NHS Sustainability Impact Report 2020

In Partnership

Sharpsmart

MAKING HEALTHCARE SAFER

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Introduction

Welcome to the 2020 NHS Sustainability Impact Report as published on behalf of the NHS Sustainability Campaign.

Inside these pages you will find best-practice on accelerating Sustainable Development within the NHS from a wide-range of Trusts, Hospitals, CCG's and Industry.

Each year I am more impressed with the standard of work NHS Professionals are carrying out to drive forward sustainable development. There are some amazing examples within which demonstrate huge progress across our health service, but we know there is much more that can be done and we will continue to campaign for wider support.

Within the 2020 Report we have some amazing examples of waste management, carbon reduction, energy efficiency and financial savings. I hope you find the Report useful and we hope you will continue to support the NHS Sustainability Campaign as we strive to improve the long-term efficiency of our beloved NHS. Finally, I would like to say congratulations to all those who feature within and all those working to improve environmental and financial outcomes. Enjoy the report.

Scott Buckler, Campaign Manager, NHS Sustainability Day

Staff Engagement

Midlands Partnership NHS FT

The Sustainability campaign at Midlands Partnership NHS FT started with the Sustainability Champions group founded in 2018, with staff interest increasing in 2019/20 by 88%. The Sustainability Champions group consists of clinical and non clinical staff, led by the Energy Manager. The Champions group reports to the Sustainability Strategic Group (set up in August 2019) which consists of heads of departments such as Communications, Finance, IM&T, Quality Improvement, Workforce Development, F&E.

With help from Sustainability Champions, the Trust have displayed 'Bring your own reusable water bottle/cup' posters by the water coolers/water fountains in offices, wards and outpatient areas and in the Bistros. Admit Officers reported that they have noticed a reduction in single use cups.

During the Trust's Festival Day in September 2019, a Sustainability stand introduced Sustainability Days. Staff found out who their sustainability contact was and MPFT reusable water bottles and reusable bamboo cups were launched.

Together with catering team, MPFT promoted and encouraged staff, visitors and service users to bring their own clean reusable food containers and reusable cutlery for take-away meals. Through Sustainability Champions projects, staff are collecting plastic bottle lids for charity and to recycle the lids to make benches and playground equipment.

MPFT were challenged by the member of staff that they were not environmentally-cautious Trust. He became a Sustainability Champion and one year later, gave feedback that he was honoured to work for a Trust which cares about the environment.

Economic Benefits

The projects were implemented at no cost or low cost. Economic benefits would be reduced waste and reduced amount of single use products. Health benefits would be on the environment and reduced carbon footprint. Staff engagement was mostly around reducing single use plastics, reducing unnecessary single use pollution and any energy used for its production and recycling. This would have contributed to lowered air pollution and reduced climate change. Volunteering as a Sustainability Champion could have had a positive impact on mental health.

Partners

The projects were supported from the top management to the front staff. Individual teams took their own initiatives and were proactive in reducing waste and promoting sustainability. Trainers from the Quality Improvement Team updated their forms and encouraged staff to bring their own reusable cups/water bottles for the training, so the waste was reduced. Members of the Sustainable Strategic Group were valuable members who came up with lots of ideas. For example, the Associate Director for Communication has actively been promoting sustainability and NHS single use plastic pledge in Trust's weekly newsletter, monthly PEP talk magazine, Intranet Enews and the Trust's Twitter account. Another example is when the Associate Director for IM&T suggested that Ecosia should be the Trust's main search engine so they could help to plant the trees. Catering team at Bistro have been involved in reducing the waste and applying more sustainable products.

Instructions have been given that Energy Manager, who also leads on Sustainability, is involved in all F&E contracts. Recent examples include Air Conditioning Contract.

Future Plans

Preparations are underway for a workshop for the Sustainability Champions, members of the Sustainability Strategic Group, and the Trust's staff. The Sustainability Workshop takes place on 31st March 2020, with the Chief Executive and the Board's Sustainability Lead, Alison Bussey, opening the event. A vegan lunch will be provided by the Trust's Bistro and everybody will be bringing their own reusable cup. The agenda on the day includes setting the Trust's sustainability priorities, refining the role of sustainability Champions, identifying what the champions would need to fulfil their role and networking.

MPFT are working with the Trust's Arts for Health team on another sustainable project. They have been collecting single use plastic stirrers in the Learning Centre and Bistros and have placed posters and containers around to encourage staff to collect stirrers in the containers provided rather than binning the stirrers. Arts for Health will be working with patients and staff to create some wonderful projects from used single use plastic stirrers and spoons and soon MPFT will be able to display those art projects.

The Quality Improvement team has linked with the Energy Manager (Sustainability lead) to integrate sustainability in their Quality Awards. MPFT will appoint scoring system for the sustainability sections.

MPFT will be considering if our patients/service users can become Sustainability Champions under the staff supervisions. MPFT value patient's feedback and their involvement in the Trust's future would be very valuable.

MPFT have seen huge improvement in staff behaviour within last 12 months. More and more staff are demanding positive changes towards sustainability and front staff want to be involved in the Trust's sustainable journey.

Interserve

Interserve and UCLH value the importance of sustainability and environmental management and strive for positive, sustainable changes. Interserve and UCLH work together to implement sustainability strategies and achieve challenging, ambitious targets around environmental and social sustainability. Both organisations have collaborated to form a partnership, to create effective methods of engaging staff and achieve goals outlined in the UCLH Sustainable Development Management Plan.

Engaging with staff through various techniques and promoting positive behavioural changes has played an essential role in achieving targets. Since 2018, Interserve & UCLH Trust developed an annual Sustainability Calendar, which has been renewed each year and acts as an awareness tool.

Each quarter focuses on a particular topic using various resources and techniques to interact with staff, increase awareness and to promote behavioural changes.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/UCLH-2019-Sustainability-Calendar.png

The 2019 Sustainability Calendar included the following topics:

- Paper Waste Reduction - posters and Toolbox Talks were created, displayed, cascaded and delivered to all staff. Innovative technology was implemented across the Interserve team resulting further employee awareness and waste reductions
- Volunteering - benefits of volunteering were cascaded to employees and multiple volunteering events were arranged. This enabled employees to interact with new people and engage with the community
- Plastic Waste Reduction - new, environmentally-friendly products have been introduced, replacing thousands of single-use plastic items and reducing waste sent to landfill. Staff were engaged through the distribution of Toolbox Talks and posters showing changes that can be made to reduce single-use plastic consumption
- Health & Wellbeing - staff engagement events have been held to encourage looking after personal Health & Wellbeing. Interserve partnered with The 52 Club gym to host a cycling competition, encouraging staff to get active, interact with new people and raise awareness of the importance and benefits of exercise

Increased staff engagement has also been reflected in the results from the MyVoice staff engagement survey concluded in December 2019. IFM UCLH contract saw a response rate of 53% and 77% engagement level, up from 31% and 75% respectively in 2018.

Economic, Health and Carbon Benefits

Paper Waste Reduction - resulted in a 793.62kg/85% reduction in paper consumed by Interserve in 2019 when compared to 2018 figures provided by supplier, Lyreco. This exceeded the initial 685kg consumption reduction target set in January 2019. Innovative technology was also implemented into the Interserve team including:

- Hand-held PDA devices, which directly receive work orders via the Computer Aided Facilities Management System, saving circa 50,000 work orders being printed annually
- MPro5 software implemented in security and cleaning teams to enable data to be saved directly from the software and allowing cleaning audits and security patrols to be completed electronically
- Account Management Suite' SharePoint system has been introduced to store all statutory compliance documents
- In UCLH/Interserve offices a 'Think Before You Print' campaign was launched in January 2019, to encourage staff to reconsider printing and to ensure double sided printing is used at all suitable times

In 2019, Interserve spent £1,442 less on paper than in 2018 due to multiple successful paper saving initiatives implemented throughout the contract during the staff engagement programme.

Last year multiple plastic-saving initiatives were implemented:

- Wooden, compostable takeaway cutlery in the Refresh Restaurant – saving 252,000 plastic knives, forks and spoons going to landfill each year. This will show a cost saving of £1,750 per annum
- Compostable porridge and soup pots have replaced plastic lined pots, saving 15,000 pots and lids going to landfill annually
- All self-service hot beverage plastic cups and sleeves have been replaced by 'Veg-Ware,' saving 24,000 plastic items going to landfill annually
- In total, over 341,000 plastic items have been replaced by compostable and environmentally friendly alternatives to prevent them entering landfill

The health impact seen during the Health and Wellbeing topic was very positive. An event was held, receiving positive feedback, from Sustainability Champions and staff who took part in a cycling challenge hosted in The 52 Club, cycling a total of 152 miles. 100 free health assessments and day passes to The 52 Club are being provided to IFM staff in order to engage staff and promote the importance of looking after health and wellbeing.

Partners

The Sustainability Calendar aims to engage with all members of staff. IFM and UCLH have partnered up to create Sustainability Calendars, in order to achieve common targets and both be working in collaboration with one another. The IFM Sustainability Calendar has full support from the UCLH Sustainability Team, including George Gebski, Head of Sustainability, and both teams have been in continuous liaison and have strong communications in order to share ideas and resources.

The calendar also engages with the supply chain, for example, Lyreco for paper consumption data to provide to staff with results from engagement and waste reduction efforts.

Case studies are regularly sent to IFM and Client staff, including senior management such as Director of Estates and Facilities and the UCLH Trust CEO, to provide full clarity on the work and engagement being carried out. Positive feedback has been received from the Trust, particularly in regards to the results from the paper saving initiatives implemented.

Future Plans

A new calendar has been produced for 2020. The aim for 2020 is to promote new topics to staff in order to broader employees' knowledge, to interact and to make sustainability more visible and relatable to everyday life at home and work. The focuses of 2020 include:

- Energy Efficiency – a focus on improving efficiency around IFM sites, including Carbon and Water efficiency and engagement. This topic links to a large portion of the Green Impact campaign, where Sustainability Champions have been displaying simple awareness resources around sites to make staff more mindful about unnecessary energy consumption
- Green Travel – initiatives to promote greener ways of commuting and travelling will be implemented, including use of public transport, walking and cycling. IFM will contact local public transport providers for resources and aim to take part in local initiatives taking place in the UCLH vicinity
- Volunteering – due to the success of the 2019 volunteering focus, IFM have decided to continue this into 2020. Partnerships have been formed during 2019, with further activities planned for 2020, particularly at Waterloo City Farm and Oasis Playspace
- Mental Health Awareness campaign – this will tie in with World Mental Health Day on 10th October 2020

These topics have been selected in line with the UCLH Sustainable Development Management Plan for 2020-25, which is aligned with the global 17 UN Sustainable Development Goals.

The aim for 2020 is also to increase the Sustainability Champion Network, by advertising the role profile to all staff and allowing them to get involved with moulding and implementing future sustainability plans, as well as continuing the good work completed on the Green Impact campaigns.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/UCLH-Interserve-Cycling-Challenge-Poster.png

Ysbyty Gwynedd

Staff across all departments of Ysbyty Gwynedd hospital have been connecting over the last few months in recognition that the climate emergency is also a health emergency, leading to the development of the Ysbyty Gwynedd Green Group.

Recently, three dynamic working groups formed as part of this, allowing staff to be actively involved in areas that most interest them, a learn, a connect and a transform sub-working group are now being trialled. This decision was made after it was felt further outlets were needed to harness staff interest and enthusiasm following several meetings. The aims of these working groups are being shaped by the staff themselves.

The connect group aims to get enthusiastic others actively involved as environmental champions, to promote good work that is already happening, engage key stakeholder to help realise the urgency of climate change and its health implications.

The learn group aims to learn what is best practice elsewhere, learning what has been tried and tested with some of the current data on Ysbyty Gwynedd's environmental footprint, whilst also learning about climate change and health and what changes can be made.

The transform group comprises of people that want to do specific projects. So far, they have identified 4 areas for carbon reduction: food, energy, transport and waste. Staff have also identified biodiversity in recognition of the amount of interest in nature connection and disconnect from nature at the hospital site. Staff have now been working to create meadows on site, as well as areas to plant trees.

Economic, Health and Carbon Benefits

Ysbyty Gwynedd hopes to establish baseline measures and then look at these again in six months' time. Staff have brainstormed what the baseline measures could be and hope to then be able to analyse the impact various campaigns have had.

If staff are feeling overwhelmed or anxious about the climate crisis or have an idea for a project, they now know that there are many others that they can turn to for support! This positive effect on staff morale will mean staff are happier and healthier and more able to lead by example, providing really good patient care.

Partners

The project "making the connections to improve the environmental sustainability at our hospital" is supported by the Bevan Commission, providing mentorship.

The project is supported and guided by the Bevan Commissions prudent principles of health care.

1. Achieve health and wellbeing with the public, patients and professionals as equal partners through co-production.
2. Care for those with the greatest health need first, making most effective use of all skills and resources.
3. Do only what is needed – no more, no less – and do no harm.
4. Reduce inappropriate variation using evidence-based practices consistently and transparently. This is a tried and tested sustainable approach to improving health care in Wales that builds upon Aneurin Bevan's founding principles of the NHS.

Future Plans

The next steps for Ysbyty Gwynedd will be seeing what impact can be made and then sharing what has worked. Ysbyty Gwynedd are beginning to make some connections across Wales that could allow sharing of learning and hope for a national programme of similar Groups (Grwpiau Gwyrdd) across Wales.

Some upcoming plans include:

- A sustainability day with keynote speakers from across Wales
- Becoming an NHS forest site and having community meadows and health walks
- Further development of links locally with local community groups

University College London Hospitals NHS Foundation Trust

Managing a complex and growing group of sites, University College London Hospitals Trust is a leader in carbon management and sustainable energy usage. They were one of the first NHS Trusts in England to receive recognition from the Carbon Trust, and are currently the only Trust to have achieved the triple standard for the management of carbon emissions, reduction of waste and the efficient use of water.

In order for UCLH to progress even further however, it was necessary to expand the focus of UCLH's sustainability efforts from infrastructure to outreach. With a robust operational set-up, developed by UCLH with the help of waste management partner, Bywaters and facilities management partner, Interserve, UCLH had the capability to monitor and manage their energy usage, waste production, and carbon emissions in detail. The project for the last year therefore, arose out of a need to educate staff visitors about these systems and processes, in order for users to help UCLH's sites to live up to their sustainable potential. UCLH's engagement strategy was designed to reach as many people in as many ways as possible, including interactive onsite events, visits to recycling facilities and multimedia education tools such as literature and posters.

UCLH and recycling company, Bywaters, hosted three events from September 2019 to December 2019 in three different UCLH sites. The most successful event was held at University College Hospital Tower, which was organised in partnership with Interserve. The event was held in the high footfall area of the Tower's main atrium, achieving great levels of engagement throughout the day. UCLH organised a competition around Bywaters' interactive waste sorting challenge to test the knowledge and recycling speed of UCLH staff and visitors. Virtual reality headsets were also available to provide VR tours of Bywaters' Materials Recovery Facility (MRF), giving staff the opportunity to discover what happens to recyclables once they leave site. Recycling-themed refreshments, such as vegan cupcakes, were on offer to promote sustainable food, and information about WARP-IT and reuse was provided.

Bywaters also invited UCLH's sustainability and waste management staff for tours of their MRF in Summer 2019. These sessions gave detailed information about the materials sorting process and gave UCLH staff the opportunity to learn about the recyclability of certain hospital materials (i.e. clinical packaging, paper towels). Staff members were then able to go back to their respective teams and further educate their own peers and teams.

Economic, Health and Carbon Benefits

The full engagement programme across all UCLH Trust sites only concluded in December 2019, meaning that the full effects of UCLH's outreach efforts over the last year have yet to fully manifest. Nonetheless, UCLH's consistent programme of education has already borne significant results in many of the key areas targeted by these events.

Food Waste

As a result of the engagement events and MRF tours undertaken by Trust staff, UCLH's combined sites have seen food waste recycling increase by ten tonnes in the last year, an increase of almost 25% over 2018's data. While food waste is not a major aspect of UCLH's waste output, ensuring that food is properly segregated at source form other waste streams is paramount to the sustainability of the site.

Food is a contaminant in recyclable material, which means that loads of dry mixed recycling with high food waste content are often unable to be segregated at all within MRF. Using the emissions data from Energy from Waste supplier Cory Riverside Energy, correctly segregating these ten tonnes constitutes a carbon saving of 4,540kg CO^2e compared to incineration.

- This was achieved through a multi-level campaign of education, through the in-person advice given at recycling events, the literature and posters providing information to visitors, and the emphasis on contamination reduction provided in the MRF tours

Engagement with Reuse Programmes

- These outreach events also help to raise awareness about, and get more staff involved in, UCLH's partnership with WARP-IT, an organisation facilitating the reuse of furniture and office equipment internally and between organisations. Staff engagement has swelled in the last year, with 350 members of UCLH staff now enrolled in the WARP-IT scheme at the time of writing. Being able to claim furniture through the scheme, internally between site and staff members but also externally between partner organisations, has saved UCLH £49,775 in the two years that they have been subscribed

The use of WARP-IT has saved 9,298kg of waste and 21,405kg CO2e, equivalent to planting 29 trees.

In line with this successful initiative, UCLH plans to carry the partnership over for the next two years for the period 2020-2022.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/WAD.jpg

Partners

- The staff and management of UCLH Trust's various sites were the key players in the project, investing their time and attention into these events and engaging in an enthusiastic and proactive way with sustainable issues throughout 2019
- Led by Account Manager Shamim Miah and Lead Green Guru Sarah Achaichia, Bywaters offered a wide range of support in these outreach efforts. This included tours of their Materials Recovery Facility for UCLH staff members, including classroom talks and experienced guides, material for posters and other waste awareness literature, and manpower, resources for waste awareness days like the ones run at University College Hospital Tower, the National Hospital for Neurology and Neurosurgery and the newly opened Royal National Ear, Nose, Throat and Eastman Dental Hospitals site
- UCLH's facilities management partner, Interserve, also assisted in the organisation and running of these engagement events, primarily the waste outreach and awareness event held at University College Hospital Tower

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/WAD-2.jpg

Future Plans

- UCLH and Bywaters have already scheduled a programme of staff training sessions, to begin from May 2020, focused on correct waste segregation onsite. The objective of this new initiative will be to educate these team members further about waste segregation in order to improve the segregation onsite and maximise recycling performance at source. This will done through a series of sessions delivered to small groups of staff members, providing not only information about what materials are acceptable in which waste streams, and the disposal routes of each, but practical tips for within the workplace
- UCLH will also continue their sustainability efforts through WARP-IT by encouraging further staff enrolment in the scheme. This includes working through the programme to source sustainable new furniture for their own sites, as well as to divert their old items and furniture out of their bulky waste streams and into new homes
- Outside of waste, UCLH will continue to invest in ways to support staff wellbeing in order to enable a happy, healthy and productive workforce. A significant aspect of this support and wellbeing effort will be made through raising awareness of climate change and carbon management at both strategic and individual levels across UCLH, and encouraging collective responsibility and action amongst staff, in order to develop a sense of community within the workforce

Tameside and Glossop Integrated Care NHS Trust

Tameside and Glossop Integrated Care NHS Trust services a community of 250,000 residents in one of the most deprived local authority areas in the country and has the highest rate of premature death from heart disease in England. As a major employer within the Borough, the Trust are committed to playing an important role in contributing towards a greener and healthier environment; particularly as 85 per cent of our 6,000 staff and volunteers live in the community served.

