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INTRODUCTION

Building on the success of the three previous editions, HCWH Europe held its annual **European Healthcare Climate Summit** in October 2022. Supported by the Scottish Government and NHS Scotland, the summit brought together a wide variety of stakeholders to discuss what climate-smart healthcare looks like in practice. The summit featured tangible and replicable case studies from across Europe, giving healthcare providers the opportunity to learn and replicate in their own operations.

Over 230 people from across the global healthcare sector, including sustainability practitioners, hospital management, health professionals, and academics, joined the fourth edition of the conference on 13 October 2022. Attendees gained insight into the health impacts of climate change and the latest tools and resources available to support hospitals in delivering climate-smart healthcare. During the event, they also had the opportunity to connect with like-minded colleagues to collaborate on future decarbonisation projects.

AGENDA

02:00 PM
Thu 02:00 PM - 1 Session

OPENING SESSION
WHY CLIMATE-SMART HEALTHCARE?

🕐 13 Oct, 02:00 PM - 02:35 PM

CLIMATE-SMART HEA...

Why climate-smart healthcare?

Climate-smart Healthcare means hospitals reducing their emissions to net zero and adapting so that they are prepared and resilient to the growing health burdens an...

Watch Session

02:35 PM
Thu 02:35 PM - 3 Sessions

PARALLEL SESSION
THE PATH TO LOW-CARBON

🕐 13 Oct, 02:35 PM - 03:30 PM

CLIMATE-SMART HEALTHCARE

The path to low carbon

New to Climate-smart Healthcare and not sure how to get started? This session will support you to take...

PARALLEL SESSION
FROM LOW CARBON TO ZERO CARBON

🕐 13 Oct, 02:35 PM - 03:30 PM

CLIMATE-SMART HEALTHCARE

From low carbon to zero carbon

Have you already implemented the easy wins at your hospital? If you're looking to take that next step an...

PARALLEL SESSION
DRIVING CHANGE

🕐 13 Oct, 02:35 PM - 03:30 PM

CLIMATE-SMART HEALTHCARE

Driving change

To deliver climate-smart services, we cannot continue with the status quo when it comes to ...

04:25 PM
Thu 04:25 PM - 1 Session

CLOSING SESSION
ARRIVING AT NET ZERO

🕐 13 Oct, 04:25 PM - 05:00 PM

CLIMATE-SMART HEA...

Arriving at net zero

To advance net zero healthcare, hospitals and healthcare centres throughout Europe will also need support and direction from national and regional health authorities. ...

Watch Session

KEYNOTE SESSION
WHY CLIMATE-SMART HEALTHCARE?

Climate-smart healthcare describes a health system that is both zero carbon and climate resilient. To protect public health and our planet, we need climate-smart healthcare.

In the opening keynote, Scotland's National Clinical Director, Jason Leitch, shared his insights on Scotland's own journey towards climate-smart healthcare. He talked about the importance of net zero healthcare and how Scotland is leading the charge with a broad vision that involves all levels of healthcare in the fight against climate change.

Scotland

Part of a
52-country coalition
committed to
developing
low-carbon
health systems.

NHS Scotland
Climate Emergency &
Sustainability Strategy
2022-2026

Scottish Government
Riaghaltas na h-Alba
gov.scot

NHS
SCOTLAND
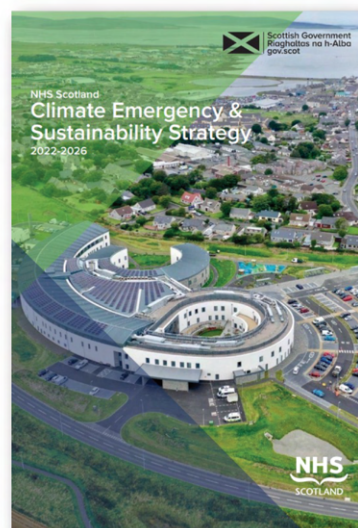
PARALLEL SESSION
THE PATH TO LOW CARBON

The first parallel session, moderated by Mireia Figueras Alsius, Climate Officer at HCWH Europe, showcased first-hand examples from those who have just taken the first steps in measuring their carbon footprint, setting targets, and building carbon management plans. Aimed at healthcare organisations that just getting started on their climate-smart healthcare journey, it introduced easy wins – projects that can be implemented to tackle direct emissions from transport and anaesthetic gases. During this session, attendees learnt more about developing a carbon management plan, making medical transport more sustainable, and reducing emissions by switching off ventilation systems.

