



Better Health. Better Environment. Sustainable Choices.

Fact sheet 9

Building Environmentally Sustainable Health Systems



Summary

Health systems represent a large share of the economy, accounting for approximately 8–10% of gross domestic product in the WHO European Region. As a whole, the health sector is a sizeable consumer of energy and resources and generates a large share of waste and pollutants. Improving the environmental performance and sustainability of health systems provides benefits in terms of health protection and promotion, saves money, improves efficiency, and increases community resilience. Improving its environmental performance and reducing the related environmental footprint are part of the health sector’s mandate to contribute to achieving the Sustainable Development Goals (SDGs).

Overview

Evidence reveals a wide range of potential benefits that result from fostering environmental sustainability in health systems including those for finance, health, access and quality of care, the workforce and the environment, as well as improved climate resilience. While there is no ‘one-size-fits-all’ set of environmental sustainability actions known to provide benefits for health systems in every setting, the existing evidence points to the following crucial actions:



Table 1. Critical categories of action for environmental sustainability in health systems

Action category	Examples
Health care waste minimization and management	General waste minimization strategies, hazardous waste management training, targeted chemicals substitution
Efficient management of resources	Water safety plans and wastewater treatment for facilities, energy efficiency strategies, sustainable design and retrofitting
Sustainable procurement	Adoption of criteria and guidelines for sustainable procurement, engagement with manufacturers, life cycle analysis of products and services
Reducing health systems' emissions of pollutants	Carbon foot-printing, prioritization of low-carbon alternatives in energy, promotion of low-carbon commuting for the health workforce
Disease prevention and health promotion	Inter-sectoral action, promotion of healthy environments and workplaces, joint monitoring of environmental exposures, building capacity for public health services
Health workforce as agent of sustainability	Capacity building for sustainability, incentive schemes and leadership
Community resilience and local assets	Local sourcing of goods and services (where appropriate), use of local assets and green spaces for health promotion, local stakeholder engagement strategies
Incentives for change	Reinvestment of efficiency savings in core health system functions, access to sustainability and climate-related funding, economic incentives and seed funding for sustainability initiatives, reputational/image incentives through awards and certifications
Innovative models of care	Digital health / e-health / m-health, service reconfiguration

A clear mandate for environmental sustainability activities, such as through a National Environmental Sustainability Policy or Plan for Health Systems, is an important enabler for action in this area.

The existing evidence points at several key categories of environmental impacts from health systems including: 1) health care waste, 2) wastewater, and 3) greenhouse gas emissions.

Health care waste: Health systems are among the highest waste-generating sectors. Between 75% and 90% of waste produced in health care is comparable to domestic waste. The remaining 'hazardous health care waste' may pose a wide range of environmental and health risks and there is evidence of health impacts in a number of low- and middle-income countries due to inadequate health care waste management. Adequately managing hazardous health care waste is particularly important to SDG 12 (Responsible consumption and production).

Wastewater: The health sector produces large volumes of wastewater. Moreover, there is a great diversity of frequent pollutants in hospital wastewater (see Table 2). Many of these substances are not completely removed by standard wastewater treatment processes, and instead escape into surface waters where they can disrupt ecological processes and, ultimately, pollute drinking water. An adequate treatment of health care wastewater is particularly important to SDGs 6 (Clean water and sanitation) and 12 (Responsible consumption and production).

Greenhouse gas emissions: Evidence suggests that health systems are a significant contributor to greenhouse gas emissions. For instance, in England the National Health Service is estimated to be responsible for approximately 4% of total emissions. To put this figure into context, that 4% was roughly the total greenhouse gas emissions in Croatia for that year. Reducing the greenhouse gas emissions of health systems is strongly linked to SDGs 13 (Climate action), 7 (Affordable and clean energy) and 12 (Responsible consumption and production).



