

Medtronic

Integrated Health SolutionsSM

Driving sustainable change: St. Antonius Hospital's journey towards CO₂ reduction

St. Antonius Hospital
Nieuwegein, The Netherlands



The challenge

Worldwide, the healthcare sector is a large contributor to CO₂ emissions, accounting for approximately 4.4% of global CO₂ emissions¹. In line with the Paris agreements, the Netherlands targets a 49% CO₂ reduction by 2030² and the Dutch healthcare sector will need to reduce its emissions to contribute to this ambitious goal.

The St. Antonius Hospital has a clear focus on the sustainable deployment of employees and resources in its long-term strategy. The hospital aims to become climate-neutral and provide healthcare with maximum circularity (reduced consumption, sustainable procurement, and recycling of waste). Based on this strategy, the St. Antonius Heart Center aspires to be a front-runner in the transition to sustainable healthcare. Although many individuals were enthusiastic about reducing the CO₂ footprint of the Heart Centre, there was no solid approach on how to do so in the Heart Centre. There was no methodology at hand to determine their CO₂ footprint, there were limited insights on how to lower their footprint and there was no governance set up to structure the way of working.

The solution

The hospital's Heart Centre collaborated with its long-time partner, Medtronic Integrated Health Solutions (IHS), to progress towards the CO₂ reduction targets. A multidisciplinary team, including department managers, nurses, and cardiologists, worked together with a Medtronic IHS team consisting of several consultants and turnkey architects.

Together they created a baseline footprint assessment. The assessment estimated the CO₂ footprint on a wide range of sustainability factors including energy and resource use, travel movements and waste. It accounted for all patient-related activities in the Cath Lab, inpatient cardiology wards and outpatient cardiology departments in the hospital.

To guide their efforts, the team conducted a baseline assessment and studied best practices in the market,

which led to the development of an actionable sustainability roadmap. This roadmap encompassed all the initiatives to be undertaken in the first year, prioritized based on an impact and feasibility assessment. To ensure accountability and transparency, a comprehensive framework was implemented, accompanied by a sustainability dashboard to measure, track, and report on the Heart Centre's sustainability progress. Additionally, a dedicated sustainability team, known as the 'green team,' was established, representing all departments and several functions, fostering collaboration and innovation throughout the institution.

About the St. Antonius Heart Centre

- A leader in cardiology and cardiothoracic surgery
- Annually performs more than 10,000 Cath Lab interventions and >1,500 open heart surgeries
- More than 300 FTE on staff



The impact

The team marked a potential CO₂ reduction of 8.5% for the first year. This equals the CO₂ emission of roughly 180 round trips from Amsterdam to Barcelona with a petrol car. In more detail, the impact estimation of the initiatives showed that reducing travel movements is the largest contributor to the potential reduction (~6% of the total footprint), for example by doing more outpatient consultations digitally. St. Antonius and the Medtronic IHS team have also partnered on planning and scheduling projects to address this need. The planning and scheduling solution increases the number of telephone consultations to optimize resources and reduce travel movements.

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After just a few weeks of starting the sustainability project, the Heart Centre realized a CO₂ reduction of 5.8 tons (0.5% of the total footprint). One of the quick wins was removing unused surgical drapes from standard Cath Lab procedure packages (previously happening for more than 1,600 procedures annually).

Although not a primary goal, the sustainability program might lead to lower costs as energy and material usage will decline. In addition, there has been a marked increase in employee engagement and employer attractiveness. "It is becoming increasingly important for people to work for organizations aligned to their personal values," said Hildelies van Oel, Department Lead of the Coronary Care Unit. "Our work in this area is making a difference in our recruiting efforts at this pivotal time in which so many hospitals are dealing with staff shortages."

5.8

tons

CO₂ reduction
after few weeks
of starting the
sustainability
project

// The sustainability scan we conducted in our departments was essential to the start of our reduction program and necessary to get a grip on our carbon footprint. This program not only positively impacts our planet but also enhances patient care and staff well-being. //

Marc van Manen, Cardiology Department Lead

// Through our sustainability scan, we discovered not only significant opportunities for improvement, but it also drives me to constantly seek innovative ways to enhance a more sustainable and environmentally conscious healthcare system. //

Anoek Kriekaard, Nurse in the Cardiac Department

About Medtronic IHS

Integrated Health Solutions builds on Medtronic's unique combination of capital resources, process optimization expertise and therapy knowledge. In cooperation with medical institutions, IHS develops innovative services and solutions to improve efficiency, reduce costs, facilitate patients' access to different types of treatment, and improve outcomes.

Would you like to know more about what IHS can do for your hospital? Learn more by visiting our [website](#), reaching out to your Medtronic contact or emailing us at: integratedhealthsolutions@medtronic.com

Sources:

1. Health care without harm - Health care's climate footprint - green paper nr.
https://noharm-global.org/sites/default/files/documents-files/5961/HealthCaresClimateFootprint_092319.pdf
2. The Netherlands Government Climate Policy:
<https://www.government.nl/topics/climate-change/climate-policy>

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