HOW TO DEVELOP A CARBON MANAGEMENT PLAN

Michalis Zouloufos, joint CEO for the General Hospital of Syros and Naxos Islands, Greece, opened the session by presenting the measures being implemented at the General Hospital of Syros to achieve zero emissions.

Michalis presented the carbon management plan developed during the hospitals' involvement in the project ***Low-carbon healthcare in the Mediterranean region***. Through the project, the hospital found that its carbon footprint for 2019 was 2,000 tCO$_2$e, with scope 3 and waste management representing the primary sources of emissions.

To address these emissions, the hospital set up a carbon management team, collaborated with experts, and measured their electricity, water, and fossil fuel consumption. All this work culminated in the development of a carbon management plan, setting them on a trajectory to zero emissions by 2050.

Michalis finished his presentation by highlighting the importance of collaboration across the healthcare sector to find resources and solutions to implement sustainability plans.

E-AMBULANCES: HOW TO MAKE MEDICAL TRANSPORT MORE SUSTAINABLE

Cristina Enjamio, PhD, Telecommunications Engineer, working at the Healthcare Area of A Coruña (SERGAS), presented the lessons she learnt while implementing a project to trial electric ambulances at Ourense hospitals.

Cristina started her presentation, by outlining the process by which the hospitals initiated the project. She also described the type of vehicles used and the various services that electric ambulances can provide.

The project's initial results show that the electric ambulances are performing really well, according to Cristina, however they also faced some challenges, such as the ambulances needing specialised infrastructure and maintenance and their short range. In future, the hospitals' goal is to adopt only electric transport for their complementary services.

LOWERING EMISSIONS BY SWITCHING OFF THEATRE VENTILATION

Jonny Groome, founder of the Greener Anaesthesia & Sustainability Project (GASP), presented his work at Nuffield Health to reduce emissions coming from their operating theatres by switching off ventilation systems. Aligned with the NHS, Nuffield Health set a very ambitious target to achieve net zero emissions from their operations by 2040.

Jonny explained that the decision to focus on reducing energy consumption was driven by two factors - 1) healthcare is a carbon-intensive sector, and 2) the current energy crisis and the related rise in energy costs.

The first step taken at Nuffield Health to reduce energy consumption was the launch of a switch-off campaign involving 16,400 employees targeting equipment at various hospital sites. In the first four months of the campaign, Nuffield Health saved 4,000 tCO_2e and over €1.1 million. Next, Jonny and his team started a theatre shutdown checklist, which involved turning off lights, equipment, and anaesthesia gas scavenging systems out of hours. Nuffield Health also decided to turn off the theatres' ventilation overnight. This decision was taken based on evidence demonstrating that it is safe to do so. According to the projected results of the project, this will save approximately €41,000 and 36 tCO_2e every year.

Jonny highlighted that the government and the NHS offer guidance on managing healthcare ventilation systems, encouraging hospitals to turn them off overnight.

2 FROM LOW CARBON TO ZERO CARBON

The second parallel session, moderated by Scott Brady, Climate Programme Manager at HCWH Europe, was developed for those who have already implemented the easy wins at their hospital and are looking to take that next step and aim for zero carbon operations. This session looked at tackling more complex issues, such as measuring supply chain emissions, changing how we deliver care to focus on carbon benefits, and building a climate-resilient hospital. During this session, attendees heard from NHS Scotland, Sunnaas Rehabilitation Hospital, and LIFE RESYSTAL project participants.

NITROUS OXIDE MITIGATION IMPLEMENTATION PLAN

Alifia Chakera, Head of Pharmaceutical Sustainability within the Scottish Government's Health Infrastructure team, presented the health system's Nitrous Oxide Mitigation Implementation Plan.

