Commons in November.

For further information, contact Sharpsmart UK e-mail [info@sharpsmart.co.uk](mailto:info@sharpsmart.co.uk) visit [www.sharpsmart.co.uk](http://www.sharpsmart.co.uk) or call 01388 810310.



**Analysis:** AuditSmart gives information on the contents of a selection of bins looking at fill optimisation and waste compliance, with a photograph



**Project lead:** Catherine Jacques, environmental services officer