Within the last 12 months 'Save Planet Tameside and Glossop' has been created with the purpose of engaging with colleagues on the best ways to work together to reduce carbon footprints and make work environments more sustainable. After consultation the Trust have provided giant recycling bins across the site, called for Green Champions to help develop a robust and relevant staff engagement strategy, introduced cycle to work and a sustainable health campaign, and provided tips on how to reduce carbon footprints by being more energy aware. The Trust also embarked on a series of novel initiatives…

- Tameside and Glossop Integrated Care NHS Trust became the first hospital in the country to ban sugar from menus in an attempt to tackle growing concerns about obesity among NHS staff. The move has been welcomed by campaigners, including the National Obesity Forum and Public Health England who are urging other hospitals to follow suit, and created a national debate on BBC Radio 4, ITV's Good Morning Britain and The Guardian newspaper
- The Trust followed this by ditching all single use plastic - all knives, forks, spoons, and food packaging is now replaced with paper and wooden alternatives. The restaurant uses almost NINE tons of these items every year, which is the weight of 400 standard wheelchairs or 20 hospital beds
- The Trust devised a novel way to recycle single-use plastic water bottles and announced a free giveaway to the first 1,000 staff to sign up to pledge their support for the sustainability campaign - 100 per cent biodegradable, long-life water bottles, with the 'Save Planet Tameside and Glossop' logo, in exchange for an empty bottle. With all the single-use plastic bottles collected, the Estates team are making a greenhouse to grow herbs in that can be used to flavour restaurant meals. So, something good will come from a product that takes 1,000 years to degrade, is bad for our health, and is destroying the planet

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/IMG_5505.jpg

Economic, Health and Carbon Benefits

The Trust spends in excess of £1.83 million each year on critical natural resources (gas, electricity and water) to deliver services, and a further £260k per annum disposing of all forms of waste generated by activities. The Trust also uses substantial quantities of food, paper and numerous clinical products and pharmaceuticals. The Trust's ambition has been to reduce that by 12 per cent this year through better staff engagement and awareness, simple energy saving tips and, as a direct result, have extended Trust key objectives from six to seven to include their absolute commitment to "*reduce our carbon footprint and our impact on the environment.*"

The Trust values its natural environment which, in addition to promoting staff health and wellbeing, is also playing a role in patient recovery and improving the overall patient experience. The Trust strives to improve the health of our workforce, but also create a culture which supports individuals at times of difficulty by making adjustments, wherever possible, to keep people in work recognising and valuing the contribution of our diverse workforce.

Small Action, Big Impact changes to the Trust's high energy bills are making an impact both economically and contributing to a reduction in carbon footprint. For example, it is estimated that a PC and monitor left on every night costs the Trust around £30 a year; multiply that by the number across the site and it adds up to tens of thousands of wasted pounds. By encouraging staff to be more carbon savvy, the Trust is now beginning to see significant savings.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/IMG_5499-1.jpg

Partners

The Trust works closely with our partners at Tameside Metropolitan Borough Council, to share best practice on staff healthy lifestyles and wellbeing as prescribed and promoted by Public Health England's Sustainable Development Strategy (2014). Changes in the restaurant encourage healthy eating and nutrition; green spaces foster exercise and physical activity and smoking, and sensible drinking programmes improve mental health and are available and widely supported within the hospital for both staff and patients.

As a caring employer seeking to promote sustainable health among their workforce, the Trust actively promote campaigns including Change4Life and No Smoking Day and work with leading charities like Dementia UK, Age UK and Macmillan Cancer Support to help staff who might need or have relatives who need these specialist services.

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Future Plans

Because 85 per cent of our staff and volunteers live in the community served, the Trust decided their 'Save Planet Tameside and Glossop' should extend to local schools, charities, voluntary organisations and care homes. Working with Tameside Council and the wider Greater Manchester health economy the Trust has specific proposals around carbon literacy which include "Squad Working," a methodology for driving improvement across the Borough.

The Trust will play a pivotal role in helping shape this agenda and have nominated four squad members to work alongside colleagues from the Local Authority and the CCG. The Trust's Director of Estates and Facilities also acts as a co-coach to the full squad. Tameside and Glossop Integrated Care NHS Trust have become the first NHS hospital to form a working partnership with The Woodland Trust who have gifted 420 native trees for in and around the hospital site, and the wider community, to offset our carbon footprint. The Trust estate incorporates a range of green infrastructure and this is seen as an important resource moving forward.

The coming months include:

- Exploiting green spaces, which provide an important habitat for flora and fauna and to further improve biodiversity across the Trust
- Establishing a staff allotment to enable food to be grown onsite
- Developing proposals to make sure that sustainability is part of the staff annual appraisal process
- Ensuring that sustainability is reflected in the Trust's expected core values and behaviours
- Introducing a dedicated Sustainable Travel Co-ordinator to further develop car share campaigns, inclusive walking and cycling initiatives
- Implementing an "anti-idling" campaign across the site, to encourage staff to switch off their engines when stationary

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/SPTG-Toolkit-V2.pdf

Sheffield Teaching Hospitals Foundation Trust

Since autumn 2017, STH's Catering Department has led an ambitious Trust-wide sustainability campaign to remove the use of avoidable single-use plastics in retail outlets. This project has been extremely successful, engaging STH staff to proactively reduce reliance on single-use plastics.

STH's organisational core values encourage positive staff behaviours. This project aligns with these:

- Patient First- reducing single-use plastics contributes to carbon reduction and health promotion in the local environment
- Respect- staff demonstrate respect for the planet through making sustainable choices
- Ownership- available options empower staff to proactively make sustainable choices
- Unity- Trust staff have engaged with this initiative which relies on their collective drive to tackle plastic pollution
- Deliver- the project communicated a clear aim of removing avoidable single-use plastics in outlets, allowing staff to 'do their bit'

Wishing to provide more sustainable options, the catering team recognised the importance of procuring locally-sourced products, considering the carbon footprint of full product lifecycle.

Inspired by the Blue Planet documentary, the project timing capitalised on the increased awareness of plastic pollution and was met with staff support from the outset. The strategy remains a key organisational focus, recognising the impact of staff turnover/ complacency over time on the project. A planned project re-launch coincided with NHS Sustainability Day 2019, an engagement event showcasing the progress made across STH, bolstering staff support and maintaining momentum.

This project's success is due to the Catering team's collective ambition, leading progress with Trust staff and external partners in driving change. The clear and consistent message has resonated with staff Trust-wide, encouraging them to consider the environmental impact of their food purchase choices.

How:

- Worked with suppliers to source local and compostable products to replace plastic-based disposables e.g. Vegware, paper straws
- Introduced a levy on disposable items to encourage 'bring your own'
- Reusable products made available to purchase and encouragement to bring these or personal crockery when purchasing food
- Reintroduced crockery for customers eating-in
- Sustainability Champions trained within Department to encourage staff/customers making sustainable choices
- Designed, developed, coordinated a highly visible campaign of promotional materials to reach staff Trust-wide
- Installed recycling points in retail areas alongside awareness campaigns encouraging customers to dispose of waste correctly
- Encouraging repurposing of plastic items and diverting waste. Collected milk bottles, donating these to create a play igloo at the STH nursery, demonstrating creative reuse of existing plastic waste and sharing the vision beyond STH workforce boundaries

The project's success is recognised by NHS England, using STH as a case study for the NHS Single-Use Plastics Reduction Campaign Pledge. Having developed from a small but ambitious idea, STH have dramatically accelerated reduced consumption of single-use plastic in retail.

Economic, Health and Carbon Benefits

As an anchor institution in Sheffield, STH are aware of their impact and responsibility to reduce their carbon footprint. By reducing consumption of single-use plastics on a large scale, this project's impact reaches far wider than the boundaries of STH. The project's output contributes to a lower volume of plastic-based products generated locally, helping to decrease harmful micro-plastics derived from litter breaking down in the local area. By reducing single-use plastic consumption through a campaign which reaches up to 17,000 staff members, the increased awareness and engagement with this portion of the local population helps to disseminate this message in the wider community.

Impact:

In the first year of the project, purchase of disposable cutlery reduced by 77.5%, plates by 43.1% and cups by 66.7%. The purchase of disposables has continued to reduce with an additional reduction in disposable purchases of 20% in 19/20 compared to the equivalent period the previous year.

An Awareness campaign surrounding separating recyclables has contributed to an increase in waste being diverted from general waste and recycled. Catering have generated significantly more recycling waste since implementation and seen a substantial reduction in municipal waste, alongside steadily decreasing overall waste produced.

The switch from plastic-based disposable products to compostables ensures that STH's environmental impact linked to food purchases is minimal. The disposable takeaway containers/cups/cutlery that are now used are produced using renewable, lower carbon, and plant-based materials. Whilst the best disposal route for these products is through composting, STH disposes through general waste which is incinerated, at a Sheffield facility from which energy generated is used to power local businesses. Disposal of compostable products via this waste management route produces no volatile gases and give off fewer toxic gases, reducing the carbon footprint of STH.

The Catering Department took the decision to recharge for disposables to recoup some of the cost of the investment into these alternatives, as this is higher than for plastic-based products. This has ensured that the scheme is financially viable.

Sheffield Teaching Hospitals Foundation Trust

Partners

The project's success has relied on STH staff unity in making sustainable choices. A team of committed and vocal Sustainability Champions among the Catering workforce have been identified and trained, and their contact with staff customers has ensured the message has been shared effectively and efficiently across all areas. The grassroots nature of this project has been valuable as STH have been able to recognise the ideas and skills offered at all levels of our diverse workforce.

The Catering team worked closely Infection Control colleagues for approval of the 'bring your own crockery' initiative. The Waste Management Department invested in separate recycling facilities increasing awareness of the waste hierarchy. Catering has also worked closely with the STH Communications team, who have shared the message across a number of platforms to ensure Trust staff in all areas receive the message. It is now commonplace that Trust staff use their own water flasks for free drinking water available in all main dining rooms, which was met with broad levels of staff support and quickly adopted.

STH Catering has worked closely with suppliers to identify opportunities to remove plastic-based products where possible. Vending partners, RSL, have been supportive of our project and worked to deliver the function of dispensing hot drinks upon placement of a reusable cup in their hot drinks machines, using a laser determining cup fill level, rather than dispensing a disposable cup. Due to initiatives across numerous cafes in the UK, staff have become accustomed to bringing a reusable cup, and a large number of staff quickly embraced this option.

Vegware, the supplier of STH's compostable take-out containers, are very supportive of sustainability initiatives and by providing sustainable plastic-free options, have facilitated a large proportion of the reduction in single-use plastics in STH outlets. They have also offered additional supporting information to educate staff.

Future Plans

The project defined an ambitious aim- to remove all avoidable single-use plastics from Trust-operated retail outlets. STH have already switched to sustainable alternatives for all take-out containers and cutlery. Switching these items has had large scale impact, and is becoming embedded as the norm thanks to staff support.

The Catering team are turning their focus to the remaining areas in their outlets which use single-use plastics for continued progress towards the removal of all avoidable single-use plastics. The team is exploring possible alternative solutions to sauce sachets and jam pots, seeking to find more sustainable options, including wafer-based containers which would have minimal environmental impact.

While the vegware disposables do not release toxic gases, the ideal way to dispose of these items is through compost. Currently STH do not have compost disposal routes on-site. The Catering team are keen to work with the Waste Management team to provide the appropriate disposal facilities to ensure these are composted and therefore reduce the impact from disposables to the absolute minimum.

Manchester University NHS Foundation Trust

People are at the heart of Manchester University NHS Foundation Trust's (MFT) sustainability strategy, but engaging 20,000 staff across nine hospitals presents a unique challenge. In May 2019 ambitious employee engagement programme, Green Rewards, was launched in partnership with expert provider Jump, to overcome the healthcare-specific challenges of sustainable behaviour change; varying shift patterns, a large dispersed workforce, and non-desk based working environments.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Image-1-The-Masterplan.jpg

MFT's sustainability strategy, The Masterplan, sets out aims and objectives to be a leader in sustainable healthcare by reducing environmental impact and protecting the natural environment, empowering staff to operate responsibly, and enhancing social value through collaboration with stakeholders.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Image-2-Activities.jp

In November 2019, MFT declared a Climate Emergency. Green Rewards assisted with turning MFT's declaration into action. Staff engage in positive behaviours through 40 different activities across 6 themes, all of which focus on sustainability and wellbeing. Examples of activities include: grow your own, get involved with a sustainability project, active commute, carbon calculator, eat local and practicing mindfulness.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Image-3-Personal-Contribution-Dashboard.png

A personal impact dashboard, newsletters and social media communicate successes of teams, ensuring that everyone can track their progress, share opportunities and encourage best practice.

The ability to share stories personalises the scheme. One employee set up their own sustainability project to collect unwanted stationery for recycling. Another employee shared their project of growing and selling plants for charity to promote Clean Air Day, whilst the 'Plastic Pledge' activity is full of staff taking action to reduce their plastic impact. The success of Green Rewards lies in the ability to understand the specific needs and challenges that staff face daily.

Economic, Health and Carbon Benefits

One of the most important features of Green Rewards is the way it enables people to see the impact that they are having in real time. By monitoring the economic, health and carbon impact of the programme, MFT is able to develop better engagement in sustainability and wellbeing whilst raising environmental awareness.

The economic benefits of Green Rewards are evident through people and outputs. By engaging employees in health and wellbeing, MFT are supporting a more motivated, productive and healthier base of staff. This in turn improves employee retention and recruitment which has numerous economic benefits for MFT. As well as this, through just the 'switch off' element of the platform alone, employees have saved 26,000 kWh which is around £3,000 in energy costs.

Health benefits are monitored through 'Nurture', one of the central themes of the programme which incentivises employees to engage with their personal health and wellbeing. Through Green Rewards 5,000 hours of exercise have been recorded as well as over 40,000 miles of active travel. A Fitbit-integrated challenge makes it even easier to monitor progress.

In the first 8 months of the programme, staff have completed 40,000 positive actions, saving 60 tonnes of CO^2 emissions. The platform intuitively converts complex metrics, such as carbon emissions or kWh saved into more tangible concepts. This communicates the environmental impact of the project to participants and stakeholders. Since the launch of the programme almost 45,000 miles of active travel have been logged; enough electricity has been saved to power 2,812 homes for a day; and almost 19 years of meat free days have been recorded.

Employees can monitor their environmental impact in real time through a personal contribution dashboard.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Image-4-Green-Rewards.jpg

Seeing the impact of teams and hospital divisions demonstrates that even small actions add up to have a significant cumulative impact.

Partners

A focused, sustainable development strategy has allowed MFT to identify and overcome challenges and potential barriers to employee engagement. During the development of this strategy, MFT wanted to innovate how staff behaviour change was facilitated across the organisation.

Extensive research was completed before partnering with Jump, who provide the Green Rewards programme. One of the desired elements was a dynamic and proactive delivery mechanism; something that could be altered and adapted frequently to keep staff interested.

To allow staff to access the platform remotely, Green Rewards is mobile compatible with dedicated apps for iOS and Android. For shift workers, the platform is available at all times, with feedback showing that almost 30% of actions are logged between 7pm-7am. Some activities are automated, reducing the time staff need to spend engaging with them. For example, the 'Step Challenge' uses Fitbit integration to automatically update employees' step count and awards points accordingly.

The gamification, interactive and competitive nature of Green Rewards has created a culture of sustainability that drives ongoing engagement.

Future Plans

Future plans for Green Rewards are to expand the reach of the behaviour change programme and embed a culture of environmental awareness across MFT.

The Sustainability Team at MFT is sharing knowledge through presenting at seminars and conferences both within Greater Manchester and beyond. As one of the first NHS organisations to launch a Jump programme, there has been a lot of interest from other organisations within the sector. A structured and consistent approach has allowed MFT to extend its programme across the healthcare sector.

Future plans include further integration of national campaigns into the programme, looking at integration into national campaigns such as NHS Sustainability Day and For a Greener NHS.

The threats that climate change poses are a health issue; MFT believes that to embed a culture of sustainability across the healthcare sector has the potential to fundamentally change the system and improve the health and wellbeing of staff and patients nationally.

University Hospitals of Derby and Burton NHS Foundation Trust

The sustainability team at the University Hospitals of Derby and Burton NHS Foundation Trust recognised a need for staff engagement for climate action and environmental protection as a way to promote collective action for the climate crisis. This led to the development of an engagement programme which incorporated national and local events.

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Development actions of social media accounts to share key information, training of Environmental Champions and installation of an 'Our Planet Matters, Our Patients Matter' display board in the main corridor of one of the hospitals were implemented.

In addition, various information sharing events were arranged including:

- A Climate Coalition *Show the Love* event, in which staff made green hearts to show why climate action matters to them. The hearts were displayed in the main entrance of one of the Trust's hospitals to promote climate action to other staff, patients and visitors
- A Trust *Leave Your Car at Home Week*, which included an information stand at key sites providing information regarding active travel options for staff and case studies of staff members and their cycle to work experiences. Cycle to work providers visited the Trust to provide information about the scheme. During the year bicycle maintenance and security marking and test drives of electric vehicles also took place. Furthermore, provision of sustainable travel and waste information to over 200 new staff at Trust induction
- A *Fairtrade Fortnight* event, which promoted human and environmental benefits of Fairtrade, was held and free samples of Fairtrade products were provided to staff. Information and free samples were also provided for Organic September, with the key focus of this event the benefits of organic, locally sourced and seasonal produce
- World Food Day presented an opportunity for the sustainability team to run an event with a key focus on the environmental impact of the food system, and how consuming less processed foods and promoting seasonal food can have health and environmental benefits. Vegetarian Day and World Vegan Month also presented opportunities to spread knowledge about the impact of animal agriculture on the environment
- Delivery of a free *Introductory Talk on Climate Change* for staff during 24 hours of reality presented an opportunity to share additional knowledge with staff regarding the impact of climate change on health domestically and globally
- The *Great British Beach* Clean allowed a key focus of what people living in-land can do to prevent beach/marine litter as well as the impact of litter in the local community (thanks to information provided by local litter-picking volunteers)

Economic, Health and Carbon Benefits

The staff engagement programme assisted staff in taking action towards the Sustainable Development Goals. Staff openly coming forward with their views and ideas highlights that the engagement programme is having some success despite development of the programme only taking place in 2019.

Working with staff to prove the case that improved cycle facilities were needed at one sites resulted in the funding and installation of such facilities which will have health benefits for staff, in addition to the air pollution and carbon reduction benefits of cycling opposed to car travel.

Staff querying whether plastic cartridges used for patient wristbands can be recycled led to the introduction of a recycling scheme for these at three hospital sites and the subsequent diversion of this waste from the general waste stream.

Following vegan events, it was raised that patients on one site were not provided with sufficient meal options. This was raised with Catering and rectified to ensure those reducing consumption of animal products for environmental reasons are able to continue to do when in hospital. Vegan events also led to staff signing up for Veganuary and 34 staff taking away free vegan starter kits. Staff showing an interest in reducing their meat consumption presents clear health and environmental benefits due to the carbon intensity of animal agriculture and impact of red meat.

Staff querying why clinical areas receive paper and electronic copies of clinical measurement results enabled the sustainability team to identify that that the measurement team had identified a suitable paperless system but were not awarded funding. This carbon reduction action is on hold due to lack of funding but it enabled the sustainability team to identify the scale of the issue (200,000 sheets paper each year from one department) and add a sustainability focus to the case for making a change.

Staff querying why plastic patient property carrier bags and plastic teaspoons are used enabled the sustainability team to look into how many bags (193,300) and spoons (1,678,992) were used each year and identify top users at each hospital to produce targeted campaigns to reduce the number of used (in progress).

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Partners

Working with partners and other agencies has been integral to the success of the engagement campaign including:

1. Suppliers of Fairtrade products for Fairtrade Fortnight
2. Suppliers of Vegan Society accredited foods for Vegan Month
3. Veganuary and their partners
4. Local food banks
5. Cycle to work providers
6. Local police
7. Local public transport companies
8. Local councils covering the geographic area of the Trust
9. Trust lease car provider

Future Plans

A 2-year sustainability plan has been developed with a full scheme of events, awareness campaigns and communications. Participation in all events held over the next 2 years will be logged to map successes and track impact of each event. Events planned include a trust climate change conference, a regular staff climate coffee club, clothes swap events, reusable cup days, cycle between Trust site events and a green ideas competition. In addition, improvements on events held as part of the current engagement programme will be improved, incorporating all trust sites: delivery of free climate change talks rolled out to all sites and improvement of vegan options in the staff/visitor restaurant.

