

Reducing carbon emissions from in-centre haemodialysis is a priority for the Yorkshire and Humber Kidney Network (YHKN). To address this, a regional initiative, *Trying to Reduce Unnecessary Carbon from Haemodialysis* (TRUNC-HD), was developed in partnership with the UK Kidney Association (UKKA) Kidney Quality Improvement Partnership (KQIP). The issue of significant food waste in a satellite dialysis unit was raised, prompting this QI study. The aim was to identify the causes of food waste and implement measures to reduce it by September 2024.

Project leads participated in four local KQIP workshops and two TRUNC-HD regional meetings, following a structured quality improvement (QI) methodology. Key steps included stakeholder analysis and engagement, process mapping to identify key areas for improvement, and prioritisation of change ideas. Meetings were held with the domestic supervisor to explore the causes of food waste and the materials management officer to discuss reusable tableware, given the unit has a dishwasher. Simple interventions were introduced, such as discontinuing paper plates and plastic cups in favour of reusable alternatives, supported by additional reusable items procured for the unit. The environmental savings were calculated using emission factors from the Department for Energy Security and Net Zero's 2024 greenhouse gas reporting conversion factors and Greener NHS spend-based multipliers for supply chain hotspot analysis.

The team discovered that a significant contributor to food waste was ordering sandwiches for patients who were not dialysing on certain days, either due to being on a twice-weekly schedule and thus not having a midweek session or due to hospital admission. The project leads have now set up regular communication with the domestic supervisor so sandwich orders can be tailored to actual demand rather than a fixed daily standing order. This simple intervention significantly reduced food waste and associated carbon emissions. Wasted sandwiches decreased from 20 per week to 3 per week, reducing food waste by an estimated total of 43.4 kg between 1st July and 30th October 2024. This corresponded to a reduction of 227 kg carbon dioxide equivalent (CO₂e) in carbon emissions and £303.45 in cost savings. Extrapolated annually, the savings could amount to 695 kgCO₂e and £928.20. Additionally, the unit was ordering 8000 paper plates and 20000 plastic cups annually, which were manufactured in Asia and United Arab Emirates, respectively. By discontinuing single-use tableware, the unit is projected to save 286 kgCO₂e and £267.20 annually. During the project, it was noticed that staff attempted to order single-use tableware again, emphasising the need for ongoing vigilance and reinforcement of the new practices.

The project highlights the importance of maintaining staff engagement to sustain changes and avoid reverting to previous practices. Improved communication fostered team cohesion and inspired both staff and patients to consider carbon reduction efforts in their daily and working lives. Future initiatives, such as empowering patients to bring their own blankets for dialysis, aim to further reduce carbon emissions of in-centre haemodialysis. These findings demonstrate how simple, practical measures can lead to meaningful environmental and financial benefits in healthcare settings.

For more information

Key Contact - Tim Shrimpton – Leeds - tim.shrimpton@nhs.net