THE CAMPAIGN FOR GREENER HEALTHCARE

Green Nephrology

University Hospitals of Leicester NHS

NHS Trust

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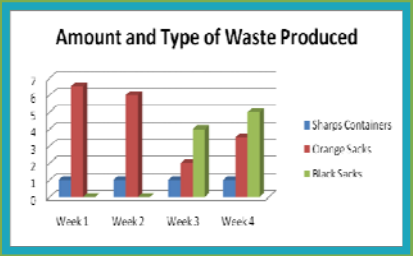
IMPROVING WASTE DISPOSAL IN A NEPHROLOGY PROCEDURES ROOM

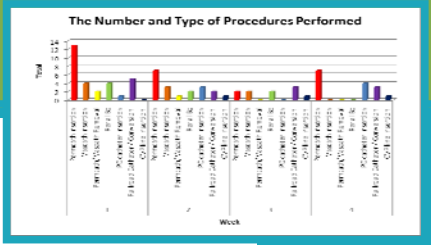
Dr Amritpal Dhaliwal, University Hospitals of Leicester NHS Trust

The 4-week audit was designed to target a small discrete clinical area as a model for how waste disposal can become more economical both in environmental and economic terms.

Healthcare trusts use a significant amount of resources, produce a large amount of the country's waste and therefore create a significant carbon footprint. Nephrology uses a large number of consumables and is likely to be responsible for a significant amount of the total NHS carbon footprint. We need to identify ways in which we become less wasteful, in order to reduce the impact on our environment. In doing this, we are also almost certain to become more efficient in financial terms. We reviewed the waste disposal in our designated nephrology procedures room, to illustrate how improvements can be made locally and hopefully kick-start more widespread change within the department and hospital as a whole.

- **For each week, the number of sharps bins, orange sacks and black sacks produced was recorded. As the amount of waste is directly proportional to the number of procedures performed, the number and type of each procedure performed per week was also documented.**
- **During the first two weeks we recorded the amount of waste produced using the waste disposal mechanisms which have been in place for years as a control.**
- **During the second two weeks, we added an extra bin into the procedures room to allow black sacks and orange sacks to be used simultaneously.**





RESULTS

- In the first two weeks, waste was only disposed of in either sharps bins or orange sacks.
- In weeks three and four, waste was divided separately into clinical and non-hazardous bags resulting in a much smaller number of sacks for incineration.
- During the third and fourth weeks, 66% and 59% respectively, of the waste produced during the procedures, did not require incineration. Furthermore, the majority of the waste in the black sacks was plastic packaging and could potentially be recycled.
- The amount of incinerated waste fell dramatically to 33% and 41% (in the third and fourth weeks respectively) of the total waste produced.
- The number of sharps containers used remained constant, at a rate of one large container per week.

There is also a correlation between the type of procedure performed and the amount of waste produced. Some procedures such as PD catheter insertion produce a greater amount of waste as more disposable sterile equipment is used. In Week 1, a total of 29 procedures were performed, one of which was a PD catheter insertion but the total number of sacks used was 6.5. In Week 3, a total of 10 procedures, including 3 PD catheter insertions, were performed, and 6 sacks in total were used. Therefore, although the overall number of procedures performed in weeks 3 and 4 were fewer than in the initial two weeks, the overall number of waste sacks produced was not significantly different.

The majority of waste in the black sacks was recycleable (although not precisely measured in this study) and therefore the next step locally must be to engage with the estates department and establish recycling for paper, card and plastics. This may also require collaborative pressure from other hospital departments to create the impetus for change within the Trust. At the same time there is a need for widespread acceptance and involvement with appropriate waste disposal to effect a real change in waste collection throughout all clinical areas within the nephrology department.

OBJECTIVES TO BE ADDRESSED

- **Measure the amount of waste accrued per week in the nephrology procedures room in terms of number of sharps bins, orange sacks (for incineration) and black sacks (non-hazardous waste for landfill) produced. Currently there are no recycling facilities at the hospital.**
- **Demonstrate the improvements that can be made in waste disposal by ensuring that only clinical waste is disposed of in orange sacks.**

CONCLUSION - This small inexpensive intervention has dramatically reduced the amount of waste sent for incineration. In financial terms this is also resulting in savings as the average cost of disposing of incinerated waste is in the region of £400 per tonne compared with £80 per tonne to disposal of waste to landfill sites. We are now trying to get recycling facilities within the hospital to reduce the number of black sacks produced.

CONTACT

Rachel Westacott
Email: rachel.westacott@uhl-tr.nhs.uk

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