Following engagement with staff and local partners the Sustainability team have been invited to deliver assemblies to a local school on the Climate Crisis and environmental protection. Should this go successfully, additional local schools will be approached. As part of the engagement campaign the sustainability team will be meeting with the Trust Medical Director with a view to promoting the fact that the climate crisis is a health issue among the Trust Board and decision makers.

Public Engagement

The Newcastle upon Tyne Hospitals NHS Foundation Trust

The Newcastle upon Tyne Hospitals NHS Foundation Trust decided it was imperative to reduce the harmful effects of carbon emissions from their activities, with climate change as the greatest threat to global health today, according to the Lancet (2009).

James Dixon (Head of Sustainability) prepared a proposal for the Board of Directors, that the Trust should agree to publicly declare a Climate Emergency (becoming the first NHS Trust to do so and sending a clear message that the Trust recognises and gives weight to the threat that climate breakdown poses to public health). The proposal also stated that the Trust should pledge to become carbon neutral by 2040; and should work collaboratively with civic partners in Newcastle to agree individual and collective actions to deliver on this goal. The Board approved the proposal and the Trust publicly declared a Climate Emergency in June 2019.

Since the declaration the following citywide groups have formed to take action:

- Climate Change Committee
- Net Zero Taskforce
- Climate Change Assembly

As well as the citywide and regional action that is described above, within the Trust there has been an Executive Oversight Group for Climate Emergency Action established, which has task groups focusing on priority action. Climate Emergency, carbon reduction and energy efficiency have also been embedded in the Trust Strategy for 2019-24. The commitment to work collaboratively with other civic anchor institutions to agree individual and collective actions is an innovative way of working, which will see the city and wider region as a whole become a cleaner, healthier and more pleasant place to work and live.

Economic, Health and Carbon Benefits

Total carbon emissions from Trust activities are measured and reported annually. This includes carbon attributed directly to activities (from building energy use and some travel, and a smaller amount related to waste disposal and water consumption) and the indirect emissions (e.g. the supply chain). For the financial year 2018-19 the reported carbon footprint of the Trust was 191,548 tonnes of CO^2e.

There were already targets in place to reduce emissions by 28% by 2020 from a 2013 baseline, however the ambitious target set as part of the climate emergency declaration was to become a net zero carbon organisation by 2040.

This means firstly reducing the carbon emissions resulting from the Trust's activity as much as possible, and then balancing any remaining carbon emissions by absorbing an equivalent amount from the atmosphere.

Any increase in global temperature is projected to affect human health, with predicted impacts including heatwaves and increases in vector borne diseases like malaria and dengue fever. Poverty is also expected to increase for many populations which is known to exacerbate health inequalities.

There are predicted financial savings associated with becoming carbon neutral. About 25% of the Trust total carbon footprint is attributed to building energy use. Current spending on utilities is £16 million a year and it is projected that demand reduction initiatives, along with an increase in energy provided by on-site renewable technologies will reduce that spend significantly.

Any investments in energy saving technologies would be recouped. Typical demand reduction initiatives with a 3-5 years payback period are upgrading heating controls, upgrading lighting to LED and lighting controls, insulation and upgrading controls for systems like air handling units. Installation of renewable technologies such as solar PV has a typical payback of 5-10 years. However the financial savings are greater when you consider the increasing cost of energy from fossil fuels.

Work is currently taking place on a city and regional basis to establish the carbon footprint and profile. A science-based plan to reduce this is being developed, meaning that the whole city region will become carbon neutral over a similar timescale.

Partners

The public declaration of a climate emergency could not have been possible without the foundations laid by James Dixon (Head of Sustainability) and the Sustainability Team at Newcastle Hospitals (Cara Tabaku, Jason Mitchell, Amy Johnston and Laura Middlemass).

Recently, James was able to foster relationships and improve buy-in for climate action with the Executive Team. Key allies included the Director of Estates, Rob Smith, Director of Communications & Engagement, Caroline Docking, and our Chief Executive Officer, Dame Jackie Daniel.

Working with other anchor institutions in the city of Newcastle, particularly sustainability colleagues in Newcastle City Council and Newcastle University, has also proven invaluable. This helped create a civic partnership that resulted in Newcastle-upon-Tyne being the first UK city to have all three anchor institutions declare a climate emergency and commit to collaborative action on achieving carbon neutrality by 2030 (ten years ahead of the original institutional commitment!).

Future Plans

Efforts to lead and influence urgent action on the climate and ecological emergency across the healthcare sector continue. The Trust have established the highest level of commitment within their own organisation, have helped lead on bold action across our city, have driven climate action to be a top priority for our Integrated Care System (spanning the largest geographical area in the country, North East and North Cumbria) and have driven the health and social care system to take notice NHSEI announcing plans for #GreenerNHS and establishing an expert panel to identify how soon the NHS can reach net zero).

Internally, they have ambitious plans to fast-track carbon emissions reduction through demand reduction, transitioning to low, and ultimately zero, carbon energy technologies and ensuring that all new builds and refurbishments achieve Passivhaus Standards (which has never been achieved in a UK hospital). The Trust have since invested in an electric fleet, have procured electric buses for staff, patients and visitors to access our sites and use zero emission e-cargo bikes to courier supplies and records between our city centre hospital sites. They have also driven down the use of single use plastics in catering and implemented Meat Free Mondays in our restaurants and cafes. The Trust have committed to embed sustainability, carbon accounting and climate emergency thinking across all business decisions, investments and policies. They aim to empower all staff, patients and members of our wider community to thrive by leading low carbon, happy and healthy lives.

Newcastle upon Tyne Hospitals NHS Foundation Trust believe they have a moral duty to lead on delivering the solutions to the climate crisis and a just transition to a fossil-fuel free health economy.

University Hospitals of Derby and Burton NHS Foundation Trust

The University Hospitals of Derby and Burton NHS Foundation Trust developed a climate action engagement programme to inform the community about climate change, its risks to health, and actions that people can take themselves to reduce carbon emissions. Events in Trust hospitals, as well as information sharing on their newly-developed sustainability social media accounts were used to share information with the community. Social media messaging was set along specific themes such as local and national awareness events (World Ozone Day, Global Goals Week etc), wider campaigns such as the UN SDG Food / Fashion Challenges, as well as any ad-hoc topical events.

The public engagement programme started with a Climate Coalition *Show the Love* event in which staff, patients and the local community were asked to create green hearts if they had a passion for climate / environmental action. Overall, over 200 individual hearts were produced including by patients in the children's ward, A&E and patients living with dementia. As these were displayed in the main entrance of one of our hospitals during the event the display sparked engagement between the sustainability team and the public.

A display board entitled 'Our Planet Matters, Our Patients Matter' was installed in the main corridor of one of the Trust's hospitals with different themes throughout the year. A targeted part of the campaign was regarding air pollution, its causes, effects and solutions. As part of the campaign, patients in the children's ward were asked to design posters to encourage the public to stop idling their engines and two of these posters were turned into signs for the drop off area of the site.

Another targeted part of the campaign was the Sustainable Development Goals and how the public can take action for the goals. The public can help towards SDG12.2 by refusing single-use, buying only what is needed and choosing the most sustainable product; towards SDG12.3 by creating a shopping list, planning meals ahead and reusing leftovers; towards SDG12.4 by limiting use of harmful chemicals around the home; towards 15.2 by choosing 100% recycled or certified sustainable wood products; towards 15.5 by reducing pesticide use and not planning invasive species.

Information about nature and environment clubs / events in the local area were also sought and information shared (RSPB, Staffordshire Wildlife, Beautiful Burton Litter Picking, Low Carbon Lichfield, clubs etc.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Picture2.jpg

Economic, Health and Carbon Benefits

Communicating the wider health implications of the climate crisis, and actions that people can take to reduce their impact will help with carbon reduction in the community and presents opportunities for health benefits also.

All trust sites are in the vicinity of Air Quality Management Areas, and the health implications of air pollution are well-documented. Communicating air pollution information via social media messaging, and the design and install of no-idling signs will act as a prompt for the public to switch off their engines. In line with this campaign, a non-emergency transport provider for one of the sites, who had been identified as regularly having vehicles idling at the main entrance, was contacted to make them aware of the campaign and to request that their drivers are educated not to idle their engines at our main entrance. Reducing idling will also have carbon reduction benefits too.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Picture3.jpg

Partners

1. Local councils
2. Public transport companies
3. UN SDG Action Partner scheme
4. Local food banks
5. Local wildlife / nature clubs

Future plans

Due to the success of the awareness campaign, the Trust plan to continue with a similar campaign next year alongside the Trusts 2-year sustainability engagement plan. The Trust already deliverers Junior Environmental Champions training at local schools and will continue to develop relationships with partners, the community and schools to engage them with climate action. The sustainability team have been invited to a local school to deliver assemblies on the climate crisis, and have been asked to visit to link in with curriculum topics that relate to climate change and environmental protection - the trust will seek to roll this out to other schools too.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/SIGNS.png

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Picture4.jpg

Sandwell and West Birmingham NHS Trust

The Sandwell and West Birmingham NHS Trust have implemented a number of programmes around environmental sustainability, good corporate citizenship and healthy lifestyles to help the Trust strive forward. For example:

1. The Trust have connected with local charities to offer bi-weekly, on-site healthy food markets for staff, patients and visitors. Food that is surplus to use from local supermarkets and eating outlets is collected and then sold at our hospitals. People pay what they can afford, reducing food waste.
2. The Trust is in its second year of running *Green Impact*, a formal staff environmental engagement programme aimed at staff taking small actions that collectively make a big impact. 28 teams are signed up and taking action, feeding back ideas on how their areas can reduce single-use plastics, car share or use public transport.
3. The Trust have a network of over 120 Sustainability Champions across the Trust.
4. A Public Health Plan, led by the Chief Executive and in partnership with Sandwell Metropolitan Borough Council, aimed at improving long-term wellbeing.
5. A Community Greenhouse Project. Previously derelict greenhouses at City Hospital have been rejuvenated and the Trust works with local volunteers who run the project, growing fruit, vegetables and plants.
6. A Go Green Campaign - encouraging patients and employees to make healthy choices. The campaign which incentivises healthy food options with lower pricing whilst at the same time disincentivising unhealthy food options with higher prices.
7. Live and Work Apprenticeship Project, partnering with youth homelessness charity, St Basils, working to provide apprenticeship opportunities to young people.
8. A Communications and Sustainability Garden Party, open to staff and the community. This event is very popular and aims to provide a fun and engaging environment where people can learn about what the Trust is doing and how people can get involved and do their bit.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Green-Impact-1-pager.pdf

Economic, Health and Carbon Benefits

The Sandwell and West Birmingham NHS Trust see positive behaviour change as everyone's responsibility.

The Trust Public Health Plan has driven changes that have had a big impact on the Trust's community (mainly around smoking cessation, reduced alcohol admissions, asthma prevention in the community, improvements to mental wellbeing, and the environment.) In terms of environmental sustainability, the Trust have made improvements in their Sustainable Development Assessment Tool (SDAT) score year-on-year, reduced energy consumption, the amount of waste disposed of and significantly reduced landfill (now sending zero general waste to landfill, recycling or reprocessing 100% of this waste).

The Community Greenhouse Project has encouraged healthy eating and wellbeing in the community, providing people with the skills and knowledge to grow their own food. Due to the Trust *Go Green* campaign, employees, patient and visitors alike now expect to see healthy foods options on the menu and in Trust restaurants/vending machines.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Staff-Engagement.pdf

Partners

The Trust Public Health Plan was created in partnership with Sandwell Metropolitan Borough Council and aims to deliver targets to ensure partnerships with the local community, tackling a number of environmental and social objectives.

Volunteers and community have been instrumental in driving the Community Greenhouse Project project and making it a success. The fruit, vegetables and plants that are grown on site are sold to the local community, staff, patients and visitors and all are encouraged to get involved where they can.

The Green Impact programme relies on empowering colleagues to join the scheme and complete a number of environmental actions. As part of this programme, the Trust works closely with the National Union of Students (NUS), the University of Birmingham, other NHS Trusts and organisations.

The Trust's Sustainability Officer is Chair of The West Midlands NHS Sustainability Network (WMNHS), working with other NHS Trusts and local organisations on collaboration and sharing best practice. The WMNHS is aimed at providing advice, guidance, good practice ideas, networking and collaboration opportunities related to sustainability for those working in the NHS. For more information, see **https://www.sustainabilitywestmidlands.org.uk/networks/west-midlands-nhs-sustainability-network/**.

Future plans

The Trust is working on plans to alleviate period poverty and promote more sustainable (i.e. non-plastic and re-usable) period products, being about to start a trial linking with the *City to Sea* project. *FreeFlow* - the pilot project - will introduce free menstrual products in a selected number of female and gender neutral bathrooms for staff and visitors.

The *Green Impact* staff engagement programme to engage staff in environmental sustainability and encourage pro-environmental behaviour, will be rolled out further. There are currently 18 teams across the Trust, with aims to double this in the next 2 years. This programme will engage and involve staff as well as improving the Trust's energy, water and waste efficiency, encourage sustainable modes of travel and have wider positive health and wellbeing impacts.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Sustainability-Garden-Party-Poster-2019.pdf

Innovation

Association of Anaesthetists

Volatile inhalational anaesthetic agents are potent greenhouse gases and the mass used in anaesthesia is many times more than the mass of all the other drugs used in a patient's anaesthetic. The "anaesthetic machines" may have the facility to display the total volume of inhaled liquid used, they don't however describe the mass, nor the carbon dioxide equivalence (CO^2e) of the anaesthetic real time.

Association of Anaesthetists therefore set about to calculate the mass of volatile agent and, if applicable, the nitrous oxide used per unit of time from the vapouriser setting and the fresh gas flow. In order to validate the mathematics, they undertook a bench study and compared the mass of agent used with the predicted mass and published this work in Anaesthesia in January 2020 available at **https://doi.org/10.1111/anae.14896**.

Having confirmed the validity of the mathematics, the Association of Anaesthetists incorporated the calculations into a revised form of a smart phone App and published this as the Anaesthetic Impact Calculator, in both Android and iOS formats. Importantly, the App is not considered a medical device by the MHRA and so is freely available in the clinical setting.

This now allows anaesthetists to calculate real time the CO2e of their currently used inhaled anaesthesia and importantly demonstrate the impact of the choice of different volatile agents and the effect of lower fresh gas flows.

Economic, Health and Carbon Benefits

By including in the set-up pages, the local cost of bottles of volatile inhalational agent, the Anaesthetic Impact Calculator also displays the cost per hour of the currently used volatile agent.

Considering the illustrations which are taken from screen shots of the App in use:

1. App 1 illustrates the effect of a very low flow of nitrous oxide, of 500 ml per minute. This has a CO^2e of 16kg per hour and costs a modest 7p an hour. However it has the same warming effect as driving a small car 100k.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/App-1.jpg

2. App 2 illustrates the difference between different agents at the anaesthetic concentrations set in oxygen enriched air. The differences are striking. Using sevoflurane, the CO^2e is 1.3 kg and costs £1.81 an hour. Choosing to use desflurane (which is less potent and requires a greater concentration) would result in a CO2e of 61.1 kg and cost 3.5 times as much.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/App2.jpg

3. App4 includes an image from the page used if an anaesthetist is using an anaesthetic machine with an Aladin cassette.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/App4.jpg

4. App3 is the illustration of the results obtained from the validation work and shows clearly the reliable straight-line relationship between mass used and predicted mass used.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/App3.png

Partners

The initial developmental work was self-funded. The later iteration was supported by the Association of Anaesthetists and the use of the balance for the bench study was only possible with the generous help of SageTech.

Future plans

The next step is to work with the anaesthetic machine manufacturers to include the software calculations within the anaesthetic machine and for the display to include the real-time and integrated use of volatile anaesthesia to define the environmental impact per case. Discussions are at an early stage.

Waste

Great Ormond Street Hospital for Children NHS Foundation Trust

Great Ormond Street Hospital (GOSH) has been working in partnership with Bywaters, London's leading waste management and recycling provider, to overhaul the site's waste practices to deliver cost savings and protect the environment. Over the course of 2019, the partnership put particular emphasis on certain initiatives, including:

Auditing

In order to discover where enhancements could be made to GOSH's waste management provision, a wide number of audits were carried out across the year, providing recommendations specific to each part of the site.

Working in partnership, in 2019, Bywaters and clinical auditing specialists SUST'N delivered audits Trust-wide. Bywaters' key focus of the auditing was to deliver improvised signage and correct allocation of recycling bins, whereas SUST'N focused specifically on working up a strategy to improve GOSH's offensive waste streaming.

The recommendations resulted in 56 general waste bins being converted to Dry Mixed Recycling, pushing the overall recycling rate towards the 60% offensive waste target recently set by the NHSI.

Improving Offensive Waste Streaming, Maintaining Recycling Performance, and Reducing Waste

GOSH is a complex waste environment, and as such requires an all-encompassing approach to ensure performance levels are maintained. During 2019, a key focus was placed on improving the site's offensive waste stream in order to move towards the NHSI's 60% target. Utilising the recommendations within Bywaters and SUST'N's audits, GOSH increased the percentage of offensive waste collected by 6%, with plans to see this rise even higher in 2020.

A focus was also placed on improving the recycling rate for domestic waste at GOSH. The plans implemented saw this rise from 39% to 40%, and the total overall weight (including clinical and offensive waste) fall 6% from 1617.03 tonnes in 2018 to 1525.51 tonnes in 2019.

Improving Food Waste Streaming

Previously, a considerable amount of food was ending up in GOSH's general waste stream and therefore not being sent to the correct facility for anaerobic digestion. The auditing process revealed that in areas such as the Camelia Botnar Laboratories and Western House, this was due to insufficient bin provision.

Following the recommendations, a small food waste caddie was installed across each of the CBL's five tea points and 8 patient family accommodation kitchens, creating a simple solution for CBL staff and patient families to dispose of their food waste sustainably, ensuring the waste is recycled.

Removing WIVA Bins

In order to reduce the amount of plastic waste generated at GOSH, the trust worked to remove all WIVA bins from lab areas, replacing them with cardboard alternatives. Continuing the improvements delivered in 2019, GOSH aim to switch entirely to bio bins throughout the hospital.

Economic, Health and Carbon Benefits

In order to achieve objectives, Bywaters and GOSH track all data to ensure constant improvements are being made across the board. The two most notable examples of significant impacts are the streamlining of waste collections and removal of WIVA bins.

Throughout 2019 the Trust monitored the status of the onsite DMR compactor, to ensure that it was only collected when full, reducing vehicle movements and congestion from London's busy roads, while at the same time providing significant cost savings for GOSH.

By taking this approach, the trust has saved £13,880, with the number DMR compactor collections reducing by 25% from 104 collections a year to just 78. This reduction in collections saved the equivalent of 712.4kg of CO_2 emissions from entering London's air – keeping the capital sustainable, in line with Bywaters' 'London for London' approach.

The potential cost savings of removing WIVA bins and switching to using cardboard bins were highlighted in the audit of the Camelia Botnar Laboratories, through which it was discovered that 1400 WIVA bins were used throughout the previous year at a cost of £10,456 to GOSH. Additionally, because the WIVA bins themselves are disposed of in the infectious waste stream, this was leading to knock-on higher waste costs down the line and a significant amount of plastic being needlessly incinerated.

The audit found that by switching to yellow bags, and cardboard bio bin alternatives, GOSH could save £8,973 annually whilst preventing the incineration of 1,846kg of plastic every year.

Partners

Managers across GOSH have been pivotal to the Trust's success. In particular, Carol Mitchel – Waste Manager – has led innovations and initiatives making GOSH a leader in sustainability and waste management. Furthermore, the laboratory managers, laboratory staff, and infection control team have been an integral part in ensuring all upgrades to waste practices have been compliant with hospital policy and safely implemented.