Alifia started her presentation by explaining the damaging and long-lasting impacts of nitrous oxide (N_2O) on the environment. She also outlined NHS Scotland's objective to achieve zero emissions from this agent by 2027 as part of the national sustainability strategy. By decommissioning or reducing the size of ten N_2O piped systems, they lowered their N_2O emissions by 2,869 tCO_2e since 2019, she explained.

Alifia's research with NHS Lothian and the University of Edinburgh identified that most of their N_2O anaesthetics (over 95%) are lost due to system leaks, followed by poor security, stock management, system design, and inefficient clinical utility.

Alifia also highlighted several barriers to a ban of N_2O: the involvement of many actors in the N_2O and Entonox (a gas mixture composed of 50% nitrous oxide and 50% oxygen) supply chain, poor legislation and policies, and green technology.

SCOPE 3 INVENTORIES

David Vernon Brasfield, Environmental Manager at Sunnaas Rehabilitation Hospital, presented the hospital's project to address scope 3 emissions, which refer to indirect emissions that are outside the control of a hospital, such as patient and employee travel and embodied emissions in goods and services purchased. Calculating and managing these emissions represents a significant challenge to healthcare facilities, especially as there is no standardised method for the creation of scope 3 inventories.

The project aims to address this challenge and to better understand why scope 3 inventories, a measure to manage and reduce these emissions, can be so divergent.

The hospital developed methods for improving the analysis of emissions in the procurement category and communicating climate inventory results. They created a prototype dashboard, showing several ways of analysing inventories. This dashboard will help manage carbon emissions and decide which actions hospitals should implement.

David concluded his presentation by expressing the need for continued carbon tracking, a greater standardisation of practices, and the need for guidance for hospitals to develop quality scope 3 inventories.

LIFE RESYSTAL: COMMUNITY APPROACH FOR CLIMATE RESILIENCE

Cyprien Butin, an Expert in Climate Adaptation, Territorial Development and Architectural & Urban Design at ACTERRA, presented the EU-funded project **LIFE RESYSTAL**, which is working closely with seven pilot hospitals and two health systems to improve European healthcare climate resilience.

Cyprien outlined the project's unique community approach to climate resilience. Made up of hospital personnel, first responders, urban planners, and local government representatives, these communities of practice exchange knowledge and personal and professional experience of climate change, health challenges, and solutions. Each pilot hospital involved in the LIFE RESYSTAL project has developed a community of practice, engaging stakeholders from the hospital and beyond (critical infrastructure, climate authorities, local authorities) to build a collective climate-resilient pathway for the hospital.
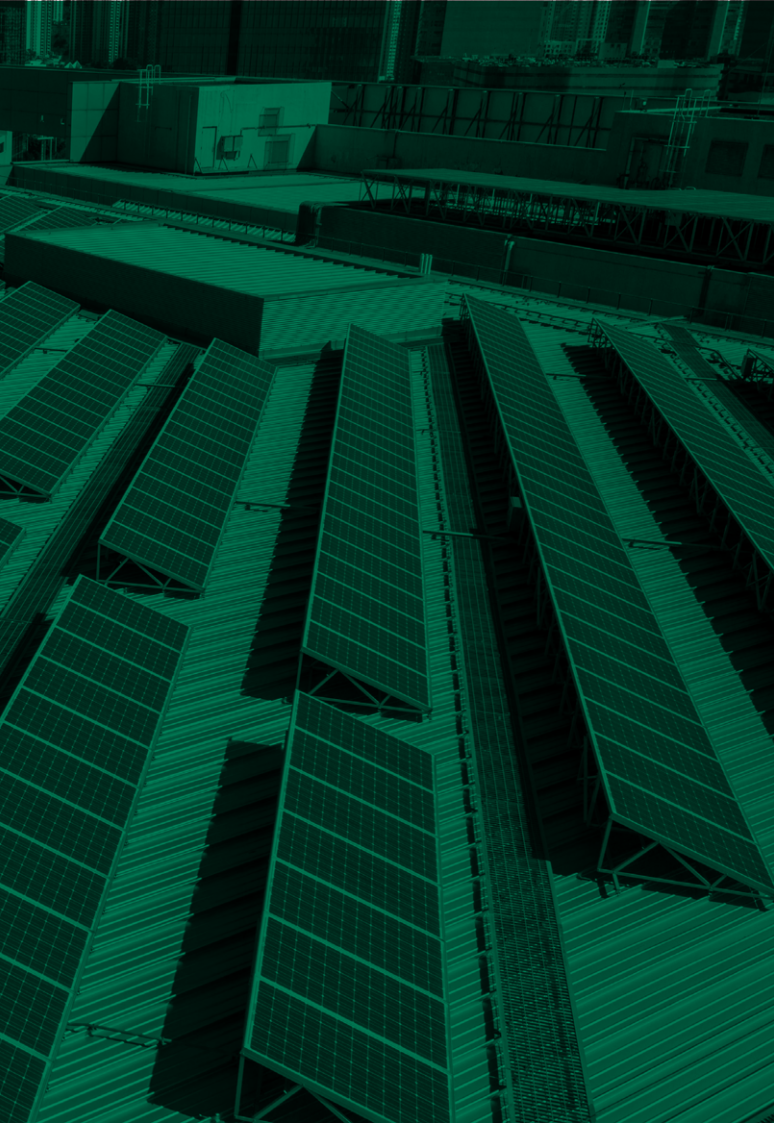
The establishment of a community of practice follows an incremental approach made up of three steps:

