

Reduction of Medicine Waste, Green Ward Competition 2017 Ashford and St. Peter's Hospitals NHS Foundation Trust

Project Description

Background: The Ash Ward (Paediatrics) undertook a project to reduce medicine waste in 2017. Staff identified medicine waste as coming from: 1) medication intended to be taken home by patients on discharge but returned to the pharmacy due to duplication, treatment change or ineffective storage, and 2) medications requested from pharmacy but not collected by parents/patients who are discharged and prefer to come back and collect rather than wait.

Approach: This project involved the ward staff, nurses, and pharmacists. They chose to develop more effective storage solutions and increase 'to take out' (TTO) packs of medicines for patient to take home straight from the ward when discharged. Increasing TTO packs would decrease the medicines left uncollected at the pharmacy and streamline the process for parents and patients. First, the team collected data on medicine waste in terms of medication orders for antibiotics, TTO packs, inhalers, and others. They implemented the following changes:

- Redesigned the medicine cupboard for easier medicine storage, including of medications brought in by patients from home
- Labelled Montelukast as a TTO pack



Ash Ward Medication Cupboard after reorganisation

- Generic stock antibiotics bottles were stored in the fridge for which could be used for all patients, rather than opening separate bottles for each patient
- Communicated changes to all staff to ensure full implementation

After those changes, they measured the medication orders and analysed results.

Benefits

Patient Outcomes: There is potential to reduce medication errors and increase patient compliance with prescribed regimens through reducing stockpiling of medicines at home, ensuring that patients are not using out of date medicines and, if doses are changed whilst patients are in hospital, then ensuring that they are discharged the correct dosages.

Environmental and Financial: The team tracked the number of medication orders over six weeks before and after implementation, which can be seen in the table below.

Number of Medication Orders Over Six Weeks

	Before	After
Antibiotics	35	9
TTO orders	6	2
Miscellaneous	51	14
Total Medication Orders	92	25
Difference		- 67

As 67 medication orders were saved over 6 weeks, there is an average saving of about 11 orders per week. For a year, about 558 orders are saved. At an estimated cost of £5 per order, around £2,791 and 432 kg CO₂e in yearly savings are possible.

Social: By creating better medication storage, the staff are able to more efficiently accomplish their tasks, potentially improving staff experience and freeing up time for other aspects of ward management or direct patient care. With more TTO packs, patients and parents spend less time waiting and travelling to pick up medications from the pharmacy.

Dis-benefits

This changed treatment routine during inpatient stay. In paediatrics, the stay is often very short and various medications can be trialled to find what works best for the child. While this approach is unavoidable, stock bottles are used to prevent waste. However, due to infection control, inhalers are single patient use. Hospitals could investigate inhaler recycling schemes.

Potential Barriers

Challenges to this project:

- Incorporating a different routine to job role
- Adjustment to a new routine such as staff attitudes towards the project
- Drug room is small and not fit for purpose

What the team had to say:

“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

“Medication is a lot easier to find with the new cupboard layout.” – Rachel Allen

“We have noticed a significant reduction in the wastage of inhalers since change was implemented.”
– Emily Carr

Key Aspects

The team thought about how to reduce medicine usage in the ward and recorded pre/post usage to track changes. Following the idea of reducing medicine wastage, other possible approaches could include asking family and friends of patients to bring patient medications from home to avoid duplicate ordering and liaising with key pharmacy staff on orders.

For more information please contact:

Jayne Nguyen, Deputy Sister, jayne.nguyen@nhs.net

Keith O’toole, Charge Nurse, keith.otoole@nhs.net