



PROCURING VENDING MACHINES IN HEALTHCARE:

Guidelines to promote healthier
and sustainable choices



Introduction

Healthcare facilities (primarily hospitals) operate large-scale food services providing meals, snacks, and beverages to patients, visitors, and staff. Though historically hospital food has had a poor reputation and been heavily criticised, many hospitals are now taking a more proactive approach to improve the quality and sustainability of their food service whilst meeting key dietary guidelines. Health Care Without Harm (HCWH) Europe's 2016 report *Fresh, healthy, and sustainable food: Best practice in European healthcare* highlights such approaches.¹

One area of food service in healthcare that might be overlooked, however, is vending machines. Dispensing a range of drinks and snacks, vending machines come in various shapes and sizes and are often supplied through external contracts with companies responsible for the installation, maintenance, and supply.² This publication aims to provide guidelines for healthcare organisations that wish to procure healthier, more nutritious, and more sustainable vending services.

Health, environment, and vending machines

Vending machines can be found in many public settings in Europe, including healthcare facilities. They offer a convenient solution to provide staff, patients, and visitors with basic food options when it is not possible to run a fresh meal service. The nutritional quality of products provided by vending machines has a direct impact on health of consumers and operating the machines produces an environmental impact, including waste that needs to be disposed of and Greenhouse Gas (GHG) emissions from the energy they consume.

Environmental impact

Vending machines often run 24 hours a day, all year round – this continuous operation consumes on average 2,700 kWh of energy annually.² Energy efficiency might not be the most relevant factor when procuring vending machines in Europe, despite the available technologies and legislation in place.³ There are, however, options available to mitigate environmental impact. Improving the energy efficiency of vending machines through LED lighting, for example, could reduce energy use by 24%-76%.³ Other, low-tech solutions can reduce unnecessary energy use, such as switching off machines at night in unoccupied areas that do not contain perishable items, it is estimated that this could save approximately €40 per machine annually in energy costs.⁴ Considering the longevity of most vending machines, and that larger

healthcare facilities or systems may have several installed across their sites, this is an easy and simple change that could represent significant cost savings in the long-term.

Vending machines often provide disposable utensils (e.g. cups or bowls) as well as packaging creating additional non-recyclable waste, particularly plastic. To combat this, a small number of hospitals are already purchasing bio-based, compostable, or recycled paper containers, cutlery, and other products for their food service, including for their vending machines. Placing recycling containers next to vending machines at **Barts Health NHS Trust (UK)** has helped to engage people in recycling; intelligent technologies have also helped, such as machines that pay users for returning empty plastic bottles.⁵

Health and diet implications

The majority of vending machines - including those in hospitals – often stock packaged foods and beverages that are high in calories, sugar, saturated fat, and/or sodium.^{6,7} These machines are usually positioned in high visibility areas (i.e. entrances and exits), and are sometimes the only food available onsite.

There are several measures that can influence consumers to choose healthier products: increase availability (compared to unhealthier products)⁸ reduce portion sizes (particularly for sugary drinks)⁹ clearly display nutritional information on the packaging of products, and preferential pricing policies that promote healthier alternatives.¹⁰

Evidence shows that applying these measures to vending machines can encourage greater uptake in healthier choices: 40% of participants in an Australian study were even prepared to pay more for healthier products in vending machines.¹⁰ Research is limited though, especially in Europe, but the available evidence suggests that it is feasible to offer healthier products in hospital vending machines, at a time when the healthcare sector is increasingly acknowledging the co-benefits of healthy and sustainable food and voluntarily going beyond what is required by law.

