



## SUSQI PROJECT REPORT

**Project Title:** Reducing Continence products waste

**Start date of Project:** 5th May 2023

**Date of Report:** 19th July 2023

### Team Members:

Kathy Wagstaff, Clinical Lead Nurse.

Abbie Cooke and Gill Turberfield, Ward Coordinators.

Babitta Rani, Sandra Timms Ward Clerks.

Avril Baker, Nicola Compton & Fiona Franklin, Housekeepers.



### Background:

Continence is important for maintaining health, dignity and wellbeing. For many patients in the neurorehabilitation setting, they will have varied levels of incontinence and require continence products and support. While individual continence products are relatively low in cost, as a team we observed many products to be wasted and disposed of without patient use, contributing unnecessarily to our Trust carbon footprint.

Leamington Spa Hospital houses the Central England Rehabilitation Unit (CERU), which offers neuro rehabilitation to adults following acquired brain injury. 3 of 4 wards from the Neurorehabilitation service contributed to this project, 2 Acquired Brain injury rehabilitation wards (42 beds) and 1 stroke rehabilitation ward (20 beds). Our team included the Clinical Lead Nurse, Housekeepers, ward coordinators and ward clerks.

### Specific Aims:

The aim of the project was to understand how many vernicare continence items were being disposed of unused, and to reduce this wastage via education to the clinical team.

### Methods:

We first studied our current practice to identify the amount of items that were being wasted. Initially, we reviewed waste associated with continence pads and wipes (Tena and Conti brands) believing this to be a large issue. However, we established that additional stock left with patients was routinely given to patients at discharge. Assuming patients would go on to use this stock, there would be no unused products wasted. While a reduction in stock sent home with patients would lead to a financial saving for the trust, we switched our focus to products that are being disposed of unused to increase our environmental impact and plan to target this area of financial waste at another time.

We next targeted our Vernicare, or 'pulp' products which we often observed to be left in non-patient identifying or secured areas (e.g. windowsill, bathroom). When left out, these items would need to be disposed of either via macerator or incineration.

The 6 items targeted include:



- Male urinal
- Female urinal
- Bed pan holder
- Bed pan liner
- Vomit bowl
- Wash bowl

An observational audit was completed for six weeks. The ward Housekeepers were engaged to carry out these observations as a) they are responsible for stock management and ideally placed to know what items were being overused or wasted and b) to ensure our data was accurate, as clinical members of the team may change their behaviour if audits were carried out by the clinical leads and coordinators who are familiar faces and leads to of the clinical staff. Our audit captured how many products were not assigned to an individual patient and required disposal with the ward admin teams engaged to collate and input project data for the team.

#### Changes implemented

After 4 weeks we presented our findings to the clinical staff in the form of posters that were displayed next to the products, providing a visual reminder when reaching for a product.

#### Planned changes

We plan to continue observations weekly to keep an up to date record of the number of items that have been wasted. This will support us to ensure that our change is embedding into everyday practice for the team.

We plan to continue to remind staff to be mindful of how they manage stock at nursing handover meetings 3 times a day. We will do this by providing information on how many items were wasted (either during the 6 week period or with more up to date data) and asking them to think about how they could reduce this number.

We also plan to shadow staff when responding to a patient call, to ensure that when a patient rings the call bell or has scheduled personal care, the responding staff are following our policy to check the patients' personal supply at the bedside before collecting more stock.

#### Measurement:

##### *Patient outcomes:*

Patients will still receive the continence products they require, so this project will not impact on patient outcomes and clinical care.

##### *Environmental sustainability:*

We completed a process based (bottom up) carbon footprint for each of the six continence products included in the project to identify the CO<sub>2</sub>e emissions of each product. This included weighing and applying emission factors to the materials of the products and layers of packaging, disposal and transport of products from the manufacturer to our hospital site. Carbon emissions associated with disposal via the macerator were estimated based on macerator energy and water consumption per item disposal.

We estimated the following carbon emissions per item:

- Male urinal: 0.08 kgCO<sub>2</sub>e
- Female urinal: 0.08 kgCO<sub>2</sub>e
- Bed pan holder: 0.06 kgCO<sub>2</sub>e



- Bed pan liner: 0.06 kgCO<sub>2</sub>e
- Vomit bowl: 0.09 kgCO<sub>2</sub>e
- Wash bowl: 0.1 kgCO<sub>2</sub>e

To calculate our savings we used an average emission factor per item of 0.07833 kgCO<sub>2</sub>e.