Bywaters has worked with GOSH to deliver a comprehensive auditing programme, providing training and infrastructure upgrades to improve waste practices onsite. Their dedicated team of Green Gurus have acted as sustainability consultants to ensure that waste performance has been accurately measured and enhanced.

Clinical waste auditors, SUST'N have been delivering the new offensive waste services rollout at GOSH as part of the trust's ambition to reach the 60% offensive waste target, as specified by the NHSI. Their work has involved many detailed audits and a gradual implementation of best practice procedures.

OCS is the cleaning services provider at GOSH, and has been instrumental working alongside Bywaters, GOSH, and SUST'N in delivering and implementing the improvements. In particular, OCS has taken an active role in ensuring all members of staff across the hospital are engaged, whilst utilising their vast knowledge to ensure that staff have access to accurate information.

The company has worked with Bywaters to ensure cleaning teams are fully trained, and their work with staff has created an inclusive environment of constant improvement.

Future Plans

Removing all Unnecessary Single-use Plastic Containers: the Trust are looking to stop using single-use plastics containers across the Trust by June 2020. This will be achieved by transitioning to bio bins throughout the hospital – having already begun the process of removing the blue-lidded plastic pharmacy waste containers in the pharmacy in 2019, the Trust hope to complete the transition fully in 2020.

Implementing Reusable Sharps: an efficient way to reduce the risk of infection, but also the most sustainable way to handle sharps waste – with containers able to be safely reused over and over again, following decontamination. This process minimises waste and emissions related to the disposal of the existing bins.

Reduction of High Temperature Incineration Waste Stream: the key focus of this task is the downgrading of waste streams in lower classification laboratories. This will help the trust to keep moving towards the 60% offensive waste target, ensuring both financial and environmental savings for GOSH.

Interserve

Interserve and UCLH, along with waste contractor Bywaters, have formed a partnership to effectively reach waste targets, increase recycling rates and reduce consumption of single-use plastics in particular.

These single-use plastic targets have been outlined in the UCLH Sustainable Development Management Plan and are in line with the NHS Single-Use Plastics Reduction Campaign Pledge. This means that the Trust is committed to:

- By April 2020, no longer purchase single-use plastic stirrers and straws, except where a person has a specific need
- By April 2021, no longer purchase single-use plastic cutlery, plates or single-use cups made of expanded polystyrene or oxo-degradable plastics
- By April 2021, go beyond these commitments in reducing single-use plastic food containers and other plastic cups for beverages – including covers and lids

The waste reduction targets are integrated into the IFM Sustainability Calendar, which has proven to be an effective and clear strategy to manage and monitor specific waste streams, including paper and plastics. During the Sustainability Calendar, each quarter focuses on a different topic area, and in 2019, two of the sustainability focuses were on paper waste reduction and plastic waste reduction. Both Interserve and UCLH collaborated to create waste reduction targets to be included within these topics.

The paper waste reduction began in January 2019 and the target was to reduce IFM paper consumption by 685kg in 2019 when compared to 2018 paper consumption figures. IFM exceeded this target and reduced paper consumption by 793.62kg.

The plastic waste reduction saw a focus on the catering and canteens' consumption of single-use plastics. New, environmentally-friendly products have been introduced, replacing 341,000 single-use plastic items from being sent waste sent to landfill annually.

IFM and UCLH have also seen a large focus on increasing recycling rates in collaboration with the waste contractor, Bywaters. Following a joint effort between UCLH and Interserve, recycling rates have reached 49%, a continuous improvement since September 2019. This has been achieved through the installation of new recycling equipment, a change of specialist provider and increased communications.

Case studies regarding waste reduction and increased recycling rate achievements have been distributed to staff to share and showcase good practice and achievements.

Economic, Health and Carbon Benefits

The 2019 Sustainability Calendar saw a focus on both paper waste reduction and plastic waste reduction. During the first topic, the overall paper waste reduction target was to reduce consumption of paper, according to Lyreco figures, by 685kg when comparing to 2018 figures. This target was exceeded in quarter 4 of 2019, when final figures showed that IFM had reduced their paper consumption by 793.62kg. This saved IFM £1,442 on paper alone in 2019. To achieve this, multiple paper saving initiatives and innovative technology were implemented across the IFM contract, including:

- Hand-held PDA devices, which directly receive work orders, saving circa 50,000 work orders being printed annually
- MPro5 software implemented in security and cleaning teams to enable data to be saved directly, allowing cleaning audits and security patrols to be completed electronically
- 'Account Management Suite' SharePoint system introduced to store all statutory compliance documents
- A 'Think Before You Print' campaign was launched in in UCLH/IFM offices in January 2019, to encourage staff to reconsider printing
- Quarter three saw multiple plastic-saving initiatives implemented, particularly in the Refresh Restaurant in the main PFI
- Wooden, compostable takeaway cutlery in the Refresh Restaurant – saving 252,000 plastic knives, forks and spoons going to landfill each year. This will show a cost saving of £1,750 per annum
- Compostable porridge and soup pots have replaced plastic lined pots, saving 15,000 pots and lids entering landfill annually
- All self-service hot beverage plastic cups and sleeves have been replaced by 'Veg-Ware,' saving 24,000 plastic items entering landfill annually

Since the change of waste contractors at the main PFI, to Bywaters, Interserve and the Trust has seen a continuous increase in recycling rates since September 2019, and in turn huge financial savings. In November 2019, recycling rates reached 49%.

September 2019 saw an increase of mixed recycling at the PFI from 0.5 tonnes to 9 tonnes, and a decrease of general waste from 67 tonnes to 31 tonnes (46% decrease). The recycling rate continued to rise in October 2019, where 35 tonnes of waste were recycled, 46% of total waste. In November, a total of 37 tonnes of recycling was collected, increasing recycling rate to 49%.

Partners

The waste reduction targets achieved by a joint and collaborative effort between Interserve Facilities Management Team, UCLH Trust and Bywaters has been extremely well received by all parties and has been recognised and supported through various case studies.

George Weekes, IFM Account Director, says *"During 2020 we will continue to increase our recycling rates, so that as a site we recycle more than we send to general waste to minimise our impact on our environment. Over the past twelve months we have made significant progress across a range of Sustainability activities including removing 85% of the paper used by IFM and removing 341,000 pieces of single use plastics from our catering outlets."*

The partnership with Bywaters has been invaluable. Since changing waste contractor in September, the first 2 months of data saw a 36.5 tonne increase in recycling, a total of 49% of all waste is now recycled. The partnership provides an online dashboard where waste data is readily available to be viewed and analysed Since partnering with Bywaters, IFM staff have been invited to external events with Bywaters, including a Sustainable Solutions Event, focusing on food waste reduction, particularly in the local area in London.

Future Plans

As outlined in the UCLH 2020-25 Sustainable Development Management Plan, the Trust will monitor the sustainable development targets using a Sustainable Assessment Development Tool (SDAT). This will help to report on progress and monitor the path towards reaching targets. IFM and UCLH will continue to adopt the principles outlined in the Waste Hierarchy.

The UCLH target for 2020-2025 is to increase the recycling rate of dry mixed waste to 80% by 2025. The aim is to achieve this through 8% annual increments. To achieve this, UCLH Trust, Interserve and Bywaters will continue to implement new strategies to increase recycling rates and change staff behaviours.

One method to be implemented is to organise a volunteering day to raise awareness around food waste and ensuring food waste that would otherwise be put into general waste is put to good use and alternative uses are found for it. There are many charities that provide these services, and the target within the IFM Sustainability Calendar is to encourage both Interserve and UCLH staff to get involved.

The aim for 2020 is also to increase the Sustainability Champion Network. This will be beneficial as they are a vital pillar in the waste management strategies, as Champions are able to reach out to all staff and encourage staff to get involved and provide a route for feedback to be fed through to management.

NHS Business Services Authority

The NHS Business Services Authority (NHSBSA) deliver a range of national services for the NHS, as well as contractors, patients and the public. One of these services is Prescription Prepayment Certificates (PPCs).

The PPC allows patients to buy a certificate for either 3 or 12 months which enables them to collect an unlimited amount of prescriptions for a set price. The service is for patients with conditions that require medication over a short-term period or those who have mid to long term conditions that require regular medication and are not covered under medical exemption rules. Around 2 million certificates are issued each year and previously, following successful application and payment, these would be sent by second class post in the form of a credit card sized plastic card.

The transformation project to digitise the PPC service began in September 2016 with a hypothesis that 'by improving the digital journey the service could increase digital take-up and improve customer satisfaction.'

Beside usability and accessibility issues with the current online application, there were also problems with the postal application route for PPCs. Any errors in completing the form would result in delays, meaning users incurred additional costs paying for prescriptions whilst waiting for the certificate to arrive.

NHSBSA wanted to reduce the environmental impact of over 2 million plastic cards being issued each year, which would eventually end up in landfill, and wanted patients to experience a quick, seamless application process. Digital certificates were therefore a key goal of the project.

The initial release of the new online journey went live to 1,000 customers in July 2018 This met WCAG 2.1 accessibility standards, used approved GDS design patterns and allowed the patient to receive an instant digital certificate.

In early 2019, the service became available for all users, and the number of digital certificates continued to grow. The project had delivered an improved online offering as well as highlighting other routes to purchase a PPC. Customers could obtain a PPC from a registered pharmacy, or over the phone for those that needed extra help. NHSBSA decided then to stop printing postal application forms, in order to drastically scale down the inefficient postal route.

The next step was to cease the issue of plastic cards for the service, which was accomplished in February 2019.

The approximate cost to the NHSBSA of issuing plastic certificates yearly for PPCs was £180,000. An £80k reduction was realised from replacing these with paper certificates.

Economic, Health and Carbon Benefits

Since the new online application for PPCs went live, there have been 1.4 million digital certificates issued to customers, eliminating 1.4 million plastic cards.

A saving of £600k has been realised to the NHSBSA through the huge increase in digital certificates being issued, money which can be reinvested into the NHS for patient care.

As changes have been made to the service design and a digital-first approach taken NHSBSA have seen an increase in digital take-up from 65% to the current 87%. Postal applications have reduced from 101k in 18/19 to only 11k in 19/20, with the number continuing to decrease every month. The reduction in postal applications has also led to a reduction in staff requirement from 4 to 1.

The changes to the service mean that the waiting time to receive a PPC has decreased from up to 19 working days to 1 minute if receiving by email. This means that prescriptions can be collected immediately using a PPC, rather than patients having to pay for medication and then claiming a refund of these costs.

Health outcomes

33% of citizens with long-term conditions report that they have missed collecting prescriptions due to cost often having an impact in secondary care. 26% of this group needed an additional GP appointment regarding their health issues. 9% of the same group required admission to hospital. By gaining access to a PPC and making prescription costs affordable it is expected that the volume of citizens requiring secondary care will be reduced.

User satisfaction

The Net Promoter Score (NPS) and Net Easy Scores (NES) measure customer satisfaction and ease of use based on ratings and feedback, and are measured on a scale from -100 to +100. The online PPC service's NPS is consistently above 80, whilst the Net Easy Score (NES) is consistently above +90.

NHS LOTHIAN (Main Recovery and Anaesthetics)

NHS Lothian has been running various sustainability projects to emphasise benefits for staff, communities and our planet. NHS Lothian has been redistributing goods from a local bakery (destined for landfill) to different wards throughout the hospital, saving over half a tonne of food waste in 4 months.

NHS Lothian also ran a Green Christmas pledge campaign alongside anaesthetic sustainability leads where around 100 staff pledged sustainable actions during December in order to win prizes from local/ sustainable businesses.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/SAW-2020-FEED-BELLIES-NOT-BINS-sub.docx

Economic, Health and Carbon Benefits

Substantial financial benefits have been achieved by reducing clinical waste by 45%, since disposal costs are approximately 3.5 times more than recycling and domestic waste.

The Ditch Desflurane campaign saw a 100% reduction in usage and waste of this gas, with a 100% reduction in use and zero canisters being bought since January 2020. Across the hospital sites where this work is also ongoing this translates to a 60% reduction in Desflurane waste. The current trend predicts saving up to 416 tonnes co2e per annum (£40,000). Effectively segregating waste also allows more opportunities for recyclable items to be recovered and the materials reused.

Throughout this process, staff have regularly been updated as to the rationale behind the project and the benefits of more sustainable actions for both the environment, the NHS and their own well-being. Through engaging the workforce, staff have committed to sustainable actions and have made a suite of individual environmental pledges, including transitions to vegetarian diets, cycling to work and switching to green energy suppliers.

NHS Lothian have received substantial engagement through online outreach via hashtags such as #TalkingTrash, #BakeryBingo, and #GreenXmasRIE.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/waste-QI-sub.png

NHS Business Services Authority

Partners

Although the project started out within a single ward, the ethos has spread throughout the Royal Infirmary of Edinburgh, culminating in a Sustainability Action Workshop in January 2020. Several organisations throughout the community have taken part in the sustainability project. For example, pupils at the Morningside Steiner School are making reusable theatre hats as part of their handy work project; Zero Waste Scotland provided reusable sanitary products as part of #trailperiod, and Andante Bakery regularly donate artesian baked goods destined for landfill to be distributed throughout the hospital. Over 30 sustainable and local businesses throughout Edinburgh also provided prizes for the Green Christmas initiative.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/green-xmas.png

Future plans

Achieving substantial success and engagement with waste reduction and sustainability campaigns throughout 2019, NHS Lothian plan to expand the Talking Trash project at both ward, hospital and community levels in 2020.

Contamination of recyclates still poses a barrier to processing outside the hospital. As such, Main Recovery are now commencing a detailed audit of recycling waste to quantify contamination and the volume of different items within this waste stream. This will then be communicated with waste management providers, to accelerate the required changes both outside and within the hospital to improve the usability of recycled materials. Following engagement with Great Ormond Street Hospital in London who have pioneered this technique, NHS Lothian plan to pilot a Gloves Off campaign, first at ward then hospital level, to reduce plastic waste, eradicate unnecessary glove use and also improve patient experience, infection rates and staff hand health.

NHS Lothian also plan to establish a medical PVC recycling programme, to ensure high quality materials are repurposed, which in some instances due to the valuable nature of the items may reduce waste disposal costs. To capture successes to date, NHS Lothian have enlisted the help of Art Link Scotland to develop a visual art project using hospital waste products.

Finally, NHS Lothian plan to work with academics and economists at the University of Edinburgh, to accurately translate substantial waste reductions into financial and environmental impacts at numerous local and national scales, and promote such schemes throughout NHS Scotland for the betterment of staff, hospitals and the planet.

Yorkshire Ambulance Service NHS Trust

In 2018, Yorkshire Ambulance Service set up WARP IT, to ensure that furniture could moved within YAS, and where it couldn't be used, gifted to charities. Since then, YAS have saved over £115,000 in waste deposited in landfill.

YAS also set up the PI 'YAS' tic free initiative in 2018. This was rolled it out in canteens and they are now looking at a Plastics Strategy that will look at single use plastic throughout the organisation.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/LeedsAnchorsPlasticfree_YAS_plasticfreecanteen.pdf

Economic, Health and Carbon Benefits

Over £115,000 of furniture has been saved from being thrown away and repurposed somewhere else! Yorkshire Ambulance Service have also taken cars off the road, saved trees and saved 65 tonnes of carbon dioxide from being produced.

Through a Plastic free YAS initiative and YAS have saved around 7 tonnes of plastic from being disposed to date. YAS have so far…

- Saved nearly 200,000 pieces of plastic from the waste stream
- Reduced the amount of plastic waste by approximately 4 tonnes a year, but still generate around 0.5 tonnes of waste from the changes
- Waste production has been reduced by at least one industrial waste bin per day
- Saved over £5000 in a year in procurement costs for plastic packaging

Suppliers engaged with the task of plastic and waste reduction and YAS found that cleaning staff did not have to empty the bins as many times over a day.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Element-society2.jpg

Partners

Through WarpIt, YAS have donated redundant furniture to:

- Element Society (helping the youth of Sheffield and working to reduce knife crime)
- East Street Arts
- Dream Community Charity (creating community heritage projects and leading community archaeological excavations)
- Dove House Hospice
- Toast Loves Coffee in Leeds
- Emmaus
- Mesopotamia (helping Syrian refugees and homeless)
- Staffordshire North & Stoke on Trent Citizen's Advice Bureau
- Solidaritech (an IT repurposing company retraining asylum seekers)
- Kirkstall Valley Development Trust

YAS have also donated to other NHS organisations and repurposed within Yorkshire Ambulance as well.

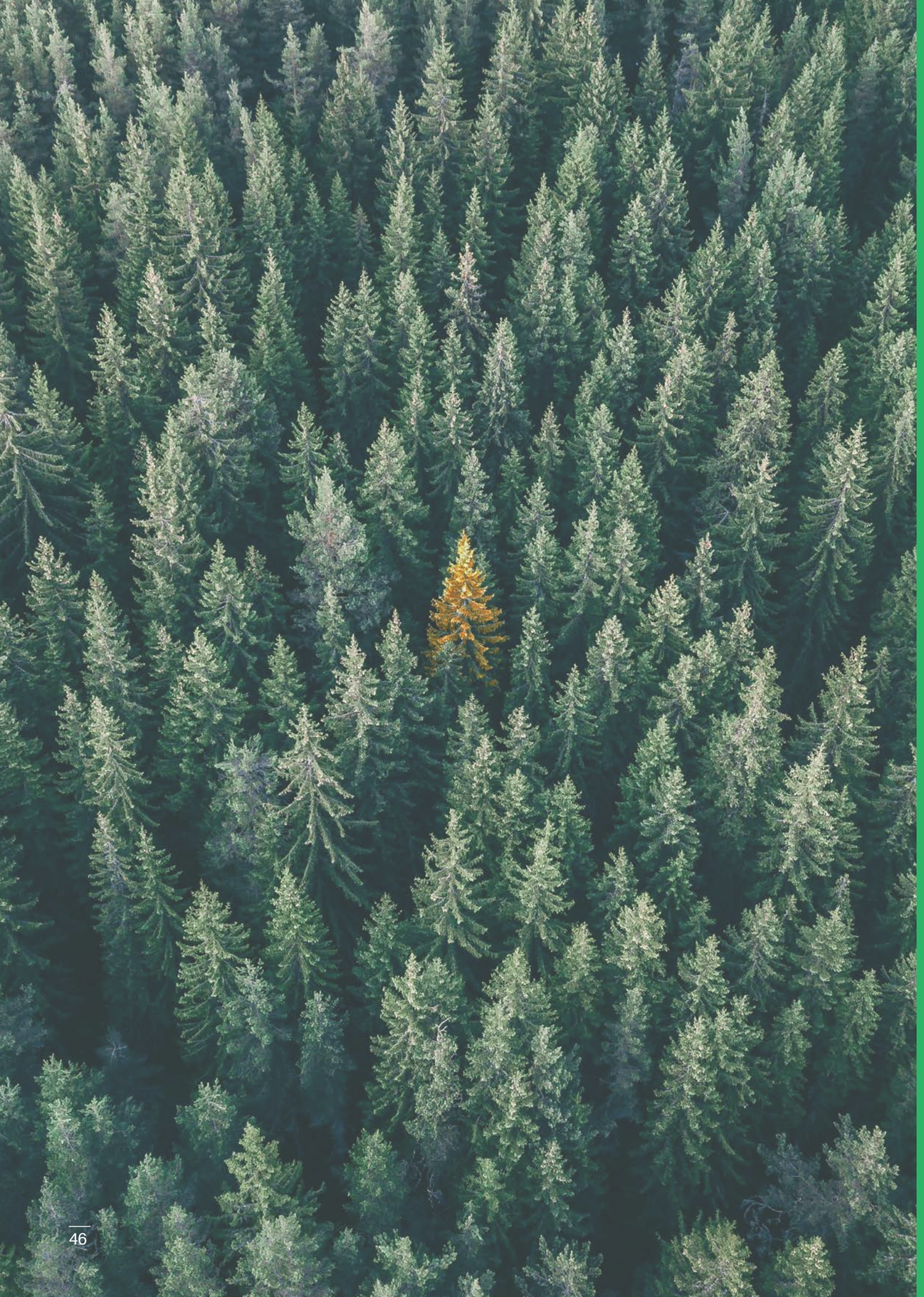
The Plastic free canteen was supported by canteen managers, Mellors.

