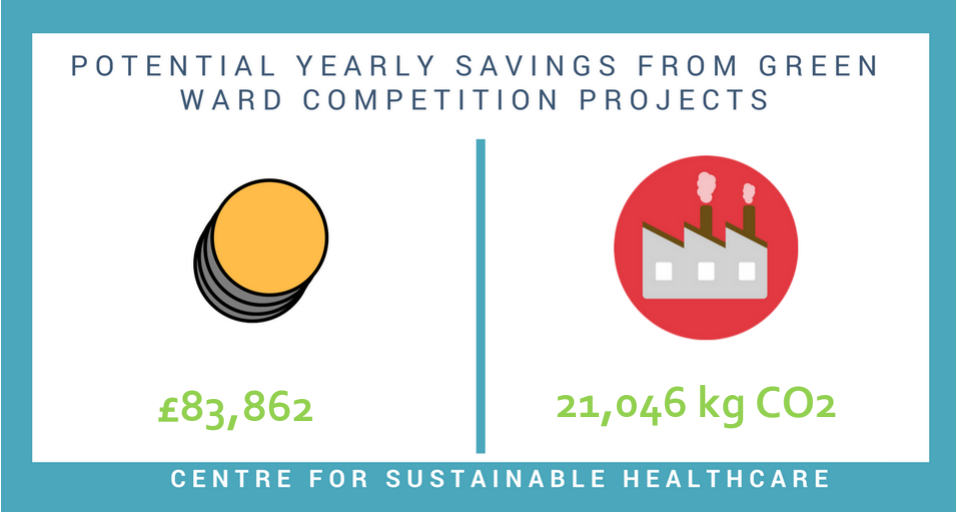


ASHFORD AND ST. PETER'S HOSPITALS  
GREEN WARD COMPETITION  
CASE STUDY AND SAVINGS 2018



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HEALTHCARE  
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# GREEN WARD COMPETITION ASP



## COMPETITION BACKGROUND

The Green Ward Competition is a clinical engagement programme run by the Centre for Sustainable Healthcare (CSH) for NHS Trusts wishing to improve their environmental sustainability and reduce their carbon footprint. Healthcare workers who participate are supported to design an innovative project in their unit or ward that will bring social and financial benefits alongside carbon reductions from resource efficiency.

Ashford and St. Peter's Hospitals NHS Foundation Trust (ASP) was keen to engage staff in this endeavour and also to realise the substantial carbon savings available from sustainable approaches to treatment and care. This report outlines the activities and outcomes of the Green Ward Competition which ran between October 2017 and March 2018.

### **Ashford and St. Peter's Hospitals Green Ward Competition in 2017**

Commissioned by ASP and overseen by Louis Pilard (Clinical Programme Manager, CSH), Ollie Swan, (Medical Engineering and Energy Manager, ASP) and Peter Wilkinson (Consultant Cardiologist, ASP), the Competition was launched in September 2017. 8 teams consisting of multiple staff members signed up. Each team attended an hour-long workshop led by Ben Whittaker (CSH) to develop project ideas, discuss approaches to measuring project outcomes and savings and hear about the competition's judging criteria.



Green Ward Competition Workshop with AMU

The workshops included some background information about the breakdown of the NHS's carbon footprint and a resource analysis for each setting was conducted. Staff were encouraged to consider clinical care changes, as well as traditional green project ideas (e.g. waste and energy) to maximise the potential carbon savings. Teams were given six to eight weeks to set up and run the developed projects and record the results. During the project implementation, Louis Pilard provided support by phone and email. Following the competition, a feedback process sought views on the experience of participating in the competition and suggestions to improve future years.

## COMPETITION ENTRIES

Seven teams submitted competition entries.



Surgical Assessment Unity, including Carole Armes , Cristian Jupoiu and Vances Machado

### 1. SHORTENED ADMISSION BOOKLET – SURGICAL ASSESSMENT UNITY (SAU)

**Goal:** To reduce the paper work associated with short-term admissions.

**Background:** The unit decided to review the use of admission booklets for patients. The team identified that admissions booklets for short-stay patients were too long and used an unnecessary amount of time and paper. By reducing the short-stay admissions booklet the team realised that they would be able to dedicate more time to patient care while reducing paper procurement and paper waste.

**Approach:**

1. The SAU team worked together to assess the admission booklet.
2. Together, they identified the key pages to keep and reduced the booklet from 27 pages to 6 pages.
3. They began using the 6-page admission booklet with short-stay patients, roughly 3 or 4 a day.

