



## Editorial

# [Translated article] Environmental sustainability in drug procurement strategy



## La sostenibilidad ambiental en la estrategia de compra de medicamentos

The procurement of medications in the hospital setting is a fundamental activity with direct repercussions on patient safety, the efficiency of healthcare systems, and the environmental impact of drug use and supply. It is estimated that medicines could account for between 20% and 25% of the healthcare sector's carbon footprint. Two product groups have a particularly significant weight—anaesthetic gasses and inhalers—which account for around 2% and 3% of this footprint, respectively.<sup>1,2</sup> Furthermore, the healthcare sector as a whole is estimated to be responsible for 4.4% of global greenhouse gas emissions, a figure that reaches 4.5% in Spain.<sup>3</sup> The carbon footprint is not the only environmental impact generated by medicines. Drug residues, especially those that find their way into water, can also have harmful effects on human health and the environment.<sup>4</sup>

Climate change presents us with an urgent need to adopt measures that promote sustainability in hospital purchasing and, more broadly, by all stakeholders in the healthcare system. In this sense, the concept of sustainable purchasing, also known as Environmentally Preferable Purchasing (EPP), is particularly important. Sustainable purchasing encompasses economic, social, and environmental criteria and is understood as a form of procurement in which organizations seek to meet their needs for goods and services while minimizing adverse impacts on health and the ecosystem and obtaining the best value for money from a life-cycle perspective.<sup>5</sup> This life-cycle approach takes into account the environmental costs and impacts of not only the manufacture and use of a product, but also its transportation, distribution, and final disposal.

In the hospital environment, where it is often not possible to substitute certain products or medicines for others with a lower carbon footprint, the adoption of sustainable purchasing practices becomes even more important to minimize the environmental impact and the risks associated with pharmaceutical waste. Although this may seem like a new debate or one driven by initiatives such as the European Green Deal<sup>6</sup>—in which the European Commission presented the plan to reduce emissions by 55% by 2030, as a first step toward carbon neutrality set for 2050—the Organization for Economic Cooperation and Development (OECD) had already pointed out in 2004 the benefit of promoting sustainable public procurement.<sup>7</sup> In this context, Green Public Procurement is a tool to promote the emergence of increasingly sustainable products and services through purchasing decisions. The first step is usually to reduce product consumption, followed by maximizing reuse systems and promoting efficiency in resource management.

After reducing consumption and maximizing reuse systems, institutions can choose to purchase products and services that integrate environmental factors (positive environmental and health impacts), social

factors (fair labor, human rights, local employment), and economic factors (longer useful life, total cost, waste management costs, quality, innovation).<sup>8</sup> The sustainable procurement process evaluates what products are made of, where they come from, who made them, who is affected by their production, how their waste will be managed, and even whether it is necessary to manufacture or use a product. This strategy should consider not only the procurement of goods but also logistics and distribution, prescription and consumption, and the final disposal of products and their potential impact on water or air.

Given the complexity of this process, the sustainable procurement strategy has to be aligned with each institution's own medicine selection and financing policies, as well as with a prescribing approach that incorporates the environmental variable in decision-making. The growing importance of sustainable public procurement is not only limited to a theoretical debate but also falls within the framework of Goal 12 of the United Nations Sustainable Development Goals, which promotes responsible consumption and production.<sup>5</sup> This goal aims, among other actions, to reduce the use of natural and toxic resources, optimize waste, and reduce pollutants throughout the life cycle of a product or service. The 2030 Agenda encourages governments and organizations to use their purchasing power to drive market changes that improve sustainability.