In 2018, the National Health Service (NHS) in England introduced a voluntary scheme to reduce sales of sugary drinks. Some hospitals went further, however, banning all sugary drinks, milkshakes, and hot drinks with added sugar syrups.¹¹



Policy context

Procurement is a powerful tool to promote the uptake of healthier and more sustainable food practices. In the EU, the 2014 Procurement Directive (2014/24/EU) encourages public authorities to consider environmental impacts when making procurement decisions.¹² Furthermore, the Green Public Procurement (GPP) criteria for food and catering services aim to address the main environmental impacts of food and provide a common basis for developing procurement criteria for public contracting authorities.¹³

The GPP criteria for vending machines focus on organic and/or fair trade products, and those using environmentally responsible palm oil. Specific criteria is also included for:

- Smart controls (including sleep-mode during out of hours)
- Annual energy consumption
- Global Warming Potential (GWP) of refrigerants
- Reusable cups
- Purchasing vending machines.

Health impacts are not specifically addressed in the GPP criteria, however, and the provision of healthier products for vending machines is not mentioned. Other EU legislation such as Ecodesign and Energy Labelling regulations that cover energy consumption, refrigerants, and disposal also apply to vending machines.^{14 15 16}

The 2014 Procurement Directive offers a foundation to create award criteria on best price-quality ratio, thus ensuring the most economically advantageous tender (art. 67) for the contracting authority.¹⁴ In food and catering services, quality can be read as both *nutritional* quality and *staff* quality i.e. those adequately trained to handle food. These aspects combined can help foster a food supply chain that promotes health and wellbeing.¹⁷



Case studies

In 2019 Health Care Without Harm (HCWH) Europe interviewed a number of hospitals and healthcare systems on the procurement of vending machines. The case studies described here are the result of those interviews, summarising policy frameworks, programmes, and initiatives in Europe to increase the availability of healthier and more sustainable products in vending machines within healthcare.

Ireland

In 2019, the Healthy Eating Active Living Programme of the Health Service Executive (HSE) published the *Minimum Nutritional Standards for Food and Beverage Provision for Staff and Visitors in Irish Healthcare Settings*.¹⁸ This publication includes a voluntary policy to promote healthy food and drink options in vending machines that aims to:

- Provide greater availability of healthy food and beverage options at HSE premises
- Ensure that HSE facilities reflect best practice for healthier eating options
- Use food service (including vending machines) as a forum to discuss healthy diets.¹⁹

A strong, ambitious policy, it is yet to be properly implemented, however, as many vending machines in HSE facilities still contain crisps, chocolate bars, and sugary drinks with minimal to no healthier products.

In the face of weak implementation, some members of the public have even taken on the responsibility of increasing the availability of healthy food in hospitals. A well-publicised example was the initiative of Richard Kennedy, a visitor at the **South Tipperary General Hospital**. Frustrated with the unhealthy foods offered in an HSE branded vending machine, he worked with local farmers to provide the hospital with free apples as a healthier alternative.²⁰

Voluntary system-level or national policies do not always necessarily translate into action at an operational level. Even with such frameworks in place, the onus is still on organisational decision makers to initiate change. Clearer policy at the organisational level is therefore required to more effectively shape how vending machines are used, incorporating communications and awareness-raising activities to encourage behaviour change.

Spain

National legislation adopted in Spain primarily centres on vending machines in schools, whilst those found in healthcare settings are overlooked. Some regional authorities, however, have gone beyond the national requirements. The Basque Country, for example, has established a target of 50% healthy products in all public vending machines. **Hospital de Cruces** was one of the first hospitals to follow this mandate. Juan Antonio Herrero, Catering Manager, and Eduardo Resins, Deputy Director of Facilities, observed that vending machines give patients access to food outside their prescribed diet. They therefore adopted a policy that incorporates healthy products (e.g. fruits and nuts) into their food provision including vending machines. To highlight these healthy options to consumers they label the healthier products with a simple green sticker.

To contribute to sustainability the procurement team carefully considers all aspects related to energy use (e.g. promoting LED lighting or improved thermostatic control) in vending machines. The hospital also operates a database to monitor the waste produced by vending machines and is exploring the option of incorporating organic and fair trade products.