**Savings:**

The annual paper savings from the admission booklet reduction, assuming 4 shortened booklets a day, amount to 15,750 sheets of paper. This totals to 6.3 boxes of paper at £7.50 each, generating a yearly procurement saving of £47.25. Further downstream, this averts 69 kg of paper from the waste stream, generating an additional £6.90 in yearly recycling costs. The yearly carbon savings from this amount to 64 kg CO<sub>2</sub>e for paper production and 1.4 kg CO<sub>2</sub>e for paper disposal. The time savings for the work are impressive, with 1.5 hours of band 5 nurse time save a day, amounting to 375 hours a year. Assuming a £23,000 salary cost for a band 5 nurse, the yearly time savings amount to £4,739. **The total annual savings could amount to £4,793.15 and 65.4 kg CO<sub>2</sub>e.**

*'The project allowed us to spend more time with patients and to give them more attention and proper care.'*

*- Cristian Jupoiu*

## 2. REDUCTION OF ROUTINE BLOOD TESTS – CHERRY WARD

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**Goal:** To reduce the amount of routine blood tests run on the ward by 10-15%.

**Background:** Cherry Ward identified that medically fit patients were receiving daily blood-tests unnecessarily. It is estimated that the routine blood tests could be reduced by as much as 10-15%. The suggested method would be to identify which medically patients have received blood tests during lunchtime meetings and to make a note that a blood test is unnecessary on that day.

**Approach:**

Due to delays over the winter period, the project was unable to run. However, the team at Cherry Ward are keen to push this ahead when there is time.

**Savings:**

The Cherry Ward does roughly 20 routine blood-tests per day. A 15% reduction would result in 3 fewer blood-tests per day. It is estimated that the total cost of a blood test is £20. This includes: a) the materials such as syringe, test-tube, cotton and gauze, b) disposal costs in the high-cost sharps waste-stream, and c) the cost of transport and analysis from Frimley, where bloods are analysed. The annual cost savings of reduced blood tests could therefore be £15,000. Using a carbon conversion factor combining medical equipment, waste products and travel, the carbon reductions could amount to 11,511 kgCO<sub>2e</sub>. An estimated 10-15 minutes is required per blood test on Cherry Ward. A conservative estimate of 30 minutes would be saved a day on blood tests, amounting to, 125 hours of time saved a year, £1,373 per year in band 3 time. **The total annual savings of this project could amount to £16,373 and 11,511 kgCO<sub>2e</sub> or beyond.**

## 3. SHORTENED CAREPLANS – FALCON WARD

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**Goal:** To reduce the amount of time spent on irrelevant care plans amounting to high quantities of paperwork for staff.

**Background:** Falcon Ward identified that significant amounts of avoidable paper work were being completed by staff. This time spent on unnecessary paperwork could be used on patient care and increase staff satisfaction. A staff survey run on the ward found that 80% of staff were dissatisfied with current documentation procedures, 90% of staff spent almost an hour or above on evaluation work including completing paper work during lunch-breaks or out of working hours, and 90% of staff supported a change in evaluation procedure.

**Approach:**

1. The paper work procedure was re-evaluated
2. Staff will begin to use an evaluation form reduced in size
3. The project is yet to be completed and further details of implementation will be available in future

**Savings:**

The weekly amount of paper used on evaluation was 787 sheets, based on estimates of paper use reducing to 2 sheets per patient, an estimates 687 sheets of paper would be saved a week. This adds up to 34,350 sheets of paper per year, saving £103 worth of paper procurement and £15 in paper disposal per year. This equates to 143 kgCO<sub>2e</sub> avoided per year. Based on estimates, 22 hours a week of staff time could be saved on evaluation, this amounts to 1,100 hours and £13,901 per year. **Total yearly savings amount to £14,019 and 143kgCO<sub>2e</sub>.**

#### 4. MEDICINE WASTE REDUCTION – ASH WARD

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**Goal:** The aims of the project were to reduce wasted medicine and save staff time on medicine orders.

**Background:** The Team Leader identified that Ash Ward was wasting significant amounts of medicine and staff time on medicine orders. They decided to tackle the issue by addressing medicine order procedures and auditing medicine wastage.

**Approach:**

1. The medicine cupboard was redesigned to help ease storage procedures and patient own medication.
2. Montelukast was set a TTO prelabelled pack, meaning that patients did not have to return to the ward to collect it. This cut down on pharmacy time and saved time for patients,
3. Antibiotic was kept in the fridge and stored for all patients, reducing antibiotic wastage.
4. Changes were communicated to all staff on the ward.