The Pharmaceutical Strategy for Europe, approved in 2020, proposes the development of drugs that are effective, safe, competitive, and also more environmentally respectful, given the evidence on the impact of drugs on climate change and wildlife.<sup>9</sup> Although efforts to reduce environmental impact have so far been directed at the pharmaceutical industry, hospital pharmacists, and other healthcare professionals and managers, are seen as key to mobilizing the market through the purchasing strategy.<sup>10</sup>

From a healthcare management perspective, the introduction of sustainability criteria in the procurement of medication is a fundamental pillar of comprehensive strategies to reduce the environmental footprint of hospitals.<sup>5,11</sup> For these efforts to be effective, the participation of multidisciplinary committees is essential, in which hospital pharmacists, with their expertise in medication procurement and rational use, collaborate with other healthcare professionals and specialists in the procurement processes involved.<sup>12</sup> In addition, it is important to have a legislative framework that facilitates the integration of social and environmental considerations into procurement processes. In the case of Spain, the criterion of the most economically advantageous tender (MEAT), which allows for the consideration of criteria that reflect qualitative, technical, and sustainable aspects of the tender in addition to price, is included in Law 9/2017 of November 8 on Public Contracts,

which transposes into Spanish law Directives 2014/23/EU and 2014/24/EU of the European Parliament and Council of February 26, 2014.

Spain, together with other European countries, is working to incorporate sustainability criteria in the purchase of medicines. However, the decentralization of purchasing processes and the diversity of regulations and priorities between countries or organizations can make it difficult to adopt the same sustainability criteria across the board. Environmental criteria are starting to be used, but their impact has not yet been demonstrated. Experience shows that consultation or dialog with suppliers prior to the introduction of environmental criteria enables them to comply with the criteria without negatively affecting prices or the number of competitors submitting bids.<sup>13</sup> Currently, the Consorci de Salut i Social de Catalunya (Catalonia Health and Social Care Consortium) already includes at least 1 environmental sustainability criterion in all of its medication procurement contracts. Although this falls short of countries like Norway, where regulations require that at least 30% of the weighting of award criteria must be environmental<sup>14</sup>, the various European initiatives demonstrate the healthcare system's commitment to minimizing environmental impact.

It is worth noting the need to align sustainability criteria across different purchasers, which is essential to increase impact and incentivize drug manufacturers to move in this direction.<sup>5</sup> Progress should also be made toward a certification model that facilitates and streamlines the evaluation process for these criteria and, ultimately, toward assessing the impact of their incorporation on the carbon footprint and the environmental impact of the healthcare system.

Projects such as *Proyecto 2023 + SOStenible* have contributed to integrating the environmental perspective, the circular economy, and social responsibility into hospital pharmaceutical management to reduce the environmental footprint without compromising the quality of care.<sup>15</sup> This goal requires the development of policies that encourage responsible prescribing, dose optimization, and the use of products with a lower impact, such as more environmentally friendly inhalers or anesthesia systems that reduce the release of gasses into the atmosphere. Sustainable purchasing is yet another tool aimed at influencing the pharmaceutical value chain with an environmental responsibility component.<sup>11</sup>

### CRedit authorship contribution statement

**Josep Maria Guiu Segura:** Writing – review & editing, Writing – original draft.

### Funding

None declared.

### Conflicts of interest

None declared.

