

P272

## P272 -Reducing our carbon footprint and resource use: A single centre experience of changing our practice to be more environmentally sustainable. A quality improvement project (QIP).

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### Introduction

The diverse and severe effects of climate change have far reaching consequences for global health including within the United Kingdom<sup>1</sup>. The delivery of healthcare also results in carbon emissions. Data published in 2018 shows that the NHS is the largest public sector contributor of carbon emissions, contributing to over one third of public sector emissions <sup>2</sup>. The Climate Change Act calls for an 80% reduction in carbon emissions by 2050 (from the 1990 baseline)<sup>2</sup>. Only 17% of NHS emissions are derived from energy usage which has been the main focus of carbon-reduction policies to date<sup>3</sup>. The NHS will only reach its targets by considering all aspects of practice, including clinical service design, to reduce carbon emissions. The Centre for Sustainable Healthcare (CSH) is a registered charity that aims to help the NHS fulfil its objective to reduce carbon emissions and resource use<sup>4</sup>. With the CSH we undertook a multi-disciplinary team (MDT) QIP making changes towards greater environmental sustainability in our units.

### Method

As an MDT we identified the following areas for change:

- Reducing duplication in disinfection cycles across 24 machines by only running the 'Hot-C-Cart' cycle at the end of the day (that includes disinfection) rather than a disinfection cycle and a 'Hot-C-Cart' cycle. This reduces the disinfection cycles that run each day by one quarter.
- Replace 12 existing machines with new machines that can be switched to a 'standby' mode following priming to save on water used.
- Instead of hospital linen being used and laundered after each patient use, patients were asked to bring their own blankets that can be stored in the unit between visits, saving on emissions and resource use incurred by laundry.
- Expanding home haemodialysis numbers results in a reduction in water usage per cycle and the potential for packaging to be recycled by the council in domestic recycling.
- Thirty staff pledged to 'Meat Free Monday'.

### Results

The CSH calculated the environmental impact and financial savings of implementing the QIP on one unit over one year using data provided from our Renal Unit and the Department of Environment, Food and Rural Affairs. In the calculation it was assumed that all home haemodialysis patients were new patients and the savings were calculated by making a comparison to 'standard' care received.

The potential carbon footprint reduction was 7161.63 KgCO<sub>2</sub>e, potential water savings were 258,336 litres and financial savings were calculated as £8000.0. These figures are based on one unit over one year, however if the changes were rolled all our five units the savings are potentially much greater.

### Conclusion

The NHS has a significant challenge in transforming clinical services to reduce carbon emissions. As NHS staff we are responsible for improving the quality of our services including introducing changes to practice to be more environmentally sustainable and protect the health of current and future generations. We noted that

our QIP would also lead to potential cost reductions for the trust. We plan to roll out the changes to all satellite units.