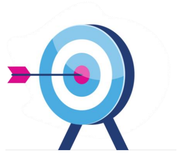
Single daily heat disinfection of haemodialysis machines

INTRODUCTION

Reducing carbon emissions from in-centre haemodialysis (ICHD) is one of the key priorities for the **Yorkshire and Humber Kidney Network (YHKN).** In partnership with the **UK Kidney Association (UKKA) Kidney Quality Improvement Partnership (KQIP),** a regional project was set up. This project was named **Trying to Reduce UnNecessary Carbon in Haemodialysis (TRUNC_HD).**



The aim of this project was to reduce the environmental impact of ICHD by **reducing the frequency of heat disinfection to once daily,** supplemented by 11-minute rinse cycles between patient sessions by the end of 2024.

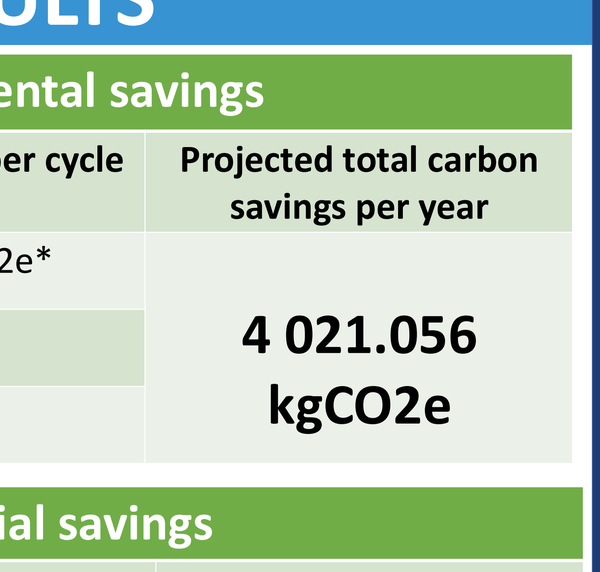


Image X Y&H TRUNC-HD Programme

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

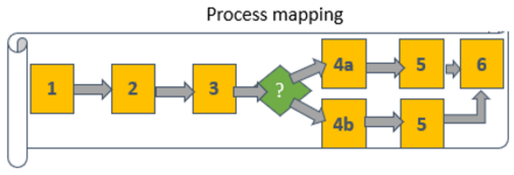
METHODS

Project leads were identified and participated in the **Y&H TRUNC-HD programme (see image X). Some QI tools and concepts used to help shape and develop ideas:**

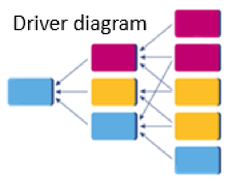
Stakeholder analysis



Process mapping



Driver diagram



- **Literature review** of current practices
- Presented proposal of reducing heat cleans to once daily at **renal governance meeting.**
- Measured water **microbial and endotoxin levels** from water samples
- Developed a **standard operating procedure**
- **Identification of high-risk patients** in place.
- Inform **ICHD staff of new process**

Before and after the implementation of changes, data was collected to calculate the **environmental, financial and social impact** of the project .

RESULTS

kgCO2e = Kilogram of carbon dioxide gas equivalent*

Environmental savings

	Carbon savings per cycle	Projected total carbon savings per year
Water	0.00250749 kgCO2e*	**4 021.056 kgCO2e**
Disinfection	0.16268 kgCO2e	
Energy	0.192654 kgCO2e	

Financial savings

	Per cycle	Projected total savings per year
Water	**£0.0266681**	**£4 829**
Disinfection	**£0.28**	
Energy	**£0.126**	

RESULTS

Most staff expressed **satisfaction to this change**, despite some adjustments to the faster-paced environment. Over 70% of staff took part in survey of which 85% were positive. These efforts also boosted team morale, earning a **shortlist nomination for the trust's Star Award in Sustainability**.



We surveyed over 70% of the total patients effected by the change. They were all positive as they had shorter wait time during lunchtime and evening.

We even managed to close the unit an hour early.

CONCLUSION



The findings show that this intervention **achieved the project aim** of improving operational efficiency while maintaining patient safety and satisfaction.

Achieving consensus among the multidisciplinary team, particularly with infection control and microbiology departments, haemodialysis **technicians required extensive discussions and evidence-sharing to address concerns about patient safety.**





The next steps for our unit will continue to focus on enhancing sustainability and operational efficiency**. The unit plans to introduce patient smartcards for data management** thus replacing paper records while improving data accuracy and accessibility

YORKSHIRE & HUMBER
Kidney Network

TRUNC. HD
TRYING TO REDUCE UN-NECESSARY CARBON

KQIP
Kidney Quality Improvement Partnership

UKKW 2025