

# Sustainable & Green Strategies

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# The Journey to Climate-Resilient Healthcare

Beatriz Piñeiro Lago, Health Innovation and Sustainability Technician at the Galician Health Service (SERGAS), spoke to HealthManagement.org about several climate-smart initiatives implemented at SERGAS and how healthcare facilities can take the lead in transitioning to net zero.

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## Can you describe the climate-smart initiative that Galician Health Service (SERGAS) has implemented?

I would like to begin by pointing out the roadmap of the Galician Health Service, which started in 2004, almost two decades ago, with the computerisation of the medical record, a corporate electronic medical record system (IANUS) oriented towards management by processes, health problems, and allowing a model of care for patients with chronic conditions in which the health organisation, the patient and their environment are involved.

The Galician Health Service has been considered a benchmark in digital health for years. Technology is allowing us to change the way of doing things in the SERGAS to make it more efficient, improve and optimise processes, facilitate the work of professionals, and be more sustainable and resilient. Our health system is structured in seven health areas that cover the entire territory of Galicia.

Among the latest advances is the eighth health area, a fundamentally digital area, which will support the other

seven territorial areas with the provision of technological infrastructure in primary and hospital care. This includes implementing the intelligent clinical history, deploying teleconsultation throughout primary and hospital care, and the patient's health folder, which allows citizens to communicate their own data to the health institution. It also includes a medical imaging centre that allows diagnosis from hospitals other than the place where the patient is treated or in the promotion of diagnostic imaging in pathological anatomy and the development of a system for identifying outbreaks.

The digital health area includes the acquisition and deployment of a networked Intensive Care Unit management platform and intelligent operating theatres in all healthcare areas, the extension of an integrated and standardised information system for laboratory tests, and the development of technology for resource planning, analytical and simulation of clinical and administrative processes. The keys are sustainability, digitalisation and resilience, a total commitment of the Galician government to a 100% resilient, sustainable and environmentally friendly healthcare system.

### **Adaptation activities plan for the inevitable impacts of climate change and reduce risks. In what ways are healthcare facilities adapting to become resilient to climate change impacts?**

For the last 20 years, we have been in a process of transformation towards a sustainable and resilient health system that improves people's health without harming the planet. With the SERGAS 2010-2014 strategy, a paradigm shift was made, putting the patient at the centre of the system. Thanks to two European projects,

up an internal working group with professionals from the seven healthcare areas and an external working group with the three Galician universities, the Galician health cluster, the wood cluster, the Regional Ministry of the Environment with the Directorate General for Climate Change, the Galician Forestry Industry Agency and the Regional Ministry of the Rural Environment, where the initiatives that had already been carried out over the years in the area of sustainability have been highlighted. Through the strategy, we have defined five

## All the improvements that are made in the health system will have an impact on the health of people and the environment

Hospital 2050 and innovasaúde, we have been able to develop eco-hospitals, energy efficiency plans, and development of technological platforms such as TELEA, a technological platform for home care that was of great help during the COVID-19 pandemic and helped us to care for many patients from their homes without the need for hospital admission.

The SERGAS integrated logistics platform has enabled the standardisation of all logistics management in a single product warehouse. It has a single, centralised computer application that makes it possible to reduce the stock level and reduce hidden losses. This has an impact on improving the quality of care perceived by citizens, as it allows health services to have the necessary products available at the right time and to achieve the ongoing satisfaction of all the agents involved in the supply chain. Since 2019, we have been developing the circular economy strategy of the Galician Health Service with a 2030 horizon already approved by the Government of Galicia, which was presented publicly in September. In a few months, we will have it in English so that it can be more widely disseminated and serve as an example to other health systems.

### **How are healthcare facilities trying to reduce the impact of their operations on the environment?**

When the circular economy strategy of the Galician health service was launched four years ago, we set

strategic axes: resources and raw materials, waste and environmental footprint, eco-design of processes, research, innovation and investment, and social behaviour, that define the actions to be followed until 2030. We have pilot projects such as Life Resystal, a European project developing different solutions to help European healthcare infrastructures become more climate resilient, or the elimination of plastics in the health sector, Plastic Free towards health care Europe 2.0, or Low Carbon for the decarbonisation of hospitals.

### **How do these actions impact patient care?**

We must conceive health in all areas. We are nature, and we are part of it. All the improvements that are made in the health system will have an impact on the health of people and the environment. Integrating circularity in healthcare is a good example of this.