1. Awareness raising among hospital staff

2. Institutional mapping

3. Resilience capacity assessment (based on a needs assessment survey)

Over the course of four years, the pilot hospitals will develop an adaptation plan together with their communities of practice. During the fourth and final year, the community of practice will start implementing adaptation measures linked to the adaptation plan and oversee their implementation.

3

PARALLEL SESSION
DRIVING CHANGE

Engaging frontline staff is fundamental to successfully delivering climate-smart healthcare. This session, moderated by Will Clark, Executive Director at HCWH Europe, gave insights into successful behavioural change campaigns using innovation and new technologies across different specialities.

WASTE REDUCTION IN A HAEMODIALYSIS UNIT

Sarah Scanlan, Climate Officer for Children's Health Ireland (CHI), presented best practices implemented at the CHI to reduce waste in their Haemodialysis unit. Sarah began her presentation by highlighting the environmental impact of the healthcare sector, focussing specifically on the haemodialysis as it requires a large number of single-use consumables, as well as a significant amount of water, and energy.

Sarah continued by describing the Haemodialysis unit's measures to reduce plastic waste and become more sustainable. These measures include:

- Using reusable instead of single-use trays allowing 3,324 trays to be diverted from domestic waste every year, saving 73kg of plastic and €366 annually.

- Customising dressing packs leading to a 30% reduction in plastic waste. Although this increased the cost of individual packs, it improved efficiency. Healthcare assistants (HCA) and nurses saved 15 hours per year.

- Introducing a paper light service and creating a specific haemodialysis Kardex for each patient.

- Optimising linen usage.

- Use of natural light.

- Switching machines to auto-off mode after the session without impacting the cleaning of the machine.

Sarah emphasised how small changes can create long-lasting impacts, particularly promoting a cultural change within the department. She also emphasised that self-education and sustainable procurement are essential for more sustainable healthcare services.

GREEN THEATRE PROJECT

Kenneth Barker, Consultant Anaesthetist at Raigmore Hospital and Clinical Lead for the National Green Theatres Programme, presented the Green Theatre Project. Kenneth started his presentation by highlighting how the Green Theatre Project started out as a tiny change made in one surgical theatre by one clinical team and then grew into a national programme.

The Green Theatre Project started at Raigmore hospital, with a ban on specific anaesthetic gases. During his presentation, Kenneth explained the impact of anaesthetic gases, such as N_2O and desflurane, used daily in operating theatres on the environment.

Kenneth and his team decided to stop using desflurane and nitrous oxide and replace them with sevoflurane, which has a lower carbon footprint.

Besides addressing harmful anaesthetic gases, the Green Theatre Project also produced a list of 10 other simple actions any operating theatre can introduce to reduce its environmental impact. These include the use of a new and more sustainable fluid suction system, the Anaesthetic Gas Scavenging System, and switching off theatre ventilation.