### References

1. NHS. Delivering a «Net Zero» national health service classification: official [Internet]. London; 2022. [consulted 9 Feb 2025]. Disponible en: <https://www.england.nhs.uk/green/nhs/wp-content/uploads/sites/51/2022/07/B1728-delivering-a-net-zero-nhs-july-2022.pdf>.
2. Malik A, Lenzen M, McAlister S, McGain F. The carbon footprint of Australian health care. *Lancet Planet Health*. 2018;2(1):e27–35. doi: 10.1016/S2542-5196(17)30180-8.
3. Karliner J, Slotterback S, Boyd R, Ashby B, Steele K. Health care's climate footprint: how the health sector contributes to the global climate crisis and opportunities for action. 2019. [consulted 9 Feb 2025]. Disponible en: <https://global.noharm.org/media/4370/download?inline=1>.
4. Alzola-Andrés M, Domingo-Echaburu S, Nogales-García M, Palacios-Zabalza I, Urrutia-Losada A, Arteché-Elguizabal L, et al. Pharmaceuticals in the environment: a hospital pharmacy's perspective. *Farm Hosp*. 2024;48(Suppl 1):S13–20. doi: 10.1016/j.farma.2023.09.010.
5. Guiu Segura JM. La incorporación de criterios medioambientales y de sostenibilidad en la compra de medicamentos. *Asociación de Química y Farmacia del Uruguay*. 2022;90:4–8.
6. European Commission. The European green deal [Internet]. [consulted 19 Feb 2025]. Disponible en: [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en).
7. OECD. Professionalising the public procurement workforce: a review of current initiatives and challenges, Paris; 2023. [consulted 9 Feb 2025]. Disponible en: [https://www.oecd.org/en/publications/professionalising-the-public-procurement-workforce\\_e2eda150-en.html](https://www.oecd.org/en/publications/professionalising-the-public-procurement-workforce_e2eda150-en.html).
8. Health Care Without Harm. Health care without harm sustainable procurement in health care guide; 2020. [consulted 19 Feb 2025]. Disponible en: <https://greenhealthcarewaste.org/wp-content/uploads/2020/12/Sustainable-Procurement-in-Health-Care-Guide.pdf>.
9. European Commission. A pharmaceutical strategy for Europe. [Internet]. [consulted 19 Feb 2025]. Disponible en: [https://health.ec.europa.eu/medicinal-products/pharmaceutical-strategy-europe\\_en](https://health.ec.europa.eu/medicinal-products/pharmaceutical-strategy-europe_en).
10. European health management association. Reducing the environmental impact of medicines from procurement to disposal [Internet], Brussels; 2022. [consulted 9 Feb 2025]. Disponible en: <https://ehma.org/app/uploads/2022/11/White-Paper-Environmental-impact-of-medicines-Nov-22.pdf#:~:text=The%20White%20Paper%20exhibits%20case%20studies%20and%20associated,environmental%20impact%20of%20medicines%20in%20these%20five%20stages>.
11. Guiu Segura JM, Gilabert Perramon A, Sans Calle V, Hors Comadira P. Introducing concepts of circular economy into the public procurement of medicines in Europe. *Eur J Hosp Pharm*. 2019;26(4). doi: 10.1136/ejpharm-2018-001717.
12. European association of hospital pharmacists. EAFP position paper on procurement [Internet], Brussels; 2024. [consulted 9 Feb 2025]. Disponible en: [https://www.eahp.eu/wp-content/uploads/2024/07/final\\_procurement\\_position\\_paper\\_2024.pdf](https://www.eahp.eu/wp-content/uploads/2024/07/final_procurement_position_paper_2024.pdf).
13. European Commission: European health and digital executive. In: Vogler S, Salcher-Konrad M, Habimana K, editors. Study on best practices in the public procurement of medicines – final report [Internet]. Publications office of the European Union; 2022. [consulted 7 Feb 2025]. Disponible en: <https://data.europa.eu/doi/10.2925/044781>.
14. Sykehusinnkjøp HF. Environmental requirements for pharmaceutical procurements 2020–2022 [Internet], Vadsø; 2022. [consulted 9 Feb 2025]. Disponible en: [www.sykehusinnkjop.no](http://www.sykehusinnkjop.no).
15. Sociedad Española de farmacia hospitalaria. Proyecto 2023 + SOStenible - SEFH [Internet]; 2023. [consulted 9 Feb 2025]. Disponible en: <https://www.sefh.es/sostenible-proyecto.php>.

Josep Maria Guiu Segura

Consorci de Salut i Social de Catalunya, Barcelona, Spain  
 Unidad de Farmacia Clínica y Atención Farmacéutica, Departamento de Farmacia y Tecnología farmacéutica, Facultad de Farmacia y Ciencias de la Alimentación, Universidad de Barcelona, Barcelona, Spain  
 E-mail address: [jmguiu@ub.edu](mailto:jmguiu@ub.edu)

Article history:

Received 20 February 2025

Accepted 11 March 2025

Available online 28 March 2025