**Savings:**

Medicine waste data was collected at baseline and again after the changes. Before changes, 92 medicine orders, not including inhalers, were wasted over six weeks. After the change, this number dropped to 25 over six weeks. The savings project across a year equate to 558 medication orders. Assuming a cost £5 per average medication order, this would create yearly savings of around £2,791. Using the SDU pharmaceuticals carbon conversion factor, this amounts to 432 kgCO<sub>2</sub>e. Carbon and cost savings do not take into account waste disposal as the information was not available at the time of writing. Unfortunately, exact time saving data is not yet available, however these would significantly add to savings and have been qualitatively noticed on the ward in terms of staff satisfaction. **The total yearly savings for this project could be around £2,791 and 432 kgCO<sub>2</sub>e.**

*“A significant impact is on nurse time, with medication in the right place we are able to work more efficiently, making us all happier.”*

*- Jayne Nguyen, Nurse*



Ash Ward Medication cupboard after reorganisation

## 5. DISCHARGE CHECKLIST TRAINING – MAY WARD

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**Goal:** To reduce bed-blocking by training Band 5 nurses to conduct discharge checklists.

**Background:** The team found that patients who were ready to be discharged were taking up extra bed days in the ward due to senior nurses not having enough time to complete discharge paperwork. The team realised that by training band 5 nurses to do the same paperwork they would be able to help patients spend more quality time out of the ward and save bed days on the ward.

**Approach:** Although there was not enough time for the project to be run, the approach suggested was to include fast-track checklist training as part of zero-three month or six-month competency reviews.

**Savings:** It was estimated that this change could save 2.5 bed days per week. Assuming a cost of £150 per bed day, the yearly savings would amount to £18,750 and 4,757 kgCO<sub>2</sub>e.

*“Once we run the project, we’ll be able to help patients get back to their families quicker so that they can be at peace.”*

*- Alen Gellado*

## 6. INCONTINENCE PAD USE MINIMISATION – ACUTE MEDICAL UNIT

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**Goal:** To reduce the unnecessary use of incontinence pads on the ward.

**Background:** When patients come from the Emergency Department to AMU they often have had incontinence pads fitted even when there is no history of incontinence. When they are on AMU incontinence pads are often continued even though the patients can get to the toilet.

**Approach:** A campaign to change the process of applying incontinence pads was run on the wards with posters and explanations during team meetings.

**Savings:** Savings identified through the minimisation of incontinence pads amounted to £500 per year. As the ward was exceedingly busy with a high turnaround of staff, the project was considered too time consuming to continue and stopped. It is advised that the project is restarted when staffing is settled and a successful campaign can be run.

## 7. MEDICATION WASTE REDUCTION – ASPEN WARD [COMPETITION WINNER]

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**Goal:** To reduce medication waste on Aspen Ward.

**Background:** High levels of wasted medication on the ward inspired the team to tackle medicine waste.

**Approach:** Aspen Ward communicated their goal during a team meeting and organised their project as a group. They decided on the following:

1. Liaised with key staff in pharmacy - Ward pharmacist, Ward top up technician and head of distribution in pharmacy.
2. The ordering of medication for patients which could be brought in from home via family members.
3. Out of date drugs in Aspen drug cupboards.
4. The labelling of patient drugs as ‘do not send home’ rather than as a TTO.
5. Medications being ordered as TTO’s and not being collected by patients.

**Savings:** The project save £6,674 in four months, which projects to £26,696 over a year. Using the SDU pharmaceuticals carbon conversion factor this equates to 4,138 kg CO<sub>2</sub>e per year.

## Potential annual savings

The following table provides detail on the annual savings available to the Trust from the 2018 Green Ward Competition projects when projects are fully implemented and ongoing. This list is not exhaustive as there are other carbon and cost savings which could not be captured in the time available. Furthermore, these carbon and cost savings will increase if the projects are scaled up across wards.

Project	Money	Carbon
SHORTENED ADMISSION BOOKLET – SURGICAL ASSESSMENT UNITY (SAU)	£4,793.15	65.4 kg CO <sub>2</sub> e
REDUCTION OF ROUTINE BLOOD TESTS – CHERRY WARD	£16,373	11,511 kgCO <sub>2</sub> e
SHORTENED CAREPLANS – FALCON WARD	£14,019	143kgCO <sub>2</sub> e
MEDICINE WASTE REDUCTION – ASH WARD	£2,791	432 kgCO <sub>2</sub> e
DISCHARGE CHECKLIST TRAINING – MAY WARD	£18,750	4,757 kgCO <sub>2</sub> e
INCONTINENCE PAD USE MINIMISATION – ACUTE MEDICAL UNIT	£500	No data
MEDICATION WASTE REDUCTION – ASPEN WARD	£26,696	4,138 kgCO <sub>2</sub> e
<b>Totals</b>	<b>£83,862.15</b>	<b>21,046.4 kgCO<sub>2</sub>e</b>