NEWS ANALYSIS

From pharmacy apps to cutting low value appointments: how hospitals are becoming more sustainable

Across Europe, hospitals and their staff are coming up with simple but effective ways to reduce their environmental impact while saving time and money, Elisabeth Mahase reports

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Microfunding for staff led projects

After years of frustration at the numbers of items in healthcare that were used once then thrown away, Maria Gaden, a midwife by training, became the head of Denmark’s Centre for Sustainable Hospitals. The centre, which works with all hospitals in the Central Denmark Region (Midtjylland), was established in 2021, alongside a new sustainability strategy that set three main goals for hospitals to achieve by 2030: reduce consumption by 30%, reduce the total amount of waste by 30%, and recycle 70% of all waste.

To help them achieve this a microfunding programme was set up to finance sustainability projects. Every year the scheme opens to applications, and anyone from the hospitals can apply. The money is mainly spent on subcontracting employees so that they can take a day or two off a week for perhaps half a year to devote time to the project. Gaden told The BMJ this can involve “reaching out to partners, testing, gathering data, making material for communication, and so on.”

The funding scheme has proved fruitful, and Gaden has created a booklet of 16 initiatives that can be scaled up and implemented by hospitals, including stopping the unnecessary use of single use plastic trays for newly sterilised instruments and paper sheets to cover beds. She said, “[The paper covers] contribute tonnes of waste every day. We think [by using the paper] that we are improving hygiene, but in a microfunding project we found that it doesn’t, because it doesn’t cover the side of the bed and people have just been sitting on the same chair without any paper. So what’s the use of this blue paper?”

One of the scheme’s main projects relates to drug waste. “One example that started as a microfunding project and then grew bigger is an app for reducing medicines waste. It works by allowing pharmacists to scan the QR code on the medicine, and then they get a warning within this app when medicines are going to run out of date soon,” Gaden explained. Pharmacists can then make the drugs available to others in the hospital to use before they expire and need to be thrown away.

Before this, Gaden said, pharmacists were having to manually check expiry dates by hand, and there was no collaboration between departments. “It’s not rocket science: it’s what they do in supermarkets. But it’s now been rolled out to all hospitals in Central Denmark Region, and last year it saved medicines equivalent to €173 000 [£150 000; $180 000] in our biggest hospital unit,” she said.

Although the scheme has seen great successes, it’s not without its challenges, with one key barrier being workforce shortages. “The problem is that they sometimes don’t have a temp to cover the shifts, even with the extra money, because, as with everywhere in Europe, we lack staff,” Gaden said.

Making hospitals climate resilient

In Galicia, in northwest Spain, hospitals faced with an increasing risk of floods, heatwaves, and fires are working to make their buildings more resilient. Three hospitals in the region—Hospital Universitario de Ourense, Hospital Público de Verín, and Hospital Público do Barco de Valdeorras—have joined the Life Resystal project, which is running from September 2021 to August 2025 and is led by Health Care Without Harm, a non-governmental organisation whose members include healthcare organisations and professionals across Europe.

The project, funded by the European Commission, aims in each of the project’s four years to protect 46 hospital buildings and 31 000 patients from climate related hazards such as extreme weather events. It does this through a network of hospital staff, first responders, engineers, urban planners, health experts, and local government representatives across several European countries who seek, design, and test ways to implement adaptation measures.

Cristina Enjamio, former director of economic resources in the Ourense healthcare area in Galicia, who has been working on the project, told The BMJ, “The way we plan and build our facilities improves our ability to adapt, because healthcare must be prepared for and resilient to the impacts of climate change, such as extreme weather events.”

Enjamio, who has spent several years working in projects involving solar panels, electric ambulances, therapeutic gardens, and food waste reduction, finds sustainability projects to be “contagious.” She says they all start with small changes and grow as everyone in a hospital—doctors, nurses, managers, and maintenance staff—see the results and want to get involved.

Reducing low value outpatient activity

In the UK a team from the East Midlands has found an effective way to save patients’ and nurses’ time...
and to cut greenhouse gas emissions: eliminating routine low value appointments from the HIV monitoring pathway. The team from Northamptonshire Healthcare NHS Foundation Trust identified patients with HIV who were deemed to be “very stable” and assessed the effect of reducing their routine face-to-face appointments from twice to once a year.³

In surveys they found that the idea was very favourable to most patients, with over 90% supporting the reduced frequency of appointments and more than 95% preferring electronic communications and the cessation of paper outputs such as letters.

The team also measured the potential social impact on patients, the environmental impact, and the financial benefits. They found that the change could save an estimated 26 tonnes of carbon dioxide equivalents each year, similar to the amount from driving 75 000 miles in an average sized car. Additionally, 350 hours of band 6 nurses’ time and 200 hours of senior doctors’ time could be saved each year, while around £45 000 a year could be saved just through the reduction of consumables used, such as blood bottles, needles, and gloves.

The team members have won the Centre for Sustainable Healthcare’s green ward competition for their proposal. In their report they said the potential financial and environmental savings across the NHS, with nearly 99 000 patients with HIV accessing care in 2019, are “irrefutably significant.” They added that similar initiatives could also be looked at in other outpatient care pathways for chronic conditions.⁴