Due to the project's success, it was adopted by the Scottish Government and became the **National Green Theatres Programme**.

MICRO-FUNDING PROGRAMME TO IMPLEMENT SUSTAINABILITY PROJECTS

Maria Gaden, Chief Manager at the Centre for Sustainable Hospitals (CfSH) in the Central Denmark Region (CDR), introduced a micro-funding programme, used to finance sustainability projects in the hospitals of the Central Denmark Region. The projects mainly focus on waste reduction and reducing unnecessary items in medical procedures.

During her presentation, Maria shared some of the most successful projects and changes made possible by this funding programme:

- A reduction in the use of disposable paper bed sheets.

- A switch from single-use to multiple-use items. Switching to multi-use cups resulted in a 90% reduction of CO_2 emissions compared to single use cups.

- More sustainable hip surgery. They established a task force to reduce material consumption and waste in this procedure.

- Development of a pharma-app, allowing hospital staff to monitor medicine expiration dates. This allows them to make it available to other pharmacists in the hospital to ensure it gets used. Since January 2021, this initiative saved the hospital approximately €123,000.

- Certified hospital cleaning with the Nordic Ecolabel throughout the Central Denmark Region. In June 2020, the programme created an environmental certification to make the procurement of cleaning products more sustainable. The measure reduced consumption of cleaning products by almost 15% (379 litres/year) and of plastic bags by 16.3%.

Maria also pointed out that this is an ongoing project, with several additional measures to reduce CO_2 emissions in the works, such as an initiative to switch from single-use to metal medical instruments.

CLOSING SESSION
ARRIVING AT NET ZERO

Vladimir Kendrovski, Technical Officer for Climate Change and Health at the WHO European Centre for Environment and Health, delivered the closing remarks of the 2022 European Healthcare Climate Summit.

He highlighted that although health facilities and health professionals are crucial to ensuring system-level changes, they will need support and direction from national and regional health authorities to advance net zero healthcare. He drew attention to the COP26 Health Programme, established by the WHO, together with the UK presidency of COP26, HCWH, and the UNFCCC Climate Champions.

Launched during COP26, it encouraged countries to make commitments to developing climate-resilient and low-carbon health systems. A total of 60 countries have committed to the COP26 programme. According to Vladimir it is important that countries meet their commitments by 2050 at the latest. The COP26 Health Programme has now become the Alliance for Transformative Action on Climate Change and Health (ATACH) and will support countries to deliver on these commitments.

NEXT STEPS

The healthcare sector needs to acknowledge and address its contribution to climate change and impact on public health. That means reducing healthcare emissions to net zero and adapting so that the sector is prepared for and resilient to the new health burdens and pressures of climate change that we're already facing. The best practices shared during the Summit are a vital source of inspiration for people working across European healthcare and beyond. They allow healthcare facilities to learn how to implement climate-smart healthcare and replicate various initiatives in their own operations.

Key examples presented during the Summit will be made available as case studies exclusively for members of our **Global Green and Healthy Hospitals (GGHH) network** via the GGHH Connect platform. The case studies provide more in-depth information about implementing the initiatives and their outcomes.

GET INVOLVED!

SUBSCRIBE

If you would like to be kept up to date with the latest developments from our Climate-smart Healthcare programme, you can **subscribe to our newsletter here.**

JOIN THE NETWORK

If you are interested in reducing the environmental footprint of your hospital/health centre, or the impact of your day-to-day work in healthcare, there are a number of ways you can join our network:

- Organisational **membership of Global Green & Healthy Hospitals** (hospitals/health systems/health centres only) - giving your institution free access to a range of exclusive tools and resources, including our Healthcare Decarbonisation Toolkit.

- **Doctors for Greener Healthcare** - bringing together doctors from across Europe to collaborate, share best practice, and advocate for a healthy future by reducing the environmental impact of healthcare.

- **Nurses Climate Challenge Europe** - empowering nurses across Europe to take action against the health impacts of climate change.

Health Care Without Harm

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