*Economic sustainability:*

The cost of each Vernacare product was obtained from our procurement system. As multiple products are delivered in one box, we divided the total cost by the number of items for a cost per item as demonstrated below

- Male urinal 0.25p
- Female urinal 0.71p
- Bed pan holder 0.24p
- Bed pan liner 0.17p
- Vomit bowl 0.14p
- Wash bowl 0.24p

We anticipate a financial saving from waste disposal as our macerator will require less cycles per day.

*Social sustainability:*

Social sustainability was not formally measured as part of the project.

**Results:**

*Patient outcomes:*

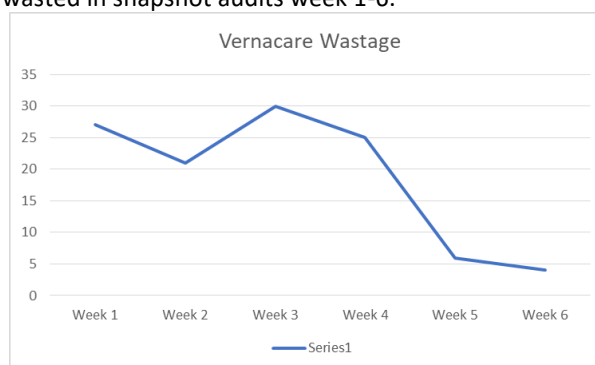
Patients will still receive the continence products they require, so this project will not impact on patient outcomes and clinical care.

*Environmental sustainability:*

Based on our 6 week audit across 3 wards, an average of 8.5 products per day were being disposed of unused per ward, equating to 25.5 items a day, 178.5 items a week, or 9,282 items per year.

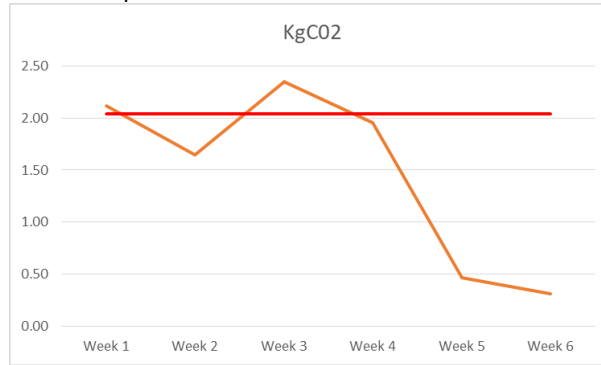
Our data demonstrates that following our change implementation at week 4, the number of items wasted reduced from an average of 25.5 items per day to 5 items per day, a saving of 20.5 items per day.

Table 1: Number of items wasted in snapshot audits week 1-6.



A reduction of 20.5 items per day equates to 1.61 kgCO<sub>2</sub>e per day. Projected across a year, this is an anticipated saving of **588 kgCO<sub>2</sub>e**, equivalent to driving 1,725 miles in an average car.

Table 2: CO2e of items wasted in snapshot audits week 1-6.



This is a reduction of 80% of total Vernacare product wastage since the project began.

*Economic sustainability:*

It will take time to see a reduction in ordering reflected in our procurement system however expect to see a significant reduction in the number of Vernacare products being ordered in the near future. Based on an average cost of 0.29p per item, a reduction in 20.5 items per day is calculated at £5.95 per day. Projected across a year, this is an anticipated annual saving of **£2,172**.

An additional **£50.37** would be saved per year from a reduction in macerator electricity and water consumption.

**Total annual saving = £2,222.37**

*Social sustainability:*

While our green team was formed by members of staff who regularly raised areas of wastage and were seeking to reduce waste, the project enabled us to engage the wider neuro rehab team, increasing awareness of how wastage not only impacts on the clinical budget but also the environment. It is too early yet to see the real long term cost savings but it has set the team thinking about other areas where they can make improvements.

Our long term aim is to create a working environment where the team considers carbon reduction alongside their everyday clinical work. This can bring additional benefits to our team, such as reducing time taken from over-ordering of stock, keeping stock levels at a manageable level and creating a tidier work environment.

**Discussion:**

Our data demonstrates that our intervention has successfully caused a decrease in the wastage of Pulp products across 3 wards by staff taking onboard the information shared and making wiser choices when collecting stock to take to the patient's bedside.

The main challenge of the project was to keep the data collection secret so the clinical staff did not make any changes before the baseline data results were published and shared with them.

We plan to continue to monitor usage using snapshot audits and if the trend continues as per the current results we are aiming to roll this method out across other continence products to increase our savings.



### Conclusions:

This project has given us the opportunity to look at reducing our carbon footprint in Neurorehabilitation and look at cost improvement areas. We are proud that we have been able to make a significant change in only 6 weeks and will continue to apply the methodology to other areas to make financial savings and reduce our carbon footprint and have already identified some items to target including dressing and wound care products.

