

Reducing waste in clinical procedures

The issue:

From 2019 to 2020, the Leeds Teaching Hospitals NHS Trust used nearly 700 Harmonic ultrasonic scalpels. These devices are used in a host of laparoscopic procedures across many specialities to simultaneously cut and cauterise tissue. The devices are single-use and must be disposed of after each procedure.

The Trust is committed to reducing waste and hasn't sent any general or offensive waste to landfills for over five years. Clinical waste such as Harmonic scalpels has to be disposed of by high temperature incineration. However, the Trust's Abdominal Medicine and Surgery Clinical Service Unit and Theatre teams were keen to investigate new processes and technologies to further reduce waste and the environmental impact of clinical procedures.

The solution:

Remanufacturing is the process of taking a single-use device and making it reusable. Vanguard Medical Remanufacturing is a leading European remanufacturer of medical devices, and they currently supply the Trust with remanufactured EP catheters.

Through discussions with the Trust's clinical teams and Vanguard, it became apparent that using Vanguard's Harmonic Remanufacturing Programme would reduce the waste and environmental impact of these devices.

The first step was to establish the process, which involves Vanguard collecting the used devices from the Trust's theatres after a procedure and taking them to their factories for cleaning and checking before being re-sterilised. Remanufactured Vanguard devices are supplied to the Trust at a price that is significantly less than purchasing a new product.

The impact:

To date, the implementation of the collection process and the use of the remanufactured equipment has been a great success.

Mr Jeremy D Hayden, Lead Clinician for Oesophageal, Gastric and Pancreatic Surgery and Consultant Upper GI & Bariatric Surgeon is quoted saying: "*Consultant GI surgeons are increasingly adopting this as part of their routine practice and considerable savings have been made and contributed to the Trust's waste reduction programme.*"

"The Trust is hoping to see an expansion in the use of other remanufactured devices to support a more sustainable working environment and reduce costs."

The Trust has estimated that waste has been reduced by 38kgs, with CO2 emissions reduced by 100kgs. They are currently operating on a 50:50 split between the original and remanufactured devices.

What's next?

Moving forward, the Trust will look to further explore the introduction of remanufactured devices and reverse logistic options, to reduce the carbon footprint of clinical procedures. This will involve working with Vanguard and other remanufactured device suppliers to highlight other single-use devices that could be repurposed.

Notes:

Leeds Teaching Hospitals NHS Trust is one of the largest and busiest hospital trusts in the UK, providing healthcare and specialist services for people from Leeds, the Yorkshire and Humber region and beyond. We play an important role in the training and education of medical, nursing and dental students and are a centre for world-class research and pioneering new treatments.