Table 2. Pollutants in hospital wastewater

Pollutant type	Examples
Pharmaceutical products	Antibiotics, lipid regulators, analgesics, beta-blockers, anti-cancer drugs, anti-epileptics
Microbial hazards	Multi-drug resistant bacteria
Heavy metals	Mercury, copper, lead, zinc, arsenic
Cleaning products	Detergents, disinfectants
Other chemical hazards	Absorbable organic halogens, free chlorine

Source: WHO Regional Office for Europe (2016:10).

Key messages

- ▶ Patients, the health workforce, health systems and society will benefit from more environmentally sustainable health systems.
- ▶ Addressing their environmental impacts is an efficient way for health systems to contribute as a sector to several SDGs.
- ▶ A significant number of private and public organizations in all sectors already incorporate sustainability as a core component of their corporate strategy. However, this shift is still at an early stage in most health systems.
- ▶ Fostering the environmental sustainability of health systems will require system-wide changes driven by improved governance, for which the role of national health authorities is critical.
- ▶ Coordination between health authorities and other sectors is also crucial to improve the environmental sustainability of health systems.

Key facts

- ▶ Health systems constitute a large economic sector, accounting for 8% of all jobs in the EU-27 and between 8–10% of GDP in the WHO European Region.
- ▶ The existing evidence reveals a wide range of potential benefits from fostering environmental sustainability in health systems, including those for finance, health, access and quality of care, the workforce, the environment and climate resilience.
- ▶ Among others, the existing evidence points at three key categories of environmental impacts from health systems: 1) health care waste, 2) wastewater, and 3) greenhouse gas emissions.
- ▶ Barriers to environmental sustainability in health systems include a lack of knowledge and awareness about sustainable practices, unclear responsibilities, inadequate procedures and resources, weak governance at the national level, and weak enforcement, among others.
- ▶ Enablers of environmental sustainability in health systems include capacity building, robust regulatory frameworks, incentive schemes, leadership from top management, and engagement of the workforce, patients and stakeholders.
- ▶ The shift by health systems towards environmental sustainability is largely bottom-up and driven by providers, but it is gaining momentum quickly at the national and international levels. During its last general assembly in Taipei in October 2016, the World Medical Association recommended that all health organizations divest from energy companies based on fossil fuels and from all companies that do not adhere to their obligations regarding environmental responsibility.



“Best buys”

- ▶ Environmental sustainability in health systems pays off: the UK National Health Service saved £23 million in 2014/15 through actions to reduce the carbon footprint from energy use in buildings; and an improved health care waste management system in Kyrgyzstan achieved, on average, a 33% annual cost savings relative to its previous practice.
- ▶ Procured goods and services constitute one of the largest shares of the carbon footprint of health systems, so the application of adequate sustainable procurement principles in health systems constitutes a crucial potential area of action for sustainability.
- ▶ As a sector of the economy, health systems have a share of responsibility towards the achievement of all the SDGs, not only SDG 3 (Health and well-being). Fostering environmental sustainability can help address their responsibility for the goals including SDG 6 (Clean water and sanitation), 7 (Affordable and clean energy), 11 (Sustainable cities and communities), 12 (Responsible consumption and production) and 13 (Climate action).



Key references

- European health for all database [online database]. Copenhagen: WHO Regional Office for Europe; 2014 (<http://www.euro.who.int/en/data-and-evidence/databases/european-health-for-all-database-hfa-db>, accessed 2 February 2017).
- Towards environmentally sustainable health systems in Europe: a review of the evidence [website]. Copenhagen: WHO Regional Office for Europe; 2016 (<http://www.euro.who.int/en/health-topics/environment-and-health/Climate-change/publications/2016/towards-environmentally-sustainable-health-systems-in-europe.-a-review-of-the-evidence-2016>, accessed 3 May 2017).
- Promoting and managing change towards environmentally sustainable health systems [website]. Bonn: World Health Organization; 2017 (www.euro.who.int/en/health-topics/environment-and-health/Climate-change/publications/_recache, accessed 11 April 2017).

Sixth Ministerial Conference on Environment and Health

13–15 June 2017, Ostrava, Czech Republic