REDUCING WASTE TO IMPROVE HEALTH

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THE CLIMATE & HEALTH EMERGENCY

"Climate change poses a major threat to our health as well as our planet. The environment is changing, that change is accelerating, and this has direct and immediate consequences for our patients, the public and the NHS.

This is why the NHS has launched the 'For a greener NHS' programme, working with our staff, hospitals and our partners. We want to build on the great work being done by trusts across the country, sharing ideas on how to reduce the impact on public health and the environment, save money and – eventually – go net carbon zero."

NHS England and NHS Improvement 2020

- The NHS generates 5 % of UK Greenhouse gas emissions
- Trusts required to produce a Green Plan detailing emissions reduction plan in line with the NHS net zero carbon targets.

Barking, Havering and Redbridge University Hospitals NHS Trust

Barking Havering & Redbridge University Hospital Trust Green Plan

2022-25

-For a Greener and Sustainable Trust-



Climate change: IPCC report is 'code red for humanity'

By Matt McGrath Environment correspondent

() 9 August 2021 | F Comments

COP26



NHS





Human activity is changing the climate in unprecedented and irreversible ways, a major UN scientific report has said.

The landmark study warns of increasingly extreme heatwaves, droughts and flooding, and a key temperature limit being broken in just over a decade.

The report "is a code red for humanity", says the UN chief.

But scientists say a catastrophe can be avoided if the world acts fast.



BHRUT GREEN PLAN: THE RESPONSE



Figure 1: IEMA Greenhouse Gas Management Hierarchy (updated 2020) and the Waste Hierarchy which focusses on the prevention of waste



LEADERSHIP &

BHRUT GREEN PLAN





Greenhouse Gas emissions (the major contributor to the climate and health emergency), start to tail off once the hierarchy is integrated into decision making:

- 1. Eliminate
- 2. Reduce
- 3. Substitute
- 4. Compensate

Figure 2: Net Zero Carbon Transition Plan framework with short, medium and long term timescales, using the IEMA greenhouse gas management hierarchy process shown in figure 1



SHARPSMART REUSABLE SHARPS CONTAINERS PROJECT KGH 2021/22

Sharpsmart is a reusable sharps (and some non sharps) disposal container.

Situation

- Sharpsmart was implemented at QH following extensive stakeholder engagement to manage potential risks in 2018.
- There was an opportunity to review and roll out the project at other sites and improve processes further.

Actions

- Engage stakeholders to review suitability of Sharpsmart for KGH site.
- Assess delivery options e.g. through our TFM contract.
- Assess opportunities to improve process further based on new ideas and industry innovations since 2018.
- Training and implementation phase.

WHAT DID THE PROCESS/SERVICE LOOK LIKE BEFORE YOU MADE IMPROVEMENTS?

Open loop/linear process: take, make, dispose

Single use sharps bin

Incinerate the container and contents

Environmental and economic impact of process:

Material input at the front end = environmental damage due to methods of production.

Material destruction at the back end = air and land pollution issues as well as ash generated which must then go to landfill (& a waste of materials = cost!).

*Some energy recovery occurs in some cases which offsets some fossil fuel use





CURRENT STATE – WHAT DOES THE PROCESS/SERVICE LOOK LIKE NOW? (PART 1)







CURRENT STATE – WHAT DOES THE PROCESS/SERVICE LOOK LIKE NOW? (PART 2 – CONTINUOUS IMPROVEMENT)



CURRENT STATE – WHAT DOES THE PROCESS/SERVICE LOOK LIKE NOW? (PART 3 – CONTINUOUS IMPROVEMENT)



Reusable sharpsmart container

Sharp smart container

Trayless system means that non sharps can now be catered for. Closed loop

Incinerate contents only (i.e. expired drugs, some pathology wastes)







- Sharps injuries (disposal related): 60 % reduction observed.
- Single use plastic: A reduction of 50,000 single use containers.
- Carbon emissions saving from waste: c. 30 tonnes CO₂e (this includes only the savings from single use plastic elimination, excludes waste treatment process savings).
- Reduced waste treatment plant downtime guidewires contribute to c. 25% incinerator breakdowns lasting 24-48hrs (helps reduce knock on impacts with clinical waste processing which could increase carbon emissions)



OUTCOMES

Positive outcomes for our staff, patients and planet:

- 1. A safer, lower cost sharps waste disposal process over the full lifecycle.
- 2. Less single use plastic waste produced leading to lower carbon emissions throughout the process lifecycle.
- 3. Less plastic waste incinerated leading to lower air and land pollution risks.
- 4. Less virgin metals produced for industry leading to lower carbon emissions (MR64 container).
- 5. Less cardboard produced and incinerated for pharmacy blue boxes leading to less deforestation and carbon emissions.



PRIDE WAY METHODOLOGY

The BHRUT PRIDE way methodology was used but not consciously – this is the way that all Sustainability Managers are taught to think (and should be thinking).

THE STEPS TO QUALITY IMPROVEMENT



Improving processes

will be a **key aspect** in achieving the **Green Plan targets** for net zero carbon emissions.