Future plans

YAS are relaunching their recycling awareness scheme with new bins, new posters and working to reduce waste production through our plastic reduction scheme and awareness.

YAS will be continuing WarpIt and looking to increase the amount of furniture reused internally.

During 2020, YAS are developing the PI 'YAS' tic free strategy and rolling out the first paramedic based glove awareness campaign to look at reducing glove use (currently identified as 39 million gloves in the ambulance service from 7 ambulance services and 8 billion in the NHS nationwide). YAS will also be working with ambulance stations to reduce the amount of waste produced and to encourage the use of reusables (i.e. glass milk bottles, reusable cups, reusable water bottles).



Carbon

NHS Blood and Transplant

NHSBT's 2015-2025 Sustainability Strategy includes the following objectives:

- 50% cut in carbon emissions, measured against the 2014/15 baseline of carbon emissions
- Zero waste to landfill (excluding clinical waste)
- Developing a resilient business
- A sustainable supply chain
- Sustainability embedded into organisational culture

The strategy was developed and is owned by NHSBT's Executive Team, with the Finance Director having Board level responsibility. A specialist firm (TerraInfirma) were engaged to hold a workshop with the Board and the outputs were then written into the attached strategy.

All staff were made aware of the strategy and its objectives, through the development of a Communication Plan, produced in partnership with the Internal Communications team. This was reinforced by the strategy's inclusion in the Mandatory 'Environmental Awareness' training package.

The strategy built on the previous 2010-15 Carbon Management Plan, which delivered a 26% carbon reduction, against an objective of 25%. The 2010-15 Carbon Management Plan target was against the 2009/10 baseline carbon emissions.

Monitoring of the strategy objectives and risk management has been through monthly reports to the Estates and Facilities Senior Management Team, Quarterly reports to the Finance SMT and Annual Reporting to the Governance and Assurance Committee (a group of non-Executive Directors).

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/NHSBT-lifecycle-proposal.pdf

Economic, Health and Carbon Benefits

The attached GAC Report for January 2020 gives the CO^2 savings and carbon reduction projects completed within the last 12 months.

NHS Blood and Transplant has reduced its CO^2 emissions, against the 2014/15 baseline, by 37% since 2015 and the launch of the 2015-25 Sustainability Strategy. Given current emission data, it is expected that by the end of the 2019/20 financial year the reduction will be 40%.

The carbon reduction projects completed to meet the strategic objective have stabilised expenditure on energy and vehicle fuel at 2014/15 levels. This has reduced the organisations exposure to fluctuations and price increases in the hydrocarbon fuel and energy provision sectors.

It is well known that high Carbon emissions go hand in hand with poor air quality, so by drastically reducing our carbon emissions NHSBT are also aiding the improvement of air quality and the health benefits that brings to the UK population.

Partners

The Board are fully engaged in the development, implementation and monitoring of the strategic aims, including the Carbon reduction target. This board level engagement feeds into the directorate management structures, with individual directorates and departments planning their actions to meet the strategic objectives.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/nhsbt-sustainability-strategy-2015-2025.pdf

The attached copy of the strategy identifies Donors, Employees, Suppliers and Customers as NHSB's key stakeholders. Regular engagement is made to update stakeholders on carbon reduction commitments and progress.

NHSBT's Procurement colleagues have also adopted the ISO20400 Sustainable Procurement standard as the model to improve the sustainability of the goods and services bought.

The organisation also has a group of volunteer Sustainability Champions, who exist to aid promotion of sustainability within their teams and sites as well as communicate projects at a local level. The champions have all had training to fulfil their role, delivered by the Sustainability Team and TerraInfirma.

Future Plans

The 50% Carbon reduction strategic objective is estimated to be achieved within the next 12-24 months. This will be achieved by:

- The installation of a further 200KvA Solar power generation scheme at the Newcastle site in 2020
- Further utilisation of the annual £100k sustainability revenue budget, to complete more energy conservation works and install Electric Vehicle Charging Points
- Increasing the refrigeration temperature for the storage of Plasma from 40°C to 35°C in 2020
- Further electrification of the liveried fleet from 2020 onwards
- Replacement of existing diesel fleet with modern low carbon vehicles from 2020 onwards
- Closure of two old energy inefficient buildings and transfer of the services into a new building built to BREEAM Excellent standards within 2020

With this in mind, a specialist team (TerraInfirma) will produce a Greenhouse Gas Protocol compliant Carbon Footprint for the organisation and its main products and services. This work will be completed within 2020.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/NHSBT-March-2015-Executive-Workshop-Report-Final.pdf

A copy of the proposal is attached and proposal 2 is the chosen project scope. The Carbon Footprint will be used to develop a new strategy and will allow for benchmarking both within the sector and outside.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/2020-GAC-Report.pdf

North Bristol NHS Trust

The North Bristol NHS Trust identified that operating theatres were energy hot spots, six times more energy-intense than hospitals as a whole, with 84% of the carbon footprint being attributed to energy use. Heating ventilation and air conditioning (HVAC) energy demands comprise over three quarters of the overall theatre energy use. This can be explained by a number of actions taken to ensure patient and staff safety in the operating theatre. The anaesthetic gas scavenging system (AGSS) performs an essential role, collecting the anaesthetic gases to ensure that the Health and Safety Executive's workplace exposure limits are not exceeded. Occupancy based scavenging systems have been shown to produce reductions in energy consumption of 50%. North Bristol NHS Trust felt that these systems could be utilised to good effect.

Two sets of baseline data were collected on the on/off status of the AGSS in 29 theatres using a data collection tool. Both were collected midweek (table 1), one in hours (10:15) and one out of hours (23:45).

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Table-1.png

Each theatre has a passive infrared (PIR) sensor that is currently connected to the ventilation, ensuring ventilation is always on appropriately. This sensor has a range of between 5 and 9 metres and is well placed to sense any activity within the theatre. If left inactivated, the PIR goes into back up after 30 minutes, and at 1 hour will disable the AGSS. We were able to link the AGSS to the PIR sensor in one theatre to assess the impact this would have on energy saving and staff safety. North Bristol NHS Trust then interrogated the AGSS log to review its activity over a twenty-four-hour period (table 2) and compared the data.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Table-2.png

Economic, Health and Carbon Benefits

A day is defined as a 12-hour period. In a 24-hour period, North Bristol found that 14 pumps were on for one day inappropriately.

Over a year this equates to £2963.80 or 26,980.80 kWh of unnecessary AGSS running. 26,980.80 kWh is equivalent to 19.1 metric tonnes of CO^2e, which is equivalent to a passenger car driven for 46,649 miles.

Moreover, 24% of theatres were in use without the AGSS being on. This poses a significant threat to both staff and patient safety and is in breach of the Control of Substances Hazardous to Health Regulations 2002.

Linking the PIR to the AGSS has reduced the number of inappropriate running hours out of hours by 75%. North Bristol found that, out of hours, there were only 3 hours in which the pump was running when the theatre was not in use. (The activation of the PIR out of hours was assumed to be due to cleaning staff in the operating theatre.) This equates to a potential 14.3 metric tonnes of CO^2e or £1,689.37 saving over a year period across all theatres.

Partners

This project has been possible through the hard work and support from a number of parties, namely all of the clinical members of staff with the North Bristol NHS Trust theatre complex and their generous colleagues from Bouygues.

Future Plans

North Bristol were able to significantly reduce the CO^2e and cost associated with inappropriate use of AGSS. This strategy has additionally optimised staff and patient safety to ensure that AGSS is on in accordance with COSHH regulations.

Plans into the future will be two fold:

In the first instance, rolling out this project to all theatres across the site, subsequently sharing experiences with other trusts in a hope to minimise energy wastage and maximise carbon dioxide equivalent savings across all theatre complexes.

Secondly, establishing this work into a theatre close down checklist, focusing on minimising the energy wastage in theatres out of hours, focusing specifically on theatre complex lights, ventilation and AGSS. Once a checklist is established and validated, North Bristol aim to share this with colleagues across the country as an example of how energy waste can be minimised.

NHS Healthier Lancashire and South Cumbria Integrated Care System

In early 2019, Healthier Lancashire and South Cumbria Integrated Care System (ICS) were successful in securing the Health System Led Investment (HSLI) funding from NHS England to develop an effective digital platform – WelLPRES. This provided the citizens and health professionals of Lancashire and South Cumbria with access to a remote surveillance monitoring for Outpatient follow-up treatments.

WelLPRES solution consists of two components: Managed Care and Patient Portal. WelLPRES Managed Care allows the clinicians/care team to access their patents' electronic health record in a secure cloud-based digital environment. This enables personalised and remote coordinated healthcare for clinical teams. The first use case built on WelLPRES was the Breast Cancer Pathway, which went successfully live in October 2019. The pathway is dedicated to digitalising the 5-year supported self-managed follow-up Breast Cancer programme/ pathway.

WelLPRES Patient Portal solution is designed to support patients' to self-manage their health condition during their follow-up care. Following treatment of breast cancer, the clinical teams assess the patient's eligibility to enter a supported self-managed follow-up pathway, by following risk stratification protocols.

The development of the patient platform has met some of the key ICS objectives:

- To achieve fundamental and measurable improvements in health outcomes
- To reduce health inequalities across Lancashire and South Cumbria
- To ensure greater focus on ill-health prevention, early interventions and self-care where this improves outcomes
- To remove organisational/professional boundaries
- To make maximum use of new technology when this will improve the quality of care provided

The solution aligns with NHS Long Term Plan (2019), NHS Sustainability and other national and international agenda like Climate Change, etc. The solution also meets the guiding principles of Topol Review (2019).

This programme of work will aim to deliver support for clinical staff, stakeholders working with cancer alliances and meet objectives of the National Cancer Strategy, including reducing variation, better patient experience and longer-term quality of life.

This solution aims to provide patients with:

- Facilities to book and manage their hospital appointments
- Access to relevant & contextual health data
- Complete health questionnaires online which will be sent electronically to their clinicians. Red flag systems are picked up by the questionnaires and clinicians are alerted to deploy care where urgently needed
- An online consultation/virtual review facility

The Managed Care solution for Breast Cancer follow-up pathway delivers cost effective, optimal care to patients as it:

- Effectively improves care coordination and reduce care fragmentation
- Facilitates access to relevant health care information
- Reduce paper transaction
- Reduce administrative burden and thereby releasing valuable health care resources to deploy effective care where needed

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Managed-Care-1.jpg

Economic, Health and Carbon Benefits

WelLPRES Managed Care solution aligns with the NHS Digital Strategy by ensuring citizen data is protected, supporting health and care organisations to get the best from technology, data and information and making better use of this health and care information.

WelLPRES aligns with The Secretary of State for Health and Social Care's Vision for Technology:

- A truly joined-up health and care system, designed around the needs of patients and their care networks
- A safe and secure data infrastructure that protects the health and care system and patients
- Local organisations are able to make the right technology choices for their own area

WelLPRES, supports:

- Improving communications between patients and their care team
- Improving compliance with evidence-based pathways/approaches both in terms of process (e.g. adherence to risk-stratified cancer follow up pathways) and outcomes
- Increasing efficiency within already stretched teams by automating administrative elements of care pathways including generation of regular call-recall letters, releasing capacity
- Increasing patient activation and experience by involving individuals in the management of, and decisions about, their own care

The areas in which WelLPRES contributes to savings:

- Reducing paper-based transactions
- Reducing unnecessary diagnostic tests and outpatient appointments

Predicting and preventing Loss of Follow Up (LTFU)

WelLPRES enables the care teams to:

- Schedule and plan follow-up appointments around patient preferences
- Send electronic messages and reminders to patients
- Reduce unnecessary waiting times and travel for patients and clinicians
- Improves Patient Safety – WelLPRES allows access to accurate and real time information on patient's health records in a secure and safe digital environment
- The solution enables care teams to schedule yearly mammographies, trigger questionnaires and arrange reviews, virtual clinical review appointments as well as a number of one-time appointments, such as educational appointments

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Managed-care-2-2.jpg

NHS Healthier Lancashire and South Cumbria Integrated Care System

Partners

There were a number of suppliers involved in this complex project

1. Solution developers
2. Cloud infrastructure provider
3. Connectivity provider
4. Integration specialists
5. Local Person Record Exchange Team

The project was approved and supported NHS England and Healthier Lancashire and South Cumbria Integrated Care System Board. The key stakeholders were the Cancer Alliance Team, Innovation Agency, Trusts that fall within the Lancashire and South Cumbria boundaries, patient engagement forum, population health leads, etc.

The solution was co-designed by patients, clinicians, cancer alliance and other key stakeholders. Patients who were involved in the first workshop have expressed interest to stay involved as they believe in the product and the outcomes it delivers.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Mobile-device-view-1.jpg

Future Plans

Further care pathways (for patients with Long Term Conditions (LTC) i.e. Hypertension, Diabetes, Heart failure, etc. will be co-designed and developed on WelLPRES. Therefore, patients with these conditions will be managed in an efficient way that will empower them, and reduce health care fragmentation, healthcare costs and improve health related outcomes.

Case Conferencing solution will effectively facilitate multidisciplinary team meetings, support enhanced case management for follow-up treatments, mitigating risks of patients being 'lost' between transfer of care. This 'one-system/platform' design model will streamline and integrate pathways thus delivering high quality of care, improving patient experience and health outcomes

Robust, patient-centric, secure and sustainable digital solutions like WelLPRES is the future for connecting, delivering and truly transforming healthcare services that will promote high quality of care, reduce costs and improve health outcomes.

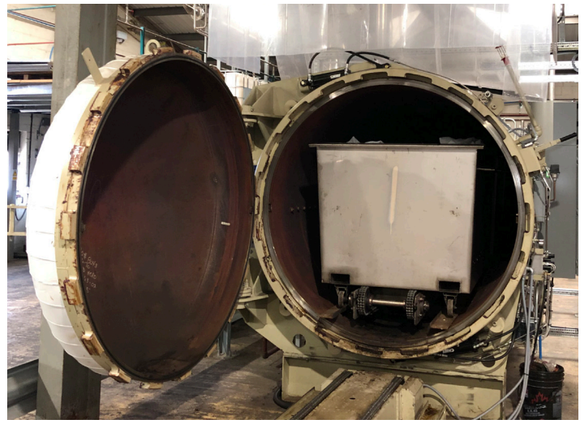
Sharpsmart
MAKING HEALTHCARE SAFER

Transforming Healthcare Waste into Recoverable Fuel

Sharpsmart is committed to leading the healthcare waste industry in innovation and sustainable practices that minimise environmental impact. Most known for our reusable healthcare waste containers, we are proud to introduce our latest contribution to the sustainable future of healthcare waste management, our patented Hazardous Waste Remediation Process.

Across the United Kingdom, sharps waste is currently processed with little to no energy recovery. **Sharpsmart is proud to announce that sharps waste material, or flock, that is processed at our plant in Stoke, can now be reprocessed into Solid Recovered Fuel (SRF)!**

Taking the form of pellets, SRF will be used as a direct replacement for coal and other fossil fuels in machines like cement kilns and power plants. Previously, the waste from our treatment plants would have been incinerated without energy recovery; now, hospitals can record their sharps disposal as an R1 recovered outlet rather than D10 disposal.



But our vision for energy recovery doesn't stop there…

A simple truth is that healthcare waste disposal and treatment causes varying levels of environmental burden. The most commonly used process of treating sharps waste is through High Temperature Incineration (HTI). Recently, across the United Kingdom, HTI capacity has been a challenge. With increased volumes of incineration, the levels of heat can burn so high that it can cause issues with pollution control systems. When this happens, the most common resolution is to either put less waste through (decreasing efficiency) or to inject a cooling liquid, often mains water (increasing water wastage).

The Sharpsmart facility in Stoke is now able to capture and contain the liquid effluent that is created when treating and disinfecting sharps waste. We use this waste effluent liquid to cool incinerators which furthers sustainability, decreases the risk of pollution, and eliminates the need to slow down processing. We are the first, and currently only, non-incineration facility in England and Wales permitted to handle, process, and treat medicinally contaminated sharps.

This new system has relieved some of the pressure from **UK incinerators and can process up to 8,000 tonnes of sharps waste per year, the equivalent of one HTI plant.**

Healthcare facilities partner with Sharpsmart for safety and sustainability

Our vision for modern healthcare waste management can seem radical at first, but stick with us and you will soon share our philosophy that the right clinical waste solutions can have a major impact within the four walls of any facility. Sharpsmart has innovated for over 30 years and will continue to find ways to improve safety, sustainability, education, and efficiency in ways that lower your budget but don't compromise your values.

To learn more about the sustainable impact our reusable healthcare waste containment systems and ecological processing methods have on the environment, go to: www.sharpsmart.co.uk/our-sustainability.

Reuse

Sussex Community NHS Foundation Trust

Sussex Community NHS Foundation Trust (SCFT) Wheelchair and Specialist Seating Service covers West Sussex and Brighton and Hove. People with a permanent disability or long-term medical condition affecting their mobility are eligible for assessment for the loan of an NHS wheelchair and/or pressure relieving equipment. The service has a total of 10,503 clients, of whom 9,816 have been prescribed a wheelchair.

As part of the contract, the maintenance contractor agreed to refurbish wheelchairs at a cost which is far less than a new wheelchair.

The service is also commissioned to provide pressure-relieving cushions and other accessories to help reduce the risk of wheelchair users developing pressure injuries. This is a priority for the wheelchair service, and prevention of pressure injuries is key to avoiding treatment and possible hospital admission following a pressure injury. So education and the issue of preventative equipment can be an investment in protecting against pressure injuries and the associated costs of additional healthcare required to manage them.

Wheelchair cushions range from simple foam cushions to more complex fluid or air cushions. Some wheelchair services in other parts of the UK discard cushions after they have been issued once. The SCFT wheelchair service check all pressure cushions and accessories following collection of the equipment, to assess if they may be suitable to be re-issued, following a decontamination process.

Economic, Health and Carbon Benefits

In the past twelve months the service has refurbished 1,426 wheelchairs including basic and more complex manual and powered wheelchairs. A new specialist powered chair costs between £3,000 to £5,000. The cost to refurbish and recondition is £488.

A basic wheelchair can be £100 and the reconditioning fee is £97. The wheelchair service therefore assess the financial viability of a refurbishment on a chair by chair basis. However many basic manual wheelchairs prescribed are in the region of £130-200, so it makes economic sense to refurbish these.

In 2019 the service saved an estimated £347,000 (excluding VAT, refurbishment fees deducted) against the cost of buying new wheelchair stock. This represents an estimated saving of 56% based on what has been spent by the service on new equipment to date this financial year.

A basic pressure-relieving cushion may only cost £7, but a specialist high-risk cushion can cost between £400-£500. The wheelchair services do record each cushion which has been reconditioned, but based on records of equipment returned to the wheelchair services, it is estimated that cushion reuse saves the services approximately £125,000 (excluding VAT) per annum against the cost of purchasing new pressure cushions.

Recycling this equipment can benefit service users as it can reduce the time it takes to meet their needs, especially in the case of cushion recycling which the teams do on-site.

This also has associated benefits in terms of the reduced carbon footprint and environmental impacts associated with reducing new purchases of equipment, and keeping usable equipment in use for as long as is appropriate.

Partners

The service partners with AJM Healthcare to supply and maintain the wheelchairs. They refurbish wheelchairs at the request of SCFT.

In addition, the service works with the prosthetic limb team, and sends any old prosthetic limbs and walking aids to a charity called Meththa, based in Sri Lanka. The charity dismantles the old limbs and reuses the parts to manufacture new limbs for those in need who would not get a prosthetic limb otherwise. The service donated a Foam Carver which was no longer being used. This would cost approximately £40,000 new. The foam carver is used to carve a support cushion which is moulded exactly to the contours of the person who needs it. Rather than scrap it, it has been put to good use overseas thanks to Meththa.

