



# Case Study

**WASTE****ROYAL LIVERPOOL & BROADGREEN  
UNIVERSITY HOSPITALS**

## **T**ackling medical waste by revolutionising theatre equipment packs

Before an operation takes place theatre staff have to get the required items out of stock and set them out for each procedure. Unwrapping each item is time consuming and requires good stock management to ensure items are readily available. This is important for patient safety and the smooth running of the theatre.

The Royal Liverpool and Broadgreen University Hospitals NHS Trust (RLBUH) is one of the largest and busiest hospitals in the North of England. It has more than 5,600 staff and sees 600,000+ patients per annum.

The Trust operates over two sites in Liverpool and carries out more than 13,000 procedures in 19 theatres every year.

RLBUH wanted to reduce the amount of time medical teams took to prepare for each patient in order to improve turn around times. One area highlighted was the number of items required per operation and the amount of time it took to unwrap them.

“Before we had ProcedurePak trays we did 154 knee replacement operations in a six-month period. With the trays we did 226, an increase of 47%.”

Lisa Tierney  
Theatre Matron  
Broadgreen Hospital, Liverpool



### How did the Trust improve sustainability?

The Trust worked with Mölnlycke Health Care (a supplier of surgical devices) to create a series of procedure packs which could be used across all theatres. This moved away from individually supplied and wrapped items to 21 specially designed pre-prepared packs containing the core items required for a given procedure.

As a result of introducing procedure packs the Trust has almost halved the set up time per operation which has led to its theatres being used more efficiently. The procedure packs also improved consistency for items used during procedures, and has simplified stock management and the reordering process. This is again saving staff time. The packs have also helped to reduce packaging, the value of stock holding, stock shrinkage and instances of 'stock outs'.

### Carbon and Financial Savings

Taking simple action by increasing the use of theatre packs has resulted in the Trust saving £175,000 per year (based on staff time saving). It's also reduced the volume of associated packaging waste by 90% (around 2.6 tonnes) helping the Trust to reduce its carbon footprint by five tonnes. Additional carbon reductions are expected as a result of tighter control on stock items and theatre set up.

“ProcedurePak has had a significant improvement on theatre turnaround so we are not waiting around for an operation to start.”

John Davidson  
Clinical Director Orthopaedics  
Broadgreen Hospital, Liverpool

## Success Factors

The success of the move to procedure packs relied on the commitment of theatre staff and clinicians and the investment of time with the supplier in setting up the item schedules for each type of procedure pack. It is also important to review the pack schedules regularly to identify any change in requirements so as to avoid unnecessary waste or additional individual item additions.

Training on the new way of working was also required, however, savings in staff time were realised very quickly, compensating for this investment of time.

Measurement of the baseline positions, in terms of packaging and carbon, allowed the carbon reduction benefits to be tracked.

The Trust is also considering an assessment looking at opportunities to reduce the embedded carbon of the items used in the packs themselves.

## Further Information:

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## Useful links:

[Procuring for Carbon Reduction \(P4CR\)](#) – guidance to help organisations reduce carbon emissions when buying goods and services for the NHS

[Procedure Packs](#) at Royal Liverpool and Broadgreen University Hospitals NHS Trust

[Promotional DVD](#) - Mölnlycke Health Care ProcedurePak®