The Hospital de Cruces example highlights the value of creating an organisational food policy that starts with a good understanding of the nutrition and hydration needs of employees and visitors. By integrating environmental considerations and extending the policy to cover its entire food service the hospital has successfully improved the sustainability and the nutritional content of products in their vending machines. Awareness and uptake amongst users has been supported by the use of simple yet effective communication techniques.

United Kingdom

Whilst Scotland and Wales have national recommendations to stock vending machines in healthcare settings with at least 30% healthier products, England has no such guidelines.^{21 22}

The Commissioning for Quality and Innovation (CQUIN)* guidance 2017-2019, however, establishes requirements for all sites providing food in healthcare facilities within NHS England. Previous CQUIN guidance documents banned the promotion of products high in salt, fat, and/or sugar within hospitals (including advertising) and also introduced requirements for healthy options to be available at all times for staff working night shifts.

* The Commissioning for Quality and Innovation (CQUIN) framework supports improvements in the quality of services and the creation of new, improved patterns of care. www.england.nhs.uk/nhs-standard-contract/cquin

The 2017-2019 CQUIN established minimum targets for 2017-2018:

- 70% of drinks must be sugar free (<5g of sugar per 100ml) including energy drinks, fruit juices, and milkshakes
- 60% of confectionery must not exceed 250 kcal per item
- 60% of sandwiches and other savoury pre-packed meals must be below 400 kcal and contain <5g saturated fat per 100g

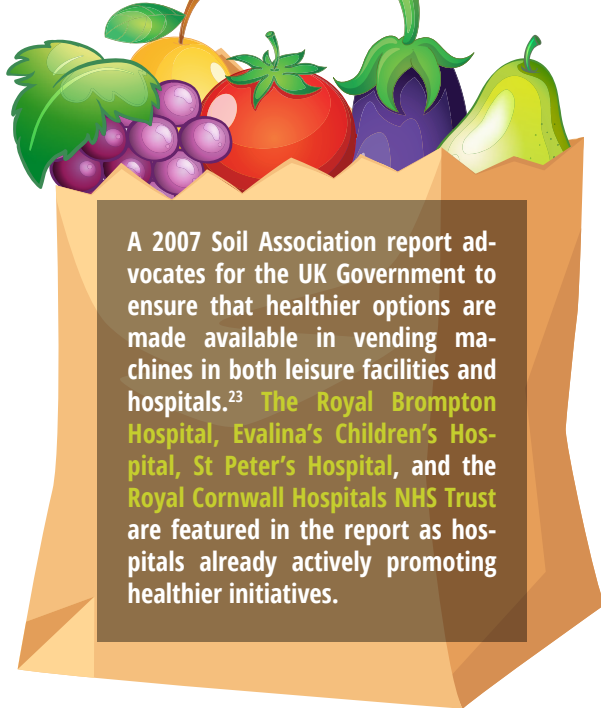
These targets increase to 80%, 80%, and 75% respectively for 2018-2019.

The **Sussex Community NHS Foundation Trust (SCFT)** in South East England works closely with its vending service suppliers to increase the provision of healthier items. By monitoring uptake it has been possible to evaluate the popularity of different options and tailor its approach and messaging accordingly. By combining the introduction of healthier alternatives with a wider sustainability communications campaign, which aims to highlight the links between healthier lifestyle choices and environmental quality, the Trust has been able to foster greater interest in and uptake of healthier food choices.

In future the Trust would like to introduce a wider variety of healthier food, including a greater proportion of organic and fair trade options. They recognise that subsidising healthier options may make them more appealing, but this has proven difficult to implement under their current vending contract. It is therefore something they wish to explore when the services are retendered.

When procuring a new vending service, SCFT will consider targeting a range of environmental criteria, including sustainable palm oil, supplier vehicle emissions (including restocking frequency), recyclability of packaging, energy consumption and GHG emissions, contractor's sustainability and record, and removal and recycling of the machine at end of life. These have been identified through its new circular economy work programme.