The wheelchair services also work closely with local care homes to ensure that equipment that is no longer needed is returned for potential re-use. This helps to spread the process of thinking sustainably about resources used across the health and care system.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/virtuouscircle_lowres-FINAL.jpg

Future Plans

The service plans to continue its work to refurbish and recycle when possible, and look for new ways to reduce waste associated with wheelchairs, walking aids and prosthetics. This will continue to be measured.

The good work to date has been captured in a case study for the Care Without Carbon website and this will be promoted to other Trusts in the region to promote best practice.

In addition, the Trust is looking at procurement and waste through the lens of circular economy, which will inform purchasing decisions with a whole life approach to products and equipment.

The virtuous circle of sustainable healthcare, attached, demonstrates why the reuse, reduce, recycle approach to this much-used healthcare equipment is important and the value in continuing to build on this approach.

The Royal Wolverhampton Hospitals NHS Trust Neonatal Unit

The Royal Wolverhampton Hospitals NHS Trust Neonatal Unit are on a journey to becoming UNICEF Baby Friendly Accredited. It was very important that parents were able to be with their baby as much as possible. After working with the health and safety team, a risk assessment was completed to allow parents to have a hot drink at their baby's cot side. The Trust worked with the medical illustrations department and the Trust charity to supply reusable cups for hot drinks with the logo and details of the Trust charity.

Economic, Health and Carbon Benefits

Previously hot drinks were only available in prefilled paper cups. Reusable cups will reduce the amount of waste on the Neonatal Unit. The next move is to look at the waste bins and how the Trust can increase the amount of recycling that is done.

Partners

Without the support of matron Kate Cheshire, the project wouldn't have been possible. The cups were all funded though the Trust charity. Having their logo on the cups ensures people are aware of the charity. The medical illustration team sourced and printed the cup, meeting the criteria of the risk assessment.

Future Plans

The cups were put into circulation week commencing 16/2/20. Moving forward, the plan is to purchase further cups that can be sold, with all money going back to the charity. The Trust is now looking at other ward areas which could make the move to reusable cups. If it not possible, then moving to recycling bins is the way forward.

The Shrewsbury and Telford Hospital NHS Trust

Last year, Warp-it welcomed the Shrewsbury and Telford Hospital NHS Trust to the £100k club. 12 months on, the Trust have achieved an additional £149k saved, prevented 78.6 tonnes of CO2 being created through new products being produced and also prevented 33 tonnes going to landfill. The Trust have explored new avenues from internally reusing items to receiving office furniture donations from external companies. The Shrewsbury and Telford Hospital NHS Trust have 900+ active staff engaged in their Reuse, Recycle, Rehome programme, having recruited 1200 staff over the last 5 years.

One avenue recently launched is the Uniform Rummage event.

As a result of the KPO De-clutter days held on both sites during December, the Trust have had a huge amount of uniforms returned. 99% were brand new, still in their packaging. A Uniform rummage event was held at sites Princess Royal Hospital and The Royal Shrewsbury Hospital. The staff response was fantastic! Over four separate morning events, homes were found for 137 different uniforms.

Uniform Rummage event = 137 uniforms claimed. 71kg saved from going to landfill and 511kg of Co2 from new products being made. Also saved the Trust spending £2,055.

Partners

SaTH Warp-It Community Feedback:

"I found using Warp it very easy and straight-forward to use and it has worked very efficiently. I will be recommending it to my colleagues within the department."

"It is my first port of call if we need anything for the offices. It is always worth seeing if any pre-loved items could be given a home before spending unnecessarily on new items. The system works for us."

"This is an ideal way of reducing the unnecessary waste of resources."

"Innovative idea that can save the NHS lots of money that can be put towards the well-being of patients and staff instead"

Future Plans

As news from the Trust's Uniform event grows, further Uniforms have been handed in, enabling future events to be held for staff. This could be rolled out in other Trusts!

Procurement

NHS Shared Services Partnership - Procurement Services

The NHS Shared Services Partnership has been focusing on embedding a Culture of Sustainability within NHS Wales' Procurement, guided by a newly-developed Sustainable Procurement Code of Practice.

NWSSP provide dedicated shared services support for all NHS Health Boards and Trusts in Wales. NWSSP's Sustainability Group works across functions such as Procurement Services, Corporate Services and Estates to lead the way in making NHS Wales economically, socially, and environmentally sustainable.

NWSSP's Sustainable Development (SD) Group has developed a Sustainable Procurement Code of Practice that the organisation has embedded within its Standard Operating Procedures, to set the path in modernising NHS Wales' procurement function. The new Code of Practice sends a clear message to suppliers and stakeholders by demonstrating that NHS Wales intends to lead the way in sustainable public sector procurement.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/NWSSP-Sustainable-Procurement-Code-of-Practice-V3-FINAL_2.jpg

The Code of Practice identifies three key objectives:

1. The well-being of future generations (Wales) Act 2015. In recognition of the Act, and Procurement Services' ambition to be a world leader in Sustainable Procurement, the well-being of future generations will be considered paramount throughout all procurement activity
2. Sustainability for patients and service users: putting patients and service users first is essential for NHS Wales
3. Sustainability for NHS Wales: it is important that NHS Wales maintain its reputation and professional credibility with the public and wider stakeholders, demonstrating genuine commitment to sustainable development and consumption

NWSSP's Sustainable Procurement Code of Practice offers strategic direction and operational support from policy, with implementation moving towards making sustainable public sector procurement a reality.

Economic, Health and Carbon Benefits

By engaging with stakeholders across the country, internal and external to the NHS, NWSSP have been able to gather wide-ranging feedback that considers the most important issues today. Innovative procurement topics such as the foundational economy and circular procurement are identified as focus areas, and these are placed alongside traditionally recognised sustainability themes such as emissions, waste and ethical employment. This approach means that NWSSP are set to respond to emerging themes and initiatives from Welsh Government, while continuing a high priority consideration of fundamental concerns such as carbon and waste reduction.

As an advance on previous processes, NHS Wales procurement now goes much further than the requirement set out in the Wales Procurement Policy Statement, with buyers and contract officers being encouraged to go far beyond the original requirement to perform a Sustainable Risk Assessment on spend exceeding £25K.

The Sustainability Group worked with the Business Process team to redevelop standard business procedures and templates so that wide-scale consideration of the sustainability programme is embedded within the entire contract portfolio, which represents £500M worth of NHS Wales' expenditure. This deep integration of sustainability themes and analysis ensures that all staff must consider the economic, environmental and social sustainability of any procurement activity as a matter of course.

This consideration is already leading to more sustainable procurement outcomes, such as the use of energy from renewable sources, the procurement of environmentally friendly catering consumables, Health Boards purchasing paper from recycled sources, and the elimination of certain single use plastic items such as cotton buds. This is all achieved while delivering savings exceeding £11M so far in FY 19/20.

NWSSP is also improving its internal consideration. The organisation uses its own bespoke carbon monitoring software to drive year on year reductions in greenhouse gas emissions, enabling achievement and retention of ISO 14001:2015 accreditation. The practical output of this monitoring is the organisations publishing of its yearly Sustainability Performance evidencing that NWSSP is exceeding its year on year carbon reduction target of 3%.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Sustainability-Performance-2018-19.png

Partners

Developing a strategy that is genuinely and practically useful for both customers and suppliers was very challenging, however, the approach developed offers tangible support for those undertaking any procurement exercise and for those who may wish to supply goods, services or works to NHS Wales.

Sustainability is a fast-moving subject matter and there are regular new developments that need to be considered by the Group. As NWSSP's previous policy had not been updated for over 4 years, there were a number of new focus areas that needed to be incorporated into the new policy, and old themes needed to be revisited and modernised. This was achieved by a shared responsibility approach, where Group members were responsible for engaging with their colleagues and surrounding stakeholders to feedback into a centrally managed master document, which was then reviewed through regular Group meetings. External input was also sought via organisations such as WRAP Cymru, who assisted in developing focus areas surrounding waste and recycling.

The implementation phase has seen a series of training sessions delivered to buyers and procurement professional across Wales, highlighting some of the key themes addressed within the Code of Practice. These training sessions have had to be delivered across the country, meaning significant time and effort invested by the Sustainability Group and from those in attendance, however the reception to the new Code of Practice has been fantastic with interest and support from all involved.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/SD-Overview-Training.png

NWSSP staff are kept informed of progress via newsletters and the popular Sustainability A4 Updates with sources of sustainability information and organisational policy and procedures also kept in a single place in the organisations public webpages that are accessible to both staff and suppliers. NWSSP also facilitate regular supplier engagement meetings, and a standing agenda item at every meeting involves the discussion of the sustainability agenda, so the spread of the benefits is particularly rapid.

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Future Plans

The hard (public) launch of the Code of Practice will to coincide with Procurex 2020, so while NWSSP have been informally engaging with other public sector bodies, it is anticipated that the best practice achieved over the last few years will be fully shared with others through Procurex and subsequent events such as the Health Care Supply Association's summer conference. NWSSP is already engaging with bodies such as The Wales Co-Operative Centre and WRAP Cymru to advance social and environmental considerations, all of which will feed the next iteration of the Code of Practice, leading to continuous improvement.

A lesson learnt from this exercise has been that staff and supplier engagement is critical. Sustainability is very firmly in the public eye, with issues such as climate change and single use plastics inspiring many.

The overall effect of this approach is that NWSSP Procurement Services has developed a culture of sustainability, which has already resulted in significant benefits, and will continue to result in far more sustainable public sector procurement.

Greater Manchester Health and Social Care Partnership

Greater Manchester NHS Trusts have created and are participating in a regional programme to encourage sustainable procurement and reduced environmental impact from its procurement activities.

The Greater Manchester region covers 5.7% of NHS England spend. The total non-pay spend across GM is £2.33bn, of which £827m is deemed 'influenceable' by Procurement. The cost of procurement AND supply chain operation in GM is around £7.6m per annum. Staffing levels in the region are 224 WTE with 240,000+ Purchase Orders being raised.

A regional procurement programme was created by the Greater Manchester Health and Social Care Partnership in February 2018. This was to focus on improved collaboration of Trust spend as part of the regions devolution powers. A formal programme board now exists including all GM Trusts, SCCL, NHS Improvement plus local authority representation.

Due to the success of that 1st year and increased programme was agreed for 19/20 with financial contribution from all GM Trusts. It has recently been agreed to further extend the programme for an additional 3 years due to its success. To date an additional £3m worth of savings have been identified along with improved service delivery and increased sector collaboration.

An important workstream around sustainable procurement is now an important priority for the region. In March 2019 the procurement work plan was approved by provider Trusts. This was a funded model with contributions from all GM Trusts and GMHSCP via NHSE Transformation Funds. Since approval of that plan, there has been an increased focus, both nationally and within GM around sustainable procurement initiatives. This included GMHSCP making a number of "green pledges" to the GMCA and the publication of the GMCA Five Year Environmental Plan. 2019 was an important year and had seen massive progress as outlined below.

1. A GMHSCP Sustainable Development Leadership Group was created in April 2019. This brought together senior stakeholders not only from procurement but from key stakeholder groups such as Estates and Energy.
2. In August 2019, GMHSCP Declared a Climate Emergency covering all areas of GM NHS that helped increase awareness and gave a clear remit for action.
3. A Sustainability Lead and SRO was identified for each GM NHS Organisation with regular meetings and working groups in place.
4. Speciality groups were created to look at waste, fleet, estates, energy, logistics, theatre gases, inhalers and clinical procurement.
5. All GM NHS Organisations aiming to have a Sustainable Development Management Plan (SDMP) by April 2020.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/GMHSCP-Logo.png

Economic, Health and Carbon Benefits

As part of the GM procurement programme the project was asked to develop a comprehensive plan to look at carbon and consumption reductions via procurement and the supply chain. With around 60% of emissions from the supply chain there is a massive role for procurement teams.

Key areas for the programme included reducing carbon emissions by looking at centralised logistics energy procurement and use of inhalers (that account for 4% of NHS emissions).

There are also specific workstreams for reducing use of plastics and improved recycling/reuse. These include changes to disposable catering equipment, increased use of paper pulp products and remanufacturing of single-use equipment.

Current analysis shows that local spend in GM is around 38% against a central government target of 33% with GM spend with SMEs at 34% via NHS Supply Chain.

Individual Studies:

- **Cutlery Switch Completing:** Usage for Straws and stirrers is around 800k pa and Cutlery around 2 million items pa. This change will mean 600 kg of plastics avoided.
- **Gloves Reduction Programme:** Currently 140m+ used in GM costing £3.8m generating 600 tonnes of clinical waste. Work is underway to reduce only reduce waste and save money but to reduce occupational health issues from clinical staff due to skin issues.
- **Centralised Logistics:** This will see a reduction of 200,000+ vehicle movements (57%) resulting in reduction of 289 Tonnes CO2 and 1.2 Tonnes NOx.
- **Remanufacturing of Single-Use Equipment:** Pilots are underway to remanufacture Harmonics & EP Catheters from hospital sites.
- **Theatre Liquid Waste:** A pilot is underway to look at the business case to install theatre equipment to remove liquid waste from the waste stream.
- **Laundry Cleaned Surgical Gowns:** A second GM trust has now moved from single use plastic gowns to a full laundry service. Along with the obvious environmental benefits, costs are also expected to reduce by at least 20%.
- **Recycling Surgical Steel Instruments**
- **Plastics Review**

Partners

Greater Manchester Trusts Including:

1. Bolton Hospital NHS Foundation Trust
2. Manchester University NHS Foundation Trust
3. Pennine Acute Hospitals NHS Trust
4. Salford Royal NHS Foundation Trust
5. Stockport NHS Foundation Trust
6. Tameside Hospital NHS Foundation Trust
7. Wrightington, Wigan and Leigh NHS Foundation Trust

Regional Partners including:

1. iNetwork
2. GM Combined Authority

National Partners including:

1. NHS Supply Chain
2. Crown Commercial Services
3. NHS SBS

Future plans

Real savings are being delivered as well as environmental benefits and will continue to be. The new 3-year funded plan will allow the Partnership to:

- Increase the roll out of current projects to more trusts and sites
- Look at new areas such as procurement of clinical waste services
- stablish working groups with key stakeholders to work with them on more sustainable procurement
- Turn sustainable procurement into a "business as usual" activity by embedding into tender and procurement processes
- Work in more depth with key suppliers to reduce carbon and plastic in the supply chain

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Clinical

King's College Hospital Foundation Trust

In January 2018, King's College Hospital (KCH) commenced on a new waste management contract with Bywaters. The arrangement, now Total Waste Management, also included the provision of a Waste Contract Manager, to provide full-time support and drive changes on site. Both KCH and Bywaters have been working hard to improve waste practices, deliver cost savings and protect the environment. The contract includes the Princess Royal Hospital, a busy 550 bed hospital with acute and primary specialities, Orpington Hospital with elective surgery and Bromley and Sydenham Renal units.

Improving Recycling

At the beginning of the contract in January 2018 the recycling rate was 16% (6.54 tonnes) with emptying of the 35-yard compactor taking place barely every fortnight. Two years on, the recycling rate has jumped to 52% (25.02 tonnes) just exceeding the Trust's aspirational targets. The Trust had set a target of 43% for the first half of 2019 followed by a target of 51% for the second half.

The way this has been achieved is by a mixture of engagement and operational changes; for example bin placement, stickering and posters have been updated on more than 45 wards. Also, over 402 members of staff have been trained in the last year. A vibrant Green Champions group has been setup, where a volunteer group of NHS staff and both clinical and non-clinical King's employees meet to discuss innovations and projects. Bywaters Green Gurus also attend these sessions to share ideas from other NHS sites within the company's portfolio.

Improving Offensive Waste Streaming and reducing infectious waste

As part of the cost savings and compliance goals of the contract, KCH have worked hard to improve the waste segregation and handling of the clinical waste streams.

The efforts have seen a 50% increase in levels of offensive waste and corresponding reduction in infectious waste. Over the course of a year, this equates to roughly 80 tonnes which has a financial saving of £2,000 pounds.

Environmental performance will be improved through the introduction of an energy from waste disposal method for this offensive waste which is another innovation in the clinical waste sector.

Improving Food Waste Streaming

Bywaters have also implemented food waste recycling into the Princess Royal University Hospital (PRUH) retail units which previously did not have any in place. Now a monthly tonnage of approximately 2 tonnes is captured and sent for anaerobic digestion (AD) at BioCollectors site. The by-products are used for energy production which powers the AD facility entirely while also exporting a significant quantity of gas back into the grid.

Removing Wiva Bins

In order to reduce the amount of plastic waste generated at Kings, the Trust worked to remove all Wiva bins from ward level at Orpington, instead replacing them with cardboard, medical grade alternatives.

Economic, Health and Carbon Benefits

In order to achieve objectives through the project, Bywaters and King's track all data to ensure constant improvements are being made across the board.

Streamlining Waste Collections

Throughout 2019, the Trust started to monitor the status of the onsite general waste (GW) compactor, and to ensure that it was only collected when full. The GW compactor has reduced from 5 collections every fortnight - equating to 240 vehicle movements per year - to 1 a week, which is only 52 vehicle movements per year. This reduced vehicle movements and congestion from London's busy roads.

Introduction of crisp packet and coffee pod recycling

Receptacles for capturing these waste streams were placed in the busy staff recreation areas and rest lounges at site. At PRUH and Orpington, this has in part helped raise £21,000 for Kent and Sussex air ambulance.

Partners

King's College Hospital PRUH and Southside sites

Although these changes have been made, without the necessary buy-in and steer from the King's Estates and Facilities Team, none of this would have been possible. The Trust clinical teams have too shown drive and determination for adapting to the changes.

Bywaters

Bywaters has worked with King's to deliver a NPAG monthly audit programme and provide ward by ward training and infrastructure upgrades to improve waste segregation and handling onsite. Using their onsite waste contract manager has been instrumental in providing cost savings and advice to the staff, even being shortlisted as one of the exceptional individuals of 2019 in the hospital.

Bywaters' Waste Contract Manager's efforts have seen 402 Kings staff members trained in clinical and domestic waste practices to ensure everyone is pulling in the same direction. This training covered NHS staff, kitchen staff and porters, and has resulted in zero contaminations reported in January 2020.

ISS

ISS is the facilities management and portering services provider at King's. On a weekly basis Bywaters and ISS have a meeting to discuss the operations of the hospital and allow the smooth running between the two parties, ensuring the waste is collected safely and on time, and where the inevitable service disruptions due to traffic or equipment difficulties occur, that alternative plans are implemented to minimize disruption.

Future Plans

King's have highlighted three key ambitions to keep making improvements:

Removing all plastic milk bottles

With regards to the NHS plastic initiative, King's and Bywaters are committed to waste reduction. This will be achieved by introducing glass recycling on site by summer 2020 and to be rolled out to ward level. By introducing glass recycling, plastic milk bottles can be a thing of the past and milk can be delivered in re-useable glass bottles.

Re-use of office and medical equipment

At King's, Bywaters are looking to introduce a re-use scheme which will allow crutches and walker frames to be collected by the supplier and re-used in other trusts after a stringent refurb programme has been undertaken.

Also, the plan by summer 2020 is to introduce an innovative app called Reyooz. This allows for partner charities to desks, chairs and other office furniture that still has life in it and would've potentially gone to bulk waste disposal.

Other Staff engagement

King's will take part in NHS Sustainability Day, putting up a stand in Orpington and PRUH with eye catching information on initiatives on site and sustainability themed freebies (e.g. reusable drinking bottles) to give away. Also, on a monthly basis a section of the Trust's electronic bulletin is used to keep all Kings staff up to date with the ongoing projects, their details and successes.

Newcastle upon Tyne Hospitals NHS Foundation Trust

The Newcastle upon Tyne Hospitals NHS Foundation Trust embarked on a KidzMed project: teaching children to swallow tablet medication. This was a quality improvement project to teach children and young people (CYP) on long-term medication how to take tablet medication.

