Reducing unnecessary carbon in a haemodialysis unit by reducing consumable waste

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INTRODUCTION

As part of its ongoing efforts to promote environmental sustainability, the **Bradford Renal Sustainability Group** partnered with the **Trying to Reduce UnNecessary Carbon in Haemodialysis (TRUNC-HD)** project in Yorkshire and Humber, supported by **UK Kidney Association (UKKA) Kidney Quality Improvement Partnership (KQIP)** and the **Yorkshire and Humber Kidney Network (YHKN)**, to further reduce the carbon footprint of our haemodialysis units.



The aim of the project was to introduce a streamlined dialysis pack by November 2024

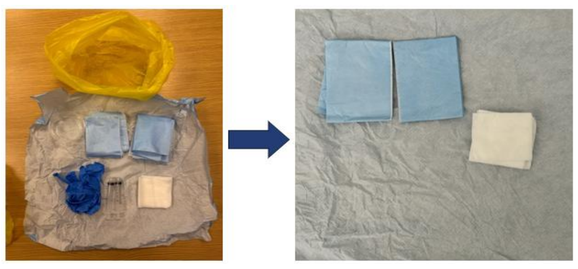
Jan – March 2024	March	April – June	June	July – Sept	Sept	Oct – Dec	May 2025
Unit face to face QI training and support	Y&H virtual sharing progress meeting	Unit face to face QI training and support	Y&H virtual sharing progress meeting	Unit face to face QI training and support	Y&H virtual sharing progress meeting	Unit face to face QI training and support	Y&H face to face celebration event

METHODS

The Bradford Renal Sustainability Group had already used the Newcastle carbon calculator to identify the need to review procurement of our dialysis packs.

- ✓ **Process mapping** helped to quantify the unused items in the packs (see picture 1).

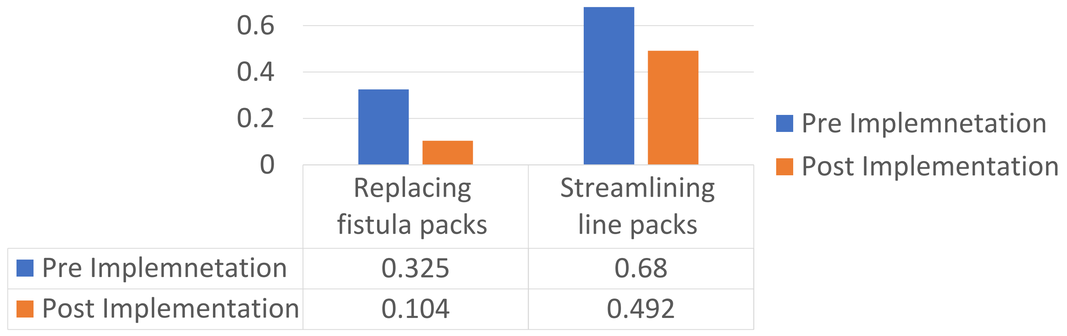
Picture 1 – unused items identified



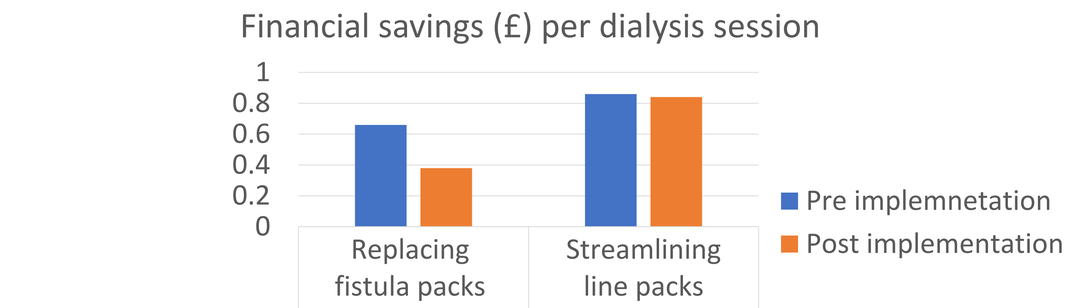
- ✓ **Stakeholder analysis allowed us to identify key people**
  - ❑ Procurement
  - ❑ Trust Executive
  - ❑ NHS Supply Chain

Data were collected before and after the implementation of changes, to calculate the **environmental, financial and social impact** of the project.

RESULTS



	Replacing fistula packs	Streamlining line packs
Pre Implemnetation	0.325	0.68
Post Implementation	0.104	0.492



	Replacing fistula packs	Streamlining line packs
Pre implemnetation	0.66	0.86
Post implementation	0.38	0.84

RESULTS

Replacing 11.232 single-use visors these with 50 reusable visors, each equipped with 12 disposable face shields, significantly reduced carbon emissions to 74.4kgCO2e.

TOTAL ANNUAL CARBON SAVINGS
12,347 KgCO2

TOTAL ANNUAL FINANCIAL SAVINGS
£19,931

CONCLUSION

- The primary challenge was to source customised, streamlined packs at an acceptable cost. The project team secured Trust endorsement as part of a Cost Improvement Programme
- This quality improvement project will produce carbon and financial savings, demonstrating the potential for healthcare providers to make simple, sustainable changes in practice to deliver significant environmental and financial benefits.
- The Bradford Renal Sustainability Group has also reviewed the disposal of dialysate acid concentrate canisters, which are currently sent to landfill, to identify opportunities for recycling.

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