The SCFT example highlights that simply offering healthier snacks is not effective enough to drive change - it must be part of a wider collaborative initiative supported by a clear organisational policy. The example also highlights the importance of supplier engagement in identifying and introducing new options and the potential for competitive tender processes to support longer-term impact.



A 2007 Soil Association report advocates for the UK Government to ensure that healthier options are made available in vending machines in both leisure facilities and hospitals.²³ The Royal Brompton Hospital, Evalina's Children's Hospital, St Peter's Hospital, and the Royal Cornwall Hospitals NHS Trust are featured in the report as hospitals already actively promoting healthier initiatives.

Recommendations

HCWH Europe believes that vending services provided in healthcare facilities should aim to offer healthier and more diverse choices with reduced levels of fat, sugar, and salt. Products such as whole fresh fruit, unsweetened fruit juice, and snacks made from fresh and organic ingredients should be prioritised wherever possible. Fresh drinking water should be made freely available and unsweetened hot and cold drinks from ethical sources should be offered to staff, patients, and visitors.

For healthcare providers seeking to tackle the health and environmental impacts of vending machines in their facilities we recommend the following actions:

1. Create a sustainable food policy, ideally covering all food services provided by your organisation, including vending machines, along with an action plan that addresses key issues in the food system affecting the health of individuals, communities, and the environment. In developing the policy and action plan you should undertake a review of all catering services, considering relevant legislation, policy guidelines, and standards as well the nutritional needs of patients, staff, and other consumers. The policy should define key priorities and objectives in relation to

health and environmental quality and the action plan should set out the steps you will need to take to implement the policy. Your review should assess whether vending machines are the most appropriate means of providing food and drinks and determine attitudes towards them. Identify and engage stakeholders from across different departments, disciplines, and levels that have an interest or role in sustainable and healthy food, e.g. catering, facilities, procurement, sustainability, staff representatives, and healthcare staff. If your organisation employs nutritionists then this could be a key group to involve in the process.

2. Engage with suppliers to build a shared commitment to sustainability, food and nutrition. Competitive tender processes are ideal opportunities to implement your policy, and key commitments, objectives, and goals built into these should reflect those in your sustainable food policy. Indeed, many vending companies now specialise in the provision of healthy and sustainable vending services. Companies bidding for new vending contracts should be fully informed about the weighting given to different criteria (e.g. price, technical characteristics, and environmental, social, and quality aspects) during the pre-tender phase. Consider organising an open day for potential suppliers so that you can present your criteria and provide an opportunity for tenderers to ask questions and visit your facilities.

If you are not in a position to re-tender the service there still may be an opportunity to engage with incumbent suppliers through your existing contract management process in order to encourage the introduction of healthier options. Monitoring uptake of healthier items will be important and will provide a basis for identifying areas for improvement, for example, testing alternative products or reviewing restocking frequencies. Success will be more likely if you can establish shared goals with suppliers and agree an implementation schedule that works for both parties.

3. Create a culture where sustainability is understood and becomes a priority amongst patients, staff, and external stakeholders. Vending machines offering food and drink choices that are low in calories, sugar, and/or salt can help patients, staff, and visitors to make healthier choices. They also create an opportunity to highlight the link between healthy lifestyles and the environment. Consider introducing healthier food options with a wider communications initiative designed to raise awareness of key environment and health issues and encourage a shift in behaviours. In addition, use simple communication techniques



to promote and help users to identify healthier options wherever these are available.

4. **Share your experiences and encourage other institutions to create a healthier and more sustainable food policy.** We encourage you to share your experiences – both successes and failures. Networking platforms, such as Global Green & Healthy Hospitals (GGHH) (www.greenhospitals.net), allow you to share best practice, access resources/tools, and discuss challenges and advice with experts across the globe.

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