Tablet medications are safer, more convenient and considerably cheaper than liquid. Family and staff feedback highlighted families' frustrations with liquid medicines. They often have short expiry dates, need refrigeration, are difficult to obtain from local pharmacies, can cause dental decay and many are unpalatable. In addition, many are unlicensed and costly (e.g. Nitrofurantoin antibiotics cost £9 tablets vs. £447 liquid per month). Liquid medications are difficult to dose and can vary in concentration. Dose errors are common, particularly in families with low health literacy and limited English proficiency.

Producing pharmaceuticals make up the greatest proportion of CO^2 emission in healthcare systems and in their production releases more respiratory inorganics, respiratory organics and ozone layer depleting CFC-11 than any other sectors in healthcare.

Environmentally, liquid medicines add an extra layer of production emissions, the need to transport bottles of much heavier liquids, and have increased waste due to short expiry duration.

In 1987, HIV medication was only available in tablet form so clinicians had no choice but to teach children from 4 years how to swallow tablets. Yet when the Trust surveyed nurses and parents of children in their hospital, they found they remained on liquid due to habit, reluctance and staff not knowing how to convert. The Trust therefore set up a system to teach children how to swallow tablet medicines.

Starting in November 2018, working with families and teams, an interactive training package with training video was created (http://northernpaediatrics.com/kidzmed/) and comic poster. Using positive reinforcement and play, the trainer sat facing the learner with sweets or dummy capsules filled with sweets of increasing sizes.

Starting with one small team over 12 weeks (January to March 2019), the Trust embedded a process for children ≥5 years attending complex children's kidney clinics to be converted from liquid to tablet medication unless contraindicated (e.g. swallowing or cognitive impairment). Outcome measures included successful conversion rate, patient and staff feedback and cost savings.

The Trust overcame practical barriers by placing easily accessible 'switching kits' in clinic filled with the necessary dummy pills, awards and certificates. To increase confidence, they created a sealed dosette box with common medications so children could see the size of tablets they needed to swallow. Working with the clinical team the Trust standardised processes (e.g. how to round doses, pre-screening clinic lists and creating prompts).

Economic, Health and Carbon Impact Benefits

Conversations were had with families coming to clinic from across our region, some travelling upwards of 3 hours for the clinic. All families expressed dissatisfaction with obtaining medication for children, especially liquid. Many liquid medications were only obtainable from the children's hospital and these trips for collection were laborious. For some patient groups e.g. children with kidney transplants, 82% of medications found were being dispensed by the children's hospital, even though shared care guidelines had been co-produced with primary care. Conversations were had with stakeholders from primary care, CCGs, NHS North, community pharmacists and specialist commissioners, who all voiced difficulties with liquid medication.

Over 12 weeks, the aim was to embed a process for children ≥5 years attending complex renal clinics to be converted from liquid to tablet medication unless contraindicated (e.g. swallowing or cognitive impairment). Outcome measures included successful conversion rate, patient and staff feedback and cost savings. Savings were compiled from pharmacy computer systems, comparing cost of each CYP remaining on liquid medication compared with tablets for one year.

Over three months, 90 CYP were seen in 13 multi-disciplinary renal clinics and 25 were suitable for conversion to tablet medication. 21 CYP (median age 8.4 years range 5.1 to 15.5) were successfully converted (only one patient required two sessions). 36 medicines were switched, generating £46 588 per year recurrent savings. Feedback was good. Staff liked the opportunity for positive interaction with children and families appreciated the ease of obtaining tablet medications versus liquids.

The Trust have subsequently spread the idea and trained >200 multi-disciplinary staff. All 12 wards and outpatients in the children's hospital now have trained staff and are converting children. This year regional medical, nursing and pharmacy schools have embedded tablet switching in their curriculum, so new graduates will be equipped with this key paediatric skill. This project has been presented nationally, plenary in RCPCH conference, and published in Archives of Disease and Child Health, the medical journal for all UK paediatricians.

The carbon impact of this project has not been calculated, however given that:

- Many liquid medications are only obtainable from the children's hospital and some families make a 3 hour trip to the clinic to obtain it
- Liquid medications are heavier and bulkier, meaning they take more fuel to transport
- Liquid medications are provided in bottles which are more carbon intensive to produce
- Liquid medications require refrigeration and have a shorter expiry date…

the Trust are confident there will be a significant impact on carbon and sustainability from this project.

Partners

Holding conversations with families was key to this project. This quality improvement project was only successful because of multidisciplinary teamwork focusing on the benefits to the family and child / young person. From the start, the idea came from speaking to families who came to clinic and learning what the barriers were. The QI project relied on the children telling us what worked and did not work during training.

Working with pharmacists, prescribers and clinic nurse the Trust standardised processes (e.g. how to round doses to the nearest tablet or half tablet, pre-screening clinic lists to select eligible children and writing prompts in clinic letters) and collected data.

Future Plans

There is massive scope for spreading to GPs, community and school nurses and health visitors. Through training sessions, the Trust discovered many adults have never learnt to swallowing tablets and having ready access to health professionals, who can teach them in ten minutes, can be transformative to their health.

Educationally, it has been delivered to Paediatric Speciality Trainee training Day and at North East Paediatric Pharmacist Training Day and the Trust are co-producing e-learning packages to embed into medical and nursing student curriculum in North East universities. The project has been published in Archives of Disease and Child Health, the medical journal for all UK paediatricians as well as the Academic Health Science Network Atlas of Solutions in Healthcare.

Royal Marsden NHS Foundation Trust

Royal Marsden NHS Foundation Trust has identified that within the hospital environment, volatile anaesthetic gases are one of the greatest contributors to greenhouse gas (GHG) emissions - 5% of the NHS carbon footprint (1). The commonest volatile agents used for maintenance of general anaesthesia are chlorofluorocarbons including sevoflurane and desflurane; these have a much higher global warming potential (GWP) than carbon dioxide. This is equivalent to driving a car 18 (sevoflurane) to 350 (desflurane) miles per hour of anaesthetic use.

The Department of Anaesthesia at The Royal Marsden (RMH) NHS Foundation Trust have pioneered the routine use of Total Intravenous Anaesthesia (TIVA) for provision of general anaesthesia in lieu of volatile anaesthesia. This initially began almost 10 years ago following a fire at RMH, when a conscientious decision was made to purchase specialised pumps for delivering intravenous anaesthesia and providing clinical anaesthetists with a choice of volatile versus intravenous delivery systems. The impetus for this was multifactorial. RMH is a specialist oncology centre and many patients have endured significant treatment-related toxicities. Volatile anaesthesia has been shown to be pro-emetic and there may be some association between volatile anaesthetics and tumorigenesis. Intravenous anaesthesia with propofol and a short-acting opiate are alternative means of delivering anaesthesia which is anti-emetic and avoids the GHG emissions of chlorofluorocarbons.

In 2019, RMH initiated Project Green, a trust-wide endeavour with a number of sustainability targets including working towards net zero carbon targets. All members of the anaesthetic department actively engaged a number of measures:

- Provision of TIVA pumps in every theatre across as in remote anaesthesia clinical areas such as endoscopy and interventional radiology
- Removal of all desflurane vaporisers
- Active engagement by anaesthetists and operating department practitioners. From Jan 1st 2019 to Dec 31st 2019 of the 4,705 general anaesthesia cases recorded on the electronic system, 4286 (91.1%) were delivered with TIVA, 412 (8.8%) were delivered with volatile and 7 (0.1%) were a mix of both. The majority of volatile cases were related to paediatric vascular access and some short cases, less than 30 minutes in adults
- Engagement with an external environmental company who toured our anaesthetic department and developed a case study based on our use of TIVA over volatile anaesthesia (figure 1).
- Awareness campaign with consultant delivered departmental presentation on sustainability within anaesthesia

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/ETL-Case-Study.png

Whilst RMH has been using TIVA for several years, in the past year particular emphasis has been given to its environmental profile. Life cycle analysis of propofol TIVA has shown that its GHG emissions are 4 orders of magnitude less than with desflurane.

References:

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Economic, Health and Carbon Benefits

The economic impacts of this study are primarily seen in the complete removal of desflurane and its vaporisers from the anaesthetic department.

Desflurane is a more expensive anaesthetic gas with a cost of £90.50 per 240ml bottle compared to sevoflurane which costs £67.20 per 250ml bottle. Desflurane vaporisers must also be heated, so there is an electrical cost to their use. Total spend on volatile anaesthesia from Jan 1st to Dec 31st 2019 was £766.73.

An economic analysis of cost effectiveness of TIVA versus volatile was not performed as the goal was carbon reduction rather than financial savings. However, there have been some studies in the literature showing a cost benefit with propofol and remifentanyl TIVA compared to volatile anaesthesia (1).

From a health perspective, there has been a plethora of evidence suggesting that intrinsic properties of anaesthetic agents can influence cancer outcomes and metastatic potential. There is converging evidence from in vitro and in vivo studies that inhalational anaesthesia may be pro-inflammatory and exacerbate perioperative immunosuppression (2), whereas intravenous anaesthesia with propofol is anti-inflammatory (3). Inhalational anaesthesia continues to be used in up to 90% of UK hospitals due to its ease of use and haemodynamic stability (4). Proponents of intravenous anaesthesia commonly cite a more favourable recovery profile including smoother emergence and decreased incidence of post-operative nausea and vomiting, however it's anti-inflammatory properties are rarely mentioned. Despite this, there are indications that propofol preserves cell-mediated immunity, and inhibits cancer cell migration and invasion (5).

With respect to carbon, halogenated anaesthetic gases are minimally metabolised and ultimately all gases in the anaesthetic circuit in theatre are released back into the atmosphere. More so, desflurane is much worse than sevoflurane. Desflurane is 20 times more powerful than sevoflurane at trapping heat in the earth's atmosphere and it remains in the atmosphere for up to 14 years compared to 1 year for sevoflurane (6).

RMH used a CO^2e calculator (7) to quantify carbon equivalence from Jan 1st to Dec 31st 2019. CO^2e in tonnes from the volatile anaesthetic agents was 11 tonnes with each volatile agent contributing equally (figure 2 &3). This is significant as 5% of the CO^2e from acute NHS Trusts arises from anaesthetic gases with some sites producing up to 200 tonnes of CO^2e per annum.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/CO2e-calculation.png

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3) Melamed R, Bar-Yosef S, Shakhar G, Shakhar K, Ben-Eliyahu S. Suppression of natural killer cell activity and promotion of tumor metastasis by ketamine, thiopental, and halothane, but not by propofol: mediating mechanisms and prophylactic measures. Anesth Analg. 2003 Nov;97(5):1331-9.

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5) Mammoto, Tadanori, Mukai, Mutsuko, Mammoto, Akiko, Yamanaka, Yasutsugu, Hayashi, Yukio, Mashimo, Takashi et al. (2002). Intravenous anesthetic, propofol inhibits invasion of cancer cells. Cancer Letters, 184(2), 165-170.

6) Foden-Vencil K. Effects of surgery on a warming planet: Can anesthesia go green? Oregon Public Broadcasting. 2019 May.

7) www.sduhealth.org.uk/.../_carbon_hotspot_anaesthetic_gases_feb 2014.

Royal Marsden NHS Foundation Trust

Partners

Project Green as a Trust-wide project has been hugely supported by the Trust Leadership and Management team, particularly the Chief Operating Officer and Head of Facilities within the Department of Anaesthesia and Perioperative Medicine it has been led by the Consultant Anaesthetist Project Green Lead with support from the Head of Department and working in close conjunction with the Consultant Anaesthetist leading Total Intravenous Anaesthsia (TIVA). The project has also been supported by ETL, external environmental consultants who were an integral part of developing the Trust Sustainable Development Management Plan.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/CO2e-pie-chart-1.png

Future Plans

Having completely avoided volatile anaesthesia in 91% of cases for 2019 and removed the use of desflurane from the department, the Trust plan to continue this project with a number of targets:

- Minimise environmental impact of TIVA through sustainable procurement
- Raise awareness of the environmental impact of volatile anaesthetic agents
- Develop standard operating procedure guidelines (SOP) guidelines for the appropriate use of the anaesthetic gas scavenging system (AGSS)
- Remove all single-use plastic from the theatre department

Overall, *Project Green* will continue throughout the Trust but within anaesthesia, ongoing projects are to minimise anaesthetic carbon footprint and, going forward, to remove all single-use plastic and develop a metal recycle scheme in theatres. 2019 was an exciting year in unifying the workforce with a common goal of providing sustainable healthcare and the Trust look forward to maintaining this momentum.

The Royal Wolverhampton NHS Trust

An innovative product has been evaluated at the Royal Wolverhampton NHS Trust that has led to improvements in patient safety, patient experience, and environmental sustainability. Purewick™ is an external female catheter (EFC) for patients who present with incontinence. The product negates the requirement for either inserting an indwelling urinary catheter, or use of multiple, regular continence products (shaped pads), skin protectants and linen changes. As a result, the product reduces the risk of catheter associated urinary tract infections (CAUTIs) and accompanying antibiotic prescriptions, and there is no requirement for continence products.

Purewick™ uses continuous low-pressure suction to wick urine away from the patient's skin. This process helps to keep the patient dry and is an effective alternative to continence products. It provides an accurate way of measuring fluid balance that would otherwise be a challenge in incontinent ladies.

It offers a more sustainable option for managing continence than the shaped pads as it significantly reduces the weight of the waste generated that would otherwise be incinerated.

Economic, Health and Carbon Benefits

According to the Sustainable Delivery Unit (2017), catheters, catheter bags, pulp urinals, gloves, aprons and continence products are in the top 20 greenhouse gas emitting products. Inserting a catheter, or managing a patient with continence products requires the use of 6 of the top 20 products.

Purewick™ negates the need for using the catheter, the catheter bag, the pulp urinal or continence products and wash bowls. Continence products in use in the Trust are made from virgin pulp as this increases the quality and absorbency. Since virgin fibres are created from trees, it is important to minimise and reduce unnecessary use. The use of the Purewick™ device will significantly reduce the use of these paper and plastic based products.

Using the BD assessment tool to predict the impact of the device when fully implemented at the Trust, it is estimated that 7,542 catheters can be avoided or removed early and around 13,750 patients could benefit from using the product rather than using body worn continence products. The device can offer huge benefits to patient care, environmental sustainability and reductions in waste and antibiotic use.

The table in the PDF attachment (on the final page) shows the weight of each item used for both continence care using the pads, and if using Purewick™. This can save at least 692g of waste per patient per day.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/NHSSUSDAYAWARDSFINALCNRWT.pdf

If used on 13,750 patients, this equates to over 9,515kg of clinical waste saved. If patients are using the products for 3-5 days while in hospital, this saves 28,545 – 47,575kg per annum.

Partners

The Clinical Evaluation was fully supported by the BD/BARD Team and took place on Ward A6 Orthopaedics. Ward Manager Divine Cooper was the lead for evaluation which ran for three weeks.

Training was provided for all staff and this included the staff on night duty -26 staff trained. Purewick™ was placed by Staff Nurses and Health care assistants.

During training, all staff were advised to document the placing of the Purewick™ and also when it was changed. Divine advised the use of the Fluid Balance charts for this.

Purewick™ was used on 4 patients early on during the evaluations, and staff were encouraged to complete the feedback forms if they were involved with changing and replacing the Purewick™ and had cared for patients with the device in situ during their shift.

14 Evaluation Feedback forms where completed. Overall consensus was that Purewick™ provides a solution for CAUTI reduction and an effective alternative to pad use for female patients as well as being well received by all patients that had the device. The patients themselves were recommending it to other patients in their ward!

Staff comments included:

- Significantly less waste and excess packaging created by the device
- Improvement in patient experience and comfort
- Reduction of pain for Fractured Neck of Femur patients
- Less time taken when changing wet pads and beds-time released
- Patients were happy to drink more fluids as they were not fearful of pain

Future plans

A plan is in place to develop a clear standard operating procedure to ensure the device is used for the right cohort of patients, to reach its true potential for reducing waste. Training plans have been put in place to enable an additional ward to access the product, and this will be expanded to the rest of the Trust.

Travel

The Christie NHS Foundation Trust

The Christie NHS Foundation Trust aims to be a leading NHS organisation in tackling air pollution, reduce its effect on road traffic-related pollution and reduce its carbon footprint. The ultimate intention is for the Trust to have a significant positive impact on the local environment and within Greater Manchester.

The Trust has a detailed Green Travel Plan with the ambitious target of 60% of staff using sustainable travel by 2030. An increase in staff traveling sustainably will reduce carbon footprint and traffic coming into Manchester. As part of the development of the Green Travel Plan (2014-2030) it was identified that circa 50% of staff lived within 5 miles of the Trust. This highlighted the fact that active travel had a potential to contribute to the initial push towards the 60% modal shift target.

Walking Then and Now

Initially the Trust held ad-hoc seasonal walks were attendance was low. In August 2017 the Trust participated in a 'Walking for Health' programme, a 12-week programme of short walks which included walk leader training.

In October 2017 'Walking Wednesday' was launched to provide weekly 30-minute walks. The walks are led by five Ramblers-accredited walk leaders. 'Walking Wednesday' often attracts around twenty staff.

Cycling Then and Now

In 2014 the Trust formed a Bicycle User Group to engage with staff that cycled to work and those that were considering switching to cycling. The initial purpose of the group was to identify any barriers individuals found with cycling. Feedback was that there was limited support for cycling and a lack of engagement.

The following barriers where identified:

- Limited secure cycle parking
- Limited and poorly maintained changing facilities
- Safer cycle lanes
- Information on alternative travel
- Lack of staff engagement with cyclists
- No cycling training in place

Upon reviewing the identified barriers an internal audit of facilities was conducted in partnership with Transport for Greater Manchester.

The Trust acknowledged the feedback and set about overseeing an overhaul of the cycling provisions and engagement. An initial budget of £245k was released for cycling facilities and a further £100k followed in 2017 to fund sustainable travel.

The funding released has helped develop a comprehensive cycling package including:

- Free training
- Secure cycle spaces (176)
- Short stay spaces (149)
- Changing facilities (including hair dryers, mirrors and seating)
- Bicycle maintenance points (3)
- Bicycle User Group Mailing List
- Bicycle Partnership with local supplier
- Staff engagement events

This investment and commitment to cycling and walking resulted in the Christie being recognised by Transport for Greater Manchester as the organisation in Greater Manchester demonstrating the strongest commitment to active travel. This has been reflected internally with positive feedback from staff on the Trust's full range of active travel infrastructure and incentives.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Picture1.png

Economic, Health and Carbon Benefits

Removing single occupancy cars from roads, with a preference to sustainable travel, is environmentally and socially sound, economically beneficial to all stakeholders.

The Trust is now in a position where 21% of staff members are commuting via active travel (14% walk, 7% cycle). These staff members now benefit from a more active lifestyle. In addition, the change to walking or cycling reduces exposure to poor air quality. However, ultimately the population as a whole are benefiting considerable from reduced congestion and improved air quality.

Incentives are in place to encourage staff to cycle to work by supporting them in obtaining a new bike through a salary sacrifice scheme that allows them to save 25-39% tax. The financial benefits to the Trust include reducing demand for car parking spaces and through staff living more active lifestyles may see improvement in health and therefore reduce sickness.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Picture2.png

Partners

The Trust regularly engages with all relevant supply chain, contractors and local partners and stakeholders, including Manchester City Council and 12 ward councillors. The University of Manchester operates services from the main site and is a contributing stakeholder.