In this sense, an initiative in the spirit of circularity is the collaboration framework of the Galician Health Service and the Galician Forest Industry Agency to promote unique projects that favour the improvement of the quality of life of people living in Galicia and at the same time promote a greener and more environmentally friendly economy in accordance with the objectives of sustainable development, promoting the progressive implementation of biophilic design and the use of natural materials especially the use of wood that contributes to mitigating climate change. Wood is the alternative

with the lowest carbon footprint. It fixes, retains and replaces CO<sub>2</sub> from the atmosphere. It is the material par excellence of the 21st century.

**Hospitals are improving their rate of energy consumption and overall efficiency. Can we see a positive difference? Have the measures been cost-effective? What changes and/or investments are still needed?**

Having developed energy efficiency plans and eco-hospitals since 2010 has given us a background and a way of doing things that have helped us to have a BREEAM-certified hospital (Álvaro Cunqueiro hospital) in 2015. Today we have solar panels in almost all the centres, and we are also promoting aerothermal energy and biomass in the centres that do not yet have them.

preparing a training programme with a specific chapter on recommendations to reduce the digital carbon footprint in the health sector.

**Can you discuss how digitalisation is helping to accelerate the shift towards sustainable healthcare models?**

Progress is being made towards a clinical record that is both intelligent and proactive.

Other objectives include the path towards the evolution of telecare and self-care platforms to enable the virtualisation of safe, effective and accessible healthcare, complementing face-to-face actions and improving the current model. The goal is to implement a platform for citizen relations to improve digital health

## The Galician Health Service has a commitment to a sustainable and resilient health system that addresses climate challenges

We also have the Government of Galicia's energy network, REDEXGA, which encompasses all the infrastructures of the regional administration, including the Galician Health Service. The body in charge of promoting the principles of energy saving and diversification within the Galician administration is the Galician Energy Institute, so we have a more technically efficient system as it is a unified management of all facilities and tends to lower consumption and lower expenditure and more transparent, a single public tender system for the entire public sector in Galicia. The electricity supply is certified through the system of Guarantees of Origin of 100% renewable or high-efficiency cogeneration.

**Is there a standardised method for assessing the carbon footprint of digital health interventions?**

A method as such does not exist. We use two tools to calculate our carbon footprint - one is at the international level HCWH (Hippocrates) and the other at the national level SCOPCO2 of Health for the climate. We are also

services and reduce bureaucracy in healthcare activity; and the development of a platform for citizen relations to improve digital health services and reduce bureaucracy in healthcare activity. It also aims to develop a system for predicting and managing demand in real time to anticipate the volume of work in health centres and the extension of a network of smart health centres to boost the resilience of SERGAS in a climate-smart way.

**What are the key actions leaders should undertake to foster green and healthy hospitals? How can leadership translate those actions down the command chain?**

To be an entrepreneur, you have to be open and creative. Human capital is fundamental, and transmitting your passion for what you do is essential for other professionals to follow you, believe in what you do and work with your mind and heart.

The health sector is complex and has a significant impact on the environment. You have to transmit the values of sustainability and justify the need for change

and how it will have a positive impact on people's health. This is the way to incorporate it into the organisation from the chain of command. In the case of the Galician Health Service, it has been a firm and decisive commitment to a sustainable and resilient health system that addresses climate challenges by taking responsibility for the impact of its activity.

**In what ways do you see the workforce engaging with sustainable practices? How has their role and their responsibility in the system changed?**

Employees become committed when they understand the why and what sustainability is for. My role is to work transversally to help professionals make that commitment, which, in turn, can lead to a commitment from the public to work together towards sustainability, towards the change we need to make in the way we live and do. Climate change is a fact, and it is the biggest health crisis we face. Social behaviour is key to this change, and working with behavioural science will help us to get the messages across to all citizens.

**How can we engage them to be part of this transition more?**

Training in circularity, sustainability, health and climate and the involvement of each professional is essential.

We have developed an open and participatory strategy for a circular economy in health that is being nurtured by pilot projects and actions that are replicated and help to understand sustainability based on circularity and the resilience of a health system that cares for people without harming the planet.

**Is there a more concrete set of goals to achieve, and what are they and in what time frame?**

The Galician health service is committed to the United Nations Race to Zero, and we have committed to a 60% reduction of CO<sub>2</sub> equivalent emissions by 2030 and a net zero by 2040.

The circumstances in which people are born, grow up, live, work, and age, including the health system, directly influence people's lives. Health systems must be part of the solution; a commitment to climate change mitigation and adaptation is the way forward. That is why addressing our own Circular Economy Strategy has been a firm commitment for our roadmap to 2030. The health sector has a great impact on the environment. We work 365 days a year, 24 hours a day, and we have to be responsible for our actions.

**Conflict of Interest**

None. ■