

Betsi Cadwaladr University Health Board

A project to reduce plastic bag use in pharmacy departments across Betsi Cadwaladr University Health Board



Topic Area

Please identify (more than one option may be selected)

Adaptation <input checked="" type="checkbox"/>	Communications and engagement <input checked="" type="checkbox"/>	Estates and facilities (energy, waste, water) <input type="checkbox"/>	Food, catering and nutrition <input type="checkbox"/>
Funding and financial mechanisms <input type="checkbox"/>	Medicines <input checked="" type="checkbox"/>	Research, innovation and offsetting <input checked="" type="checkbox"/>	Strategic ambition <input checked="" type="checkbox"/>
Supply chain and procurement <input checked="" type="checkbox"/>	Sustainable models of care <input type="checkbox"/>	Travel and transport <input type="checkbox"/>	Workforce, networks and system leadership <input checked="" type="checkbox"/>
Green/blue space and biodiversity <input type="checkbox"/>	Digital transformation <input type="checkbox"/>	Sustainability education <input type="checkbox"/>	
Other (please specify): NHS Wales Decarbonisation Strategic Delivery Plan 2021 – 2030 - Approach to Healthcare – Waste, Initiative 45 – ‘plastics in healthcare’.			

**Topics aligned with the 12 Greener NHS workstreams (NHS England) are shaded.*

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Key message / aim

The NHS Wales Decarbonisation Strategic Delivery Plan 2021-2030 includes the ‘plastics in healthcare’ - initiative 45 - aimed at addressing waste in the delivery of healthcare tackling PPE, single-use plastic and packaging waste. This project aims to reduce the use of single-use plastic dispensary bags in pharmacy departments across BCUHB, trialling initially in Ysbyty Glan Clwyd (YGC) pharmacy department.

What was the problem?

Extrapolating from available purchasing data a total of around 300,000 plastic bags - the majority of which were likely to be used only once - were being purchased by BCUHB pharmacy departments annually. They were used for inpatient delivery of medicines to the wards and as dispensary bags for medicines for outpatients and discharge patients.

The bags used for inpatient delivery usually ended their lifecycle by being sent for recycling. The bags used for outpatient and discharge prescriptions leave the hospital with the patient so the end of the bag's lifecycle is dependent on the patient – there is the potential that it could be reused, however ultimately it could end up in soft plastic recycling at a supermarket, being sent to landfill or being littered into the environment. The bags we used were LDPE plastic which had more embedded carbon and pose a similar risk if littered into the environment compared to the thin HDPE carrier bags that are banned by Phase 2 of the Welsh government Single-use Plastic Products Act.

What was the solution?

- Outpatient and discharge LDPE plastic dispensary bags were replaced with 100% recycled and 100% recyclable paper bags.
- Waiting outpatients are now asked if they need a bag as 50% decline when asked.
- Inpatient medicines need to be sent to the wards without plastic bags, loose, in reusable transport bags. In YGC we now send single medicines for an individual patient without bags and some BCUHB hospitals are already sending multiple medicines for individual patients loose to the wards. We are investigating ways of sending all medicines loose to the wards without plastic bags in all BCUHB hospitals.

What were the challenges?

- Reducing carbon. To understand the impact of the proposed improvement in terms of carbon, the different materials needed to be investigated and then compared holistically. In this case LDPE plastic, HDPE plastic, paper and recycled paper.
- Changes to processes in a busy acute main hospital. Changing to paper bag use meant some hospital locations needed to change their storage space and processes as paper is less robust than plastic if space is limited or the bags need reopening after being sealed.
- Balancing finances. Recycled paper bags cost more than plastic bags. Overall reduction in the use of plastic bags helps to mitigate this.
- Hearts and minds. Most colleagues were receptive and saw this as an overall positive change, but switching to paper introduces some issues, for example paper requires more space for storage, paper is less robust in some situations and paper is not as easy to seal and reopen as plastic bags. Trials of new processes were carried out and paper introduced gradually as our stocks of plastic were slowly reduced and with it there was reduced resistance to change.

What were the results/Impact?

- Patient outcomes: There has been limited feedback from patients since the switch to recycled paper dispensary bags – one patient mentioned it 'was the right thing to do'. Dispensary managers have commented that the new paper bags offer patients' more privacy and confidentiality when collecting their medicines compared to the previous transparent plastic bags. The reduction in

carbon will contribute towards the target of net zero which will be beneficial for all patients.

- Social impact: There has been increased awareness of environmental issues by colleagues. Suggestions have been proposed by staff for using alternatives to single-use plastics for other applications in the hospital.
- Financial impacts: Recycled paper bags cost more than plastic bags. The costs for switching from plastic bags to recycled paper bags for outpatient and discharge prescriptions was projected to increase by approximately 32%. However, the removal of plastic bags used for inpatient medicines is projected to reduce overall costs to below that of purchasing only plastic.
- Environmental impact: The majority of outpatient and discharge prescription medication now leaves YGC with patients in 100% recycled and 100% recyclable paper bags. Wrexham Maelor Hospital and Ysbyty Gwynedd have also started to purchase these bags for the same use. They can be re-used; they are easily recycled via the local authority's kerbside collection and if they end their lifecycle as litter, unlike plastic, they quickly and easily decompose.

Summary:

- At YGC pharmacy department there has been a **59% reduction in plastic bag use**.
- The current **estimated carbon saving is 489.37kg CO2e annually**, which is **an estimated total carbon reduction of 28%**, estimated to equal a carbon equivalent journey of **2231 kilometres** in a medium petrol powered car.

Next steps

This is an on-going project and we are investigating ways of further reducing the use of single-use plastic bags, specifically for inpatient and stock deliveries at YGC, and increasing the use of recycled paper bags at Llandudno Hospital.

Want to know more?

Contact 1:

- Name: [Stuart Firth](#)
- Role: [Sustainable Transformation Officer / Pharmacy Technician](#)
- Email: stuart.firth@wales.nhs.uk
- Location & NHS Region if within the UK: [Ysbyty Glan Clwyd Hospital, BCUHB, Bodelwyddan, North Wales](#)
- Partner organisations involved: Bevan Commission
- Has this project or story been made public in any form before? It is planned for this project to be shared with the Bevan Commission's "Let's Not Waste", the Welsh Pharmacy Review and NHS Benchmarking.

Critical success factors Please select one or two of the below factors that you believe were most essential to ensure the success of your project changes.			
People	Process	Resources	Context
<input type="checkbox"/> Patient involvement and/or appropriate information for patients - to raise awareness and understanding of intervention <input checked="" type="checkbox"/> Staff engagement <input checked="" type="checkbox"/> MDT / Cross-department communication <input type="checkbox"/> Skills and capability of staff <input type="checkbox"/> Team/service agreement that there is a problem and changes are suitable to trial (Knowledge and understanding of the issue) <input checked="" type="checkbox"/> Support from senior organisational or system leaders	<input checked="" type="checkbox"/> clear guidance / evidence / policy to support the intervention. <input type="checkbox"/> Incentivisation of the strategy – e.g., QOF in general practice <input type="checkbox"/> systematic and coordinated approach <input checked="" type="checkbox"/> clear, measurable targets <input checked="" type="checkbox"/> long-term strategy for sustaining and embedding change developed in planning phase <input checked="" type="checkbox"/> integrating the intervention into the natural workflow, team functions, technology systems, and incentive structures of the team/service/organisation	<input checked="" type="checkbox"/> Dedicated time <input checked="" type="checkbox"/> QI training / information resources and organisation process / support <input checked="" type="checkbox"/> Infrastructure capable of providing teams with information, data and equipment needed <input checked="" type="checkbox"/> Research / evidence of change successfully implemented elsewhere <input type="checkbox"/> Financial investment	<input checked="" type="checkbox"/> aims aligned with wider service, organisational or system goals. <input type="checkbox"/> Links to patient benefits / clinical outcomes <input type="checkbox"/> Links to staff benefits <input checked="" type="checkbox"/> 'Permission' given through the organisational context, capacity and positive change culture.