Furthermore, the Sustainability Manager is an active member of Transport for Greater Manchester's Sustainable Journeys Team network, NPAG - NHS Car Parking & Travel Planning and NPAG –Sustainable Leadership network. As part of these networks, the Sustainability Manager works with experts in the field of sustainable transport to:

- Provide subject matter expertise, best practice and advice
- Provide a channel for information exchange between member organisations
- Attends and is an active participant of steering groups and workshops
- Identifies opportunities to contribute, add value and influence in a positive way, initiatives to support sustainable travel at the Trust

Through Transport for Greater Manchester's Sustainable Journeys Team, the Trust's work on active travel, received recognition with the Travel Choices Active Travel Award for excellence in promoting cycling and walking (2018). This acknowledged the organisation in Greater Manchester, demonstrating the strongest commitment to active travel.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Picture3-1.jpg

Future Plans

The new NHS Sustainable Development Assessment Tool is now being used as the latest driver to progress sustainability. The sustainability committee is turning the tool kit's detailed requirements into individual actions to allow for target setting, identification of responsibilities, communication and monitoring. With regard to active travel, the Trust will embark on supporting a further shift towards walking and cycling.

Bee Networks will going forward support the Trust in developing a stronger walking and cycling culture; with the benefits of a new network of cycling and walking routes, which ultimately could cross the Trust North, East, South and West and join up with the existing routes.

The Trust, to support a shift towards cycling, operates a 'bike to work scheme' where *Cyclescheme* are the Trust approved partners. Employees can currently buy a bike through the scheme up to a value of £1,000. In line with new guidance the cap has been increased to £6,000 to provide staff with greater opportunity to use a bike to commute. Details of the products that will now be available are detailed below:

1. Electric Pedal Assisted Bikes
2. Cargo Bikes - specially designed to carry children
3. Inclusive cycles

The Trust Sustainability Manager will continue to sit on the Greater Manchester (GM) Walking Voice Steering Group. The group has been set up in response to several key strategies and plans which all aim to increase walking in Greater Manchester. This includes *Made to Move* (2017) and *GM Moving* (2017-21). The Trust recognises that these strategies are opportunities for significant promotion of walking to improve health and wellbeing, reduce traffic congestion, make the environment more attractive and conducive to walking, make journeys safer and easier and improve air quality.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Picture4-1.jpg

Northumbria Healthcare NHS Foundation Trust

The Northumbria Healthcare NHS Foundation Trust has been focusing on a EV charging points infrastructure development. The Trust has currently got 25 dual charging points trust-wide and 1 single point. (7kwh Charger with Load Balancing option). 2 Rapid Charging points (Hexham & Wansbeck owned by Northumberland County Council installed in the Trust Car Parks)

In 2015, Northumbria Healthcare were the only NHS Trust who introduced 13 electric vans replacing the diesel ones and took the prize for Sustainable Achievement for the introduction of a fleet of electric cars and vans within estates and facilities

In 2019, Northumbria Healthcare renewed all the 13 vans to newer EV vans and 2 more from computer services added to the list. They also have installed dedicated rapid charging points in the trust for internal vans and most of journeys are covered by electric vans with zero emissions.

The Trust travel plan coordinator was awarded EV Champion by Green Fleet in the year 2018 for the work that was carried out in the trust on greener transport projects. (**https://greenfleetawards.co.uk/categories/greenfleet-ev-champions**)

The Green Fleet 100 Most Influential list is made up of individuals for central and local government, industry associations, fleet managers, charities, car manufacturers, and businesses that supply the sector. (**https://gf100.greenfleet.net/list?page=9**) The Trust Travel Plan coordinator was identified in the top 100 most influential list filtered by Green Fleet.

From April 2019-2020 there were 50261 charging sessions carried out by staff, patients and general public. The Trust introduced Husbta software to monitor the usage of charging points and generate reports via the Hubsta Backoffice software. The total kwh energy used -126290.8 kwh.

The electric cars have helped the Trust in the reduction of carbon. Northumbria's wholly owned subsidiary is NHS Fleet Solutions. They are heavily promoting the lease of pure electric cars for staff and the uptake has increased tremendously. Northumbria Healthcare are expecting more electric cars from the 1st April 2020 due to new 0% tax benefit for EV Cars.

Economic, Health and Carbon Benefits

The government statement clearly indicates that there will not be any fossil fuel cars from 2035. Staff are slowly getting rid of their old cars and getting a newer version of cars with reduced emissions. Due to introduction of electric cars and the improved EV infrastructure, the Trust has already encouraged many staff to move to electric cars which has helped to save carbon emissions.

The internal courier van project has reduced huge amounts of carbon for the Trust after the introduction of E- NV 200- Nissan Vans.

Clean air quality is very important and directly proportional to health benefits and impact on carbon emissions.

Partners

1. Local authority
2. Top management buy-in
3. Green Fleet
4. Local EV Supplier (*Elmtronics*) - their knowledge and expertise in this field has helped the Trust achieve success
5. Estates and Facilities Managers
6. Energy Manager within the Trust

Future plans

The Trust board has approved the installation of an additional 24 charging points across North Tyneside General Hospital, Wansbeck General Hospital and Northumbria Emergency Hospital- Cramlington. Work is expected to be completed by 31/03/2020. The total number of charging points after the completion of additional charging points will go to 79.

Due to the nature of the newer cars, the Trust has decided to install 12 Fast Chargers - 24kwh on 3 sites, plus 12 7kw without load balancing. This will help the EV users to charge their cars quicker and move cars for the next EV user.

Also Hubsta back office software will help determine the usage, duration of the vehicle charging and provide a monthly report for analysis.

Sandwell and West Birmingham NHS Trust

Sandwell and West Birmingham NHS Trust have been awarded a 'Top Cycle Location Gold Standard', 'Top Walking Location Gold Standard' and 'Platinum Top Active Travel Location' by the West Midlands Combined Authority for the work the Trust has done to encourage and support the move towards more sustainable and active modes of travel.

To incentivise walking, the Trust have established lunchtime walks which are widely promoted. A 'Get Active, Eat Free' scheme has been launched in collaboration with the Health and Wellbeing department, aiming to get staff cycling and/or walking. This scheme encourages staff to participate in at least five lunchtime walks or cycle five return trips to work, in return for a free healthy lunch.

The Trust have installed a number of cycle 'lockers/pods' so that cyclists can store their bikes and equipment securely. They have also built a new bike shed at Sandwell Hospital, repaired the existing cycle shed at City Hospital, installed equipment lockers, added lane markings for cyclists to safely access sites and added signage for cycle parking. The Trust also runs a successful Cycle to Work Scheme which is very popular amongst staff.

To enable all staff, patients and visitors to travel to site using low emission vehicles, the Trust have installed six 7KW electric vehicle charge points across three sites. This is helping reduce their carbon footprint and also lowering air pollution levels. They have also launched a car sharing app to support staff connecting and sharing journeys.

Alongside this, the Trust also offers:

- Free bike checks for staff
- Free pool bikes for staff to hire
- Cycling group
- Bike maintenance / safety courses
- Trust annual charity bike ride
- Cycle proficiency training
- Bike leader courses
- Bus travel discounts
- Personal route plans

Economic, Health and Carbon Benefits

In the most Trust-wide annual travel survey (2017), at City Hospital, the Trust saw a further decrease in the amount of staff single occupancy driving to site from the previous year. Since 2013, at City Hospital, single occupancy driving to site has reduced by 6%. At Sandwell Hospital, single occupancy driving to site has also reduced – a total of 7% since 2013.

Enquiries from staff wishing to cycle into work are on the increase and the Trust's Cycling Discussion Group allows staff to feedback ideas for improvements. The lunchtime walks are also growing in popularity, many staff joining these or opting to walk independently.

Our Sustainability Officer has also set up (and chairs) the 'NHS Sustainable Travel Forum', where members of Midlands based NHS Trusts connect to collaborate on ways to encourage and support stakeholders in opting for active and sustainable modes of travel. The aim is that work allows colleagues to work together to reduce the carbon and health impacts of pollution by working to facilitate more active and sustainable modes of travel.

Partners

The Trust works with Halfords to promote and encourage cycling to/from work. The Trust offers staff regular purchasing windows so access to lower priced bikes and cycling equipment is easily accessible.

Alongside a number of projects, the Trust have set up an 'NHS Sustainable Travel Forum' with the West Midlands Combined Authority to gather local NHS colleagues that manage sustainable travel within their Trust. The aim of this Forum is to share best practice, generate ideas and collaborate to work towards making travel to NHS sites more sustainable. The hope is that this pioneering Forum will provide a good foundation for collaboration between NHS Trusts on sustainable travel.

The Trust work closely with the West Midlands Combined Authority, keeping abreast of local and regional travel updates and sustainable travel initiatives to ensure we are aligned and supporting this. Recently, the Trust has been working with officers, councillors and the local authorities from Birmingham and Sandwell to help address and mitigate air pollution in Birmingham and the surrounding areas.

Future plans

The Trust has ambitions plans to reduce single occupancy driving to the site. To 'set these wheels in motion', the Trust are in the process of exploring implementing a formal car sharing system to support staff that wish to car share and providing adequate car sharing spaces. In addition, the Trust hope to continue growing their electric vehicle charging infrastructure in the short and long term.

The Trust is rolling out a 'Green Impact' staff engagement programme which includes actions around encouraging staff to opt for active and sustainable modes of travel, aligning this with healthy lifestyles. The NHS Sustainable Travel Forum is running well and the Trust hope to continue leading this.

When the new Midland Metropolitan Hospital goes live, the objective is for a 5% modal shift from single occupancy car travel towards more sustainable modes (compared with the baseline survey undertaken in 2008), with 12 electric vehicle charging spaces, the provision for 50 dedicated car sharing bays and plentiful cycle parking facilities.

Supplier of the Year

SaveMoneyCutCarbon

Cambridge University Hospital's NHS Foundation Trust (Addenbrooke's) Hospital has been at the forefront of NHS initiatives to reduce both energy usage and carbon emissions. SaveMoneyCutCarbon (SMCC) has developed a strong working relationship with Addenbrooke's over the past four years and had already delivered 11 substantial LED lighting and lighting controls projects, with hundreds of LED lamps installed, as well as providing supply services for the hospital. Projects to date have already resulted in a plethora of energy and sustainability upgrades to reduce the hospital's carbon footprint.

SMCC successfully tendered, through the YPO framework, for NHS Improvement funding to supply and install LED lighting across the hospital. The project also met Salix Finance funding compliance, with a payback in less than 5 years (inclusive of VAT). The Salix process was undertaken by SMCC's Holden, Jenny and Richard. To meet the specific needs of the hospital, this project has been phased over a 12-month period. The large-scale seven phase project includes scope, survey, design, cost and supply and installation of mainly like-for-like fluorescent to LED replacements of around 7,000 luminaires in at least 18 buildings.

SMCC has deployed a dedicated in-house team from the outset to ensure consistency, standardisation and continuity at all times. This process has proven very successful. The process commences with SMCC's lighting surveyor, Mark, surveying all designated areas and working with the team of project analysts to specify the most appropriate and cost-effective LED lighting solutions that meet all NHS trust lighting regulations.

Project implementation plans for all phases have been undertaken by SMCC, led by Isobel, and discussed and communicated with all key stakeholders. It was agreed that this project necessitated out-of-hours installation (overnight and weekends). SMCC's installation team, led by Jamie, have therefore only worked in the evenings and overnight and Jamie has also maintained an ongoing direct relationship with the hospital's estates department and clinic managers to minimise the impact on operations.

An integral part of SMCC's project management process is the rigorous measurement and verification of cost and energy savings after project implementation. The purpose of the process is to provide a level of confidence that the energy savings required have been delivered and are as a direct consequence of the energy improvement measures implemented, which for this project is the upgrade and replacement of the existing lighting with LED systems. SMCC therefore provides the hospital with a level of comfort and reassurance to demonstrate how much energy the energy conservation measures (ECM) – LED lighting in this instance, has avoided using, rather than the total cost saved.

The M&V process enables the energy savings delivered to be isolated and fairly evaluated. To provide this confidence [SMCC] has implemented a programme of Monitoring and Verification (M&V), in line with the requirements of the International Performance Measurement and Verification Protocol (IPMVP) Option A. This option is applicable to Retrofit Projects, where there is a reduction in the power consumption, but no planned change in the system operating hours as a direct consequence of the changes implemented.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Picture3.png

Economic, Health and Carbon Benefits

SMCC has utilised its direct manufacturer relationships with global lighting organisations to leverage the best prices for the hospital to maximise the value of their investment, without compromising on the quality of product.

There was an emphasis on the requirement for quality fittings and exceptional installation routines that would minimise ongoing maintenance costs. The reduction in consumption at Addenbrooke's has been measured through a rigorous Monitoring and Verification programme and a significant drop in electricity consumption after installing LED can be seen on the graph below.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/Picture1-1.png

Addenbrooke's expects auditable energy savings of 867MWh a year with annual £148,000 savings in electricity and maintenance and payback on investment of no more than 4.8 years. Total annual carbon reductions are also expected to be 305 tonnes of carbon dioxide equivalent (CO^2e).

Whilst this LED project has delivered significant energy and financial savings, it does also have many other additional benefits. LED lighting is closer to natural daylight and has a positive impact on the body's natural circadian rhythm aiding sleep patterns. Increasing the quality of light will improve productivity in the workplace for staff and the quality of light will allow tasks to be visually easier to complete. LED lighting has very minimal flicker and improves the environment for staff and patients that could otherwise suffer from headaches that can be avoided through the correct lighting choice.

All LED lights specified and installed have a Unified glare rating (UGR) of 19 or less. Glare can affect the way people work and their wellbeing, particularly now that computer screens and monitors are everywhere.

Reflected glare: In HSG 38: Lighting at Work, the Health and Safety Executive says it is important that lighting:

- Does not cause glare, reflected glare in polished surfaces or stroboscopic effects
- Allows people to notice hazards and assess risks
- Is suitable for the environment and for the type of work carried out
- Does not cause excessive difference in illuminance in an area or between areas
- Is suitably positioned for easy repair, maintenance and safe disposal
- Includes emergency lighting, where necessary

Many LED panels emit 50% more light than the 4 x 18W fluorescent units they typically replace. More light doesn't necessarily mean better lighting. For all offices it is therefore important to ensure that the UGR MUST be 19 or lower to meet the CIBSE anti-glare lighting regulations.

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Partners

From the outset, SMCC has worked collaboratively with Richard Hales (Energy & Sustainability Manager at Cambridge University Hospitals NHS Foundation Trust) and Kieran Lockey, Energy & Sustainability Engineer at Cambridge University Hospitals NHS Foundation Trust.

Below are three testimonials from the hospital:

"SMCC's attention to detail, close customer engagement (i.e. to all the staff in the areas being upgraded), quality and care, proactivity and use of initiative and, of course, commitment to environmental sustainability have been real partnership bonuses over a plain vanilla supply and install contract. These things make sustainability matter – taking projects well beyond kWh and carbon. This large-scale LED project provided big improvements in the quality of the hospital environment for clinical practice, patient experience, operational and administrative functionality." **- Richard Hales (Energy & Sustainability Manager at Cambridge University Hospitals NHS Foundation Trust).**

SaveMoneyCutCarbon

Future Plans

As a longstanding Carbon Trust-accredited LED supplier, SMCC knows that its solutions can contribute to a substantial reduction in energy and water costs and consumption. SMCC remain keen to continue to develop the outstanding relationship with Addenbrookes well beyond the existing project.

SMCC is keen to continue to provide its excellent level of service SMCC to the hospital and provide information, advice, guidance and support on all sustainability and carbon reduction initiatives. SMCC hopes to deliver more LED lighting and lighting controls project during the next few years that would all be eligible for and compliant with Salix Finance. SMCC has also commenced discussions with the hospital to encourage the hospital to consider wider energy, water and sustainability technologies. These include the existing washrooms with some of SMCC's water efficiency products such as the Propelair toilet that reduces each toilet flush to 1.5 litres resulting in the usage of approximately 80% of water as well as the wider hygiene benefits.

SMCC also want to engage in future healthcare-focused sustainable solutions for Addenbrooke's. For example, SMCC have introduced Addenbrooke's to innovative LED lighting suitable for dementia wards and care facilities. There are also continuous developments within the portfolio of circadian rhythm lighting that helps to mimic the daylight patterns, which studies are showing will aid in healing to improve sleep patterns and natural bodily routines.

Wider sustainability initiatives include hosting an energy educational conference for NHS trusts, presenting to internal stakeholders and delivering educational presentations to staff, and establishing a bespoke website portal for the hospital staff to provide a platform for sustainability initiatives as well as providing staff with access to discounted pricing on a wide range of energy and water technologies.

Food

Tameside and Glossop Integrated Care NHS Trust

Tameside and Glossop Integrated Care NHS Foundation Trust operates from the Tameside Hospital site and a number of community locations. They care for a population of approximately 250,000 people who live in one of the most deprived local authority areas in the country, with the highest rate of premature death from heart disease in England.

Within the last 12 months the Trust have created Save Planet Tameside and Glossop with the purpose of engaging with colleagues on the best ways to reduce their carbon footprint and make their work environment more sustainable. The vanguard of this campaign has been the way the Trust have revolutionised their food - from the way the Trust sources, prepares and cooks it, to the way they serve it.

Food is prepared and cooked on site and distributed at the appropriate temperature to the wards, either already plated or in bulk. The benefits of this system as opposed to a cook-chill system, are that the menus are developed working alongside the dieticians, dysphasia nurse and other healthcare professionals so to ensure all our patients are served freshly cooked food, with a good balance of all the required nutrients. Another benefit to cook-serve, is that containers used in the preparation of food, and indeed the meals, are served plated. There is a lot less impact on the environment, as cook-chill meals are delivered in throw-away tin foil trays/packaging, with one of the main distribution sites, being in North Wales - the distance of travel would be extremely excessive.

The restaurant and café provide takeaway meals, and in line with the Trust's Sustainable Development Management Plan, which seeks to develop a greener and healthier environment, the Trust have ceased to use any single-use plastics from August 2019, and therefore all food containers, utensils are fully recyclable. The Trust became the first hospital in the country to ban sugar from their menus and restaurant in an attempt to tackle growing concerns about obesity among our NHS staff.

The Trust followed this by ditching all single-use plastic - all knives, forks, spoons, and food packaging is now replaced with paper and wooden alternatives. The restaurant uses almost NINE tons of these items every year, which is the weight of 400 standard wheelchairs or 20 hospital beds.

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Economic, Health and Carbon Benefits

It is widely understood that patient meals are an integral part of treatment, hence the provision and consumption of a balanced diet are essential to aid recovery. As an organisation, the Trust carried out a full patient menu review in 2019, working alongside the dieticians and nutritional teams, to provide a two-week menu that offers multiple fresh and nutritional food choices for patients. The catering team are continuing to work with procurement in order to source the most sustainable produce.

Another initiative introduced in 2019, was that a number of the meal options served to patients are also on the restaurant menu, which has minimised production time and cut down on waste significantly.

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Partners

Through better management of provision costs, and work undertaken to source better value cheaper and local suppliers, the catering department has cut provisions cost substantially, which has allowed the service to be more sustainable, and allowed for the development of the retail element of the services, offering more nutritional, sugar free and healthy options. This has increased the footfall, whilst at the same time maintaining spend within budget.

As an NHS organisation, the Trust are supported by a procurement framework that allows a review of a number of different suppliers. This not only delivers cash releasing savings, but wider sustainability benefits through sustainable operations and sustainable procurement, specifically aiming to work with local suppliers who are actively focused on a sustainable approach to business. As a department, the Trust uses only local suppliers that have minimal travel distance to the sites.

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Future plans

The Trust's recently agreed five-year Sustainable Development Management Plan details their obligation to achieve an 80 per cent reduction in our carbon emissions by 2050 as set out in the UK's Climate Change Act (CCA). The document includes information of a recent analysis that food and catering make up 3.44 per cent of the NHS carbon footprint. Catering staff have ambitious plans to make the food supply chain completely local by the end of the year.

The Trust plan to work closely with the hospital's weekly farmers' market – which sells locally grown and sourced fruit, vegetables, cheese and breads – to devise cost-effective menus to share with staff and visitors. Finally, the Estates team are building a greenhouse out of single-use plastic bottles, in which cooks and volunteers intend to grow herbs and onions and garlic to further flavour the delicious meals.

https://nhssustainabilityawards.co.uk/wp-content/uploads/formidable/6/SPTG-Toolkit-V2-1.pdf

In Partnership