



## 4a. How to: Improve segregation of clinical and non-clinical waste

### Why is it important?

In a dental practice we need to consider both clinical and non-clinical waste. Poor waste segregation can lead to non-clinical waste being disposed of in the clinical waste stream, increasing the cost to the practice and potential harm to the environment from incineration.

A recent study supported by Plymouth University was carried out at Torrington Dental Practice, a mixed NHS/private dental practice in Devon, measuring the clinical waste generated during treatment sessions over a specified period. It showed that *paper* followed by *nitrile* constitute the highest proportion of the total waste. (Link to study below).

They used carbon conversion factors to measure potential carbon savings and their data would appear to support the view that it is possible to reduce carbon emissions and increase profitability by appropriately segregating and managing clinical waste.



### What does sustainable practice look like?

#### Real life example

The renal unit at **Queen Margaret Hospital in Dunfermline** ran a Waste Watch Week and identified a lack of formalised waste management procedures pre and post dialysis treatments. 2.9kg of waste was generated per dialysis treatment (40.3 tonnes / year).

At the start of the year, 100% of this was sent as clinical waste for incineration. New bins were introduced for non-contaminated waste (e.g. packaging and bicarbonate bags) and clear guidance provided to staff on which disposal route to use for different items.

By April of the same year, incinerated waste had been reduced from 100% to 31%, with 69% now being directed into the domestic waste stream. A follow-on project allowed much of this domestic waste to be recycled.



## Actions

### KEY:

**Implementation:** Easy = Less Easy =

**Investment Cost:** Low = High =

**Financial return on Investment (ROI):** Low = High =

**Environmental benefit:** Small = Large =

- Undertake a waste audit
- Create a simple waste segregation guide for staff
- Label bins clearly
- In surgery, separate the sterile wrappers into plastic and paper for recycling
- Put any waste that is not contaminated with blood/saliva, into the domestic or recycling bins whenever possible

### You can calculate both the money saved and carbon saved

•**Money saved:** compare costs of waste collection fees and purchasing of goods costs each month before and after implementation

•**Carbon saved:** Carbon calculator  
<http://c.environmentalpaper.org/home>



## Resources

### Case studies:

Improved waste management in the Dialysis Unit Queen Margaret Hospital, Dunfermline

<http://map.sustainablehealthcare.org.uk/nhs-fife/improved-waste-management-dialysis-unit-queen-margaret-hospital-dunfermline>

### More links:

**What's in a bin:** A case study of dental clinical waste composition and potential greenhouse gas emission savings J. Richardson, J. Grose, S. Manzi, I. Mills, D. R. Moles, R. Mukonoweshuro, M. Nasser and A. Nichols. British Dental Journal 220: 2 JAN 22, 2016

<https://www.nature.com/articles/sj.bdj.2016.55>

Less waste, more health. A health professional's guide to reducing waste. (includes "Which waste bin?" sustainability flow chart). Royal College of Physicians, London (2017).

<https://www.rcplondon.ac.uk/projects/outputs/less-waste-more-health-health-professionals-guide-reducing-waste>

A guide for bin placement in the healthcare environment can be found at:

<http://www.greenhealthcare.ie/wp-content/uploads/2014/05/How-To-Undertake-a-Bin-Placement-Survey-revised.pdf>

Many types of waste bins are available, by size/colour for use in surgery: e.g. from :

<https://www.initial.co.uk/clinical-waste/waste-bins>

Duane B, Ramasubbu D, Harford S, Steinbach I, Swan J, Croasdale K, Stancliffe R. (in press). Environmental sustainability and waste within the dental practice. British Dental Journal.

**Dental Susnet**, online network for improving the sustainability of dental services:

<https://networks.sustainablehealthcare.org.